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**The Future of Work: An India Perspective**

by

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## The Future of Work: An India Perspective\*

The 'Future of Work' is a hot topic today. Everybody has a view on it. It is happening and is a reality that society must learn to face. The seven billion people on this planet will have seven billion reactions to the future. We cannot understand or plan for these. We can, however, learn from them. We can at best try and capture the essence of the big picture, to appreciate the global agenda and outline the major forces at play.

Employment is probably the single biggest issue across the world. This is because it is not so easily available and is getting more difficult. All governments promise to provide jobs, but the fear is that this may not come about. The fear is because of the march of technology. Technological changes have indeed threatened to disrupt jobs for the last 200 years and each time the doomsayers have been proven wrong. New jobs have replaced old ones and world economy has only prospered, especially in the last 70 years of globalisation. Unfortunately, this time the fear may be well-founded, especially for the unskilled.

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\*Paper based on an address by Dr. Alwyn Didar Singh at IIC on 10 December 2018 on 'Future of Work, Enterprise and Innovation', and Panel Discussion on 10 October 2018: Talk No.6 of METAMORPHOSES: 'Automation, Artificial Intelligence and the Future of Jobs'.

author, predicted that ‘The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment!’

A scary prediction and a representation of the extreme fear of impending automation! Maybe (and hopefully) this will not play out, but we must recognise this danger. Many thought leaders even today are pointing in the same direction. Historian Yuval Noah Harari (2018) has the following to say, ‘We will have these huge changes by 2025—but then we’ll have even bigger changes in 2035, and even bigger changes in 2045, and people who have to repeatedly re-adjust to these things.’ What is being flagged here is that technological change is not a one-time event, but ongoing, so we have to constantly adapt.

Doomsday predictions about the loss of jobs have emerged over the last three years, although many have receded somewhat in the past year. It has now been estimated that only 2–8 per cent of jobs in developing countries will be impacted by automation in the foreseeable future,<sup>1</sup> and yet technological change has accelerated (119 years for the spindle to diffuse outside of Europe; the Internet spread across the globe in only seven years). According to earlier reports, the scope of technological change is so rapid that more and more occupations will be affected. The CITI GPS Report<sup>2</sup> claims that on average, 57 per cent of jobs in the OECD (Organisation for Economic Cooperation and Development) countries, 69 per cent of jobs in India and 77 per cent of jobs in China will be impacted by automation.

And yet, unemployment rates in the developed world are approaching a 40-year low and are down to 5.5 per cent. Ruchir Sharma, well-known author and Chief Global Strategist at Morgan Stanley, explains this as the impact of ageing in the Western world.

What one has to appreciate is the gap that will always be there between what is 'automatable' and what is actually 'automated'. Let us take the example of the auto sector. Car factories in Germany or Japan are today 90 per cent automated. Yet Indian car manufacturers may be barely 20–30 per cent automated. The question is all about ROI (return on investment) and labour arbitrage. In most developing countries, labour is relatively cheaper and can be trained, whereas automated machines are very expensive. This will not always hold true across all sectors, but it is the gap that may cause the delay in automation replacing jobs in developing countries.

The important point to note is that the future of work cannot be viewed as a single narrative. Just as globalisation has impacted different parts of the world differently, with some reaping its benefits in both the developed and developing countries, the future of work will have a varied impact around the world. This impact will be contingent upon the level of development, demography, climate change and technology. For developing countries like India, the future of work will be very different from OECD countries. These differences will arise not only because technology is adopted and diffused at varying rates, but also because of the different rates of demographic transition in countries.

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## Mega Trends

To understand the issues under debate we need to first understand the mega trends impacting the globe. These Global Mega Trends confronting society are:

- *Automation and Exponential Technologies:* Digital technologies such as robotics, Information and Communications Technologies (ICTs) and Artificial Intelligence (AI) will transform the world of work. However, they will impact different economies differently, and the impact on employment will be varied.
- *Demography* is changing and, therefore, talent mobility will emerge as a big issue. While, globally, the countries that have already moved swiftly through the demographic transition at a rapid pace as compared to the developing world have high life expectancies and below-replacement level fertility rates, there are other countries with ‘youth bulges’ that have come to be known as ‘demographic dividends’. At the same time, skill gaps and labour shortages abound in countries with a shortage of people in the working age. Therefore, the future of work is bound to be impacted by demographic factors in countries with shortages as well as in those with an excessive supply.
- *Climate Change* is upon us and, therefore, environmental factors and shortages will have to be addressed by economies to ensure sustainability. Businesses have to be more sustainable. This will give many emerging economies, including Indian business, a competitive advantage. There is a strong business case for both mitigation and adaptation, and renewables have already emerged as a major business opportunity.

- And finally, there appears to be a *Retreat of Globalisation*. There is a recognised perception today that the world is witnessing a retreat of globalisation, and concerted moves towards more nationalist and protectionist positions, globally. While this may find itself articulated in some political positions, the actualities of the global economy make it imperative that any policy formulation must take into account the reality of a global market—albeit even for insular policy prescription. And, therefore, it is important that we address ‘togetherness’ rather than ‘otherness’ in order to combat growing ‘protectionism’ around the world.

### **Manufacturing-led Development**

A study of the history of economic development shows that countries modernised and grew their economies by enlarging their ‘industrial’ or manufacturing sectors, which provided jobs as people moved out from primary agricultural sectors. Manufacturing has traditionally absorbed a substantial part of the economy’s low-skilled labour from agriculture at higher levels of productivity (McMillan and Rodrik, 2011). The manufacturing sector was different from other sectors, because it absorbed large numbers of relatively unskilled workers at a substantial productivity premium which was underpinned by the sector’s tradability in international markets.

Looking ahead, changing technologies and shifting globalisation patterns bring manufacturing-led development strategies into question. The Internet of Things (IoT), advanced robotics and 3-D printing are shifting what makes locations attractive for production and threaten significant disruptions in employment, particularly for low-skilled labour. These trends raise fears that manufacturing will

no longer offer an accessible pathway for low-income countries to develop, and even if feasible would no longer provide the same dual benefits of productivity gains and job creation for the unskilled. As a result, the potential risk of growing inequality across and within countries warrants closer attention to the implication of changing technology and globalisation patterns. Manufacturing is becoming less labour-intensive in the emerging and developing world, and contributing

The three traditional factors of production—land, labour and capital—are also transforming. In an ideal market economy, these three factor markets should be like commodity markets where buyers and sellers can transact freely. Land is restricted, but available; capital that has expanded exponentially and is used to acquire technologies through M&As (mergers and acquisitions); and a labour factor market emerging and maturing in its own way. Here, skilling within enterprises is the greatest learning experience and, in that context, makes for enterprises being both buyer and producer of the labour market in the same production system. Therefore, in the context of the future of work, we need to remember that the future of the ‘worker’ is integral to the production system.

to a growing concern over ‘premature de-industrialisation’. Increased automation in low-wage countries, which have traditionally attracted manufacturing firms, could see them lose their cost advantage and potentially lose their ability of achieving rapid growth by shifting workers to factory jobs.

### **Factor Markets and Artificial Intelligence**

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Research by Accenture points out that AI as the new factor of production can drive growth in at least three important ways.<sup>3</sup> First, it can create a new virtual workforce—what we call ‘intelligent automation’. Second, AI can complement and enhance the skills and ability of existing workforces and physical capital. Third, like other previous technologies, AI can drive innovations in the economy. Over time, this becomes a catalyst for broad structural transformation as economies using AI not only do things differently, but also do different things. The research indicates that AI has the potential to double annual economic growth rates in terms of gross value.

### **Challenges for India**

We will address only the following in the context of work:

- The informal sector and dangers of ‘jobless growth’ in India;
- skills deficit;
- youth and women in the world of work.

### **The Informal Sector in India and Unemployment**

The share of workers in the unorganised sector (less than 10 employees including own account workers) stood at 82.2 per cent in 2011–2012. At the same time, the share of informal workers in the organised sector (workers without social security protection) increased significantly through the use of contract and other forms of casual labour. Therefore, the percentage of informal employment in India is

large, producing roughly 50 per cent of the GDP and employing 92 per cent of the workforce.

However, it is believed that the number of employees in the formal sector may be underestimated. Recently, a Taskforce of the NITI Aayog (on improving employment data) set up in May 2017, recommended that at least for the purpose of counting, people covered under one of the following be considered as formal workers:

- Workers covered under the Employees' State Insurance Act, 1948;
- workers covered under Employees' Provident Fund and Miscellaneous Provision Act, 1952 (or other similar social security schemes);
- government and other public sector employees;
- workers with coverage under private insurance or pension schemes or provident funds;
- workers subject to tax deduction at source on their income through the submission of Form 16 or similar Income Tax form.

‘The Task Force is of the view that, in the Indian context, where written contracts are not common and nearly three-fourths of employment is in enterprises with less than 10 workers, the definition of a formal worker based on enrolment in provident funds, medical insurance or pension schemes represents a reasonable compromise,’ said the Report.<sup>4</sup> There are several definitions for a ‘formal worker’ in India and, therefore, the Taskforce has suggested the adoption of a new, more pragmatic definition of what constitutes ‘formal employment’.

### **Underemployment, and not Unemployment**

According to the credit rating firm CRISIL (formerly Credit Rating Information

Services of India Limited), around 18 million people enter the workforce every year. The number of jobs created is far lower; between 2011–2012 and 2015–2016, India created 3.65 million jobs a year. The International Labour Organisation's (ILO) World Employment and Social Outlook 2017 estimates that the Indian unemployment rate will remain at 3.4 per cent in 2017–2018. Recently, the Centre for Monitoring Indian Economy (CMIE) flagged the climbing unemployment rate in the country, despite a fall in the number of job seekers. If we look to the future, at present there are 300 million children, between 6 and 16 years of age, who would join the job market after 10 years. Obviously, this would be a challenge.

Niti Aayog has however argued that underemployment, and not unemployment, is India's problem. In the Three-Year Action Agenda for 2017–2018 to 2019–2020, the Report says: 'Contrary to some assertions that India's growth has been "jobless", the Employment Unemployment Surveys (EUS) of the National Sample Survey Office (NSSO) have consistently reported low and stable rates of unemployment over more than three decades. Indeed, unemployment is the lesser of India's problems. The more serious problem, instead, is severe underemployment.'<sup>5</sup> The Report has stressed on the need to create 'high-productivity, high-wage' jobs. Noting that with Chinese wages rising due to an ageing workforce, and many large-scale firms in labour-intensive sectors

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currently manufacturing in that country looking for lower-wage locations, Niti Aayog reports that ‘with its large workforce and competitive wages, India would be a natural home for these firms’, stressing on the need for a ‘manufacturing-led development model’. Niti Aayog views China’s loss as India’s possible gain and has recommended the creation of a handful of Coastal Employment Zones (CEZ), which may attract multinational firms in labour-intensive sectors from China to India.

### **Skills and Jobs**

The government’s flagship skilling scheme, the ‘Pradhan Mantri Kaushal Vikas Yojana’ (PMKVY) was relaunched in October 2016 with an outlay of ₹12,000 crores and the ambition of training 1 crore people in four years (2016–2020). Placement tracking has been made mandatory since 2016. Reports suggest that placement has not been at par with skilling. The reasons cited are the lack of training quality and information asymmetry regarding demand–supply dynamics. The government has now shifted focus to inviting more participation from the state, and involving district collectors to ensure delivery and ensure district-level monitoring.

Some projections state that by 2025, there may be up to 20 crore (200 million) people without jobs if skill development is not made dynamic and focused on what markets require.<sup>6</sup> From an employer’s perspective, finding the right people for the right job is becoming an increasingly uphill task. CEOs and HR heads across industries often lament the dearth of leaders, independent thinkers, self-starters, problem solvers or even people with pure common sense in the workforce. This is the dichotomy.

## **Youth and Women in the World of Work**

According to the OECD, over 30 per cent of Indians between the ages of 15 and 29 are NEETs, ‘not in education, employment or training’ (Jethmalani, 2017). India, with the largest youth population, will be a major determinant of the future of work globally. ‘If the world is to achieve the targets under Goal 8 of the Sustainable Development Goals by 2030, it will depend on India’s success in creating more inclusive growth and decent work, overcoming the challenges inherent in these three employment dimensions’ (Verick, 2017). The three employment dimensions are: whether and how women work; whether more formal jobs are created; and which sector will be the main generator of jobs for youth.

While the participation of women has risen steadily in most countries around the world, there has been a decline in the number of women in the workforce in India. At less than 30 per cent, India has one of the lowest female participation rates in the workforce in the world.

During the 2000s, while male employment increased from 1999–2000 to 2011–2012 at 1.9 per cent, female employment in the same period only increased by 0.3 per cent annually.<sup>7</sup>

This, therefore, remains an issue.

## **Towards a Conducive Policy Environment**

The government itself will not provide jobs and can only directly provide very few jobs within the government sector, against the millions required. The jobs will be generated by the actions of others in the system. However, stakeholders outside the

government will be willing to change their current behaviour in order to improve the jobs generation system only when they have ‘bought-in’ to a particular policy. Such a policy must perform be:

- Based on an understanding of the vast number of stakeholders involved and how they are interlinked;
- the policy must have a high implementability quotient, which means the very design must incorporate the ‘how’ of achieving the stakeholder buy-in required;
- the process of policymaking must be participative from the pre-design phase because ‘Policy’ is not just a document, rather it is a process.

Such a process envisages:

- Acceptance of and support for the policy, thus ensuring that the government is actually responding to the needs of its ‘customers’, and hence setting the right metrics of success;
- seeing the benefits for themselves: the merging of the self-interest of each stakeholder with the common vision of the policy. This would mean capacity building of governments through skilling, even of the bureaucracy itself. State governments, for example, would need to plan for a work strategy for its citizens, and an HR strategy for itself;
- belief that the policy is fair and transparent—that all are being affected or benefited fairly;
- such policymaking would thus be a process of societal learning.

### **Some Recommendations**

All stakeholders must act to prepare for the future of work—member states, companies, workers, institutions and individuals. Some recommendations are

made here. These, however, are more in the context of ‘guidance’ and are not ‘prescriptive’. After all, we need to ensure that all stakeholders need to be carried along—that is true labour governance.

## **For Government**

- The excellent initiatives in the area of skilling and re-skilling need to continue.
- The government could consider establishing ‘Centres of Excellence’ in emerging exponential technologies.
- Encourage start-ups that help to transform unorganised sectors to organised ones using technology.
- Create a fund to support awareness creation and adoption of Exponential Technologies by the Micro, Small & Medium Enterprises (MSME) sector.
- Use of technology in agriculture to drive job creation through the ‘Doubling Farmer Income’ (DFI) scheme.
- Drive job creation through government investments in infrastructure.
- Transform the public healthcare and education spaces, and other development sectors through the use of technology-assisted outreach workforce.
- Create an ecosystem that allows the creation of accountable and autonomous institutions focusing on the ‘quality of education’.

Changes to the traditional employment relationship model call for reflection on existing regulations to respond to and accommodate new forms of work.<sup>8</sup> There is a need to revisit the ILO Conventions and align them to new economy requirements. For example, worktime conventions may soon be not so relevant. These conventions have been the backbone for country-level regulatory frameworks. These, too, need to be revisited.

The most crucial role for the government will be providing a social security net: huge unemployment could lead to tremendous pressure and the government may need to step in to share the burden of social security contributions (presently made by employers and employees). For example, Employees' State Insurance (ESI), Pension contribution, etc.

The government is already moving towards 'universal minimum wages', irrespective of the level of pay of workers. The Wage Code Bill, once approved, will empower the centre to set a minimum wage across all sectors in the country and states will have to maintain that. The proposed code on wages will subsume the Minimum Wages Act of 1948, the Payment of Wages Act of 1936, the Payment of Bonus Act 1965, and the Equal Remuneration Act of 1976. Add to this the health insurance scheme and basic work provisioning (National Rural Employment Guarantee Act, 2005 [NREGA]), which together create the social security net required.

### **For Industry**

- Creating a 'vision for exponential technologies'. Indian industry needs to build capacity to appreciate and understand this issue and prepare for it.
- Use the 'Gig Economy' approach to leverage the competencies and potential of the laid-off workforce.
- Create collaborative learning ecosystems for each industry.
- Work in close partnership with the government to ensure the success of its efforts to take advantage of exponential technologies for Indian economy and society.

What are the future drivers of job opportunities? What are the sectors/industries/



jobs that would emerge? This is very important from an employer's perspective and also in the context of the role of an employer's organisation vis a vis its members. Sectors such as health, education and social-care may have special significance, even though technology would have an impact. These are sectors which may require the 'human touch', and acknowledge that there are certain jobs for which people will be needed, as opposed to technology.

### **For Academic Institutions/Skill Providers**

- Creating entrepreneurs: if the focus in developing countries is to remain on the creation of self-employment, then apart from providing a conducive environment/ecosystem for entrepreneurship, the focus in education systems must also address, 'What makes an entrepreneur? What are the qualities required/important to be an entrepreneur?'
- Focus on 'judgement-driven skills/employability-enhancement skills'.
- Tailored courses with flexible completion timings will enhance students' inclination towards learning.

### **For Individuals**

- Life-long Learning (LLL): Take responsibility for and get used to LLL.
- Getting used to the 'Gig Economy': The question whether our new changing world will provide gainful employment in the 'conventional sense' remains and, consequently, the concept of day-long jobs for a quarter of a century in an individual's life will change. It is anticipated that flexi-work with flexible skills will become more common place, as in the 'gig economy', changing the very definition of a job or work.

## **ILO Recommendations**

In 2017, the International Labour Organization (the ILO) set up a Global Commission on the Future of Work. This Global Commission published its landmark report in January 2019, calling it ‘a human centred approach’.<sup>9</sup> A universal labour guarantee, social protection from birth to old age and an entitlement to lifelong learning are among 10 key recommendations made in the Report. The major issue that will arise for countries is to answer the basic question of funding. After all, universal labour guarantee, expansion of time sovereignty, setting up an international governance system for digital labour platforms, and reshaping business incentive structures for the implementation of this human-centred agenda, all require budgetary provisioning.

As the ILO itself recommends, each country must evolve its own strategy and plan to implement action and prepare for the future of work. Ultimately, ensuring ‘work’ is to ensure development and growth. For this, the key is going to be innovation, creativity and sustainability. India has its own form of innovation—‘Indovation’. Already, India has emerged as the third-fastest ‘Start-up’ nation in the world (and Bengaluru the second-fastest growing start-up ecosystem). This is our way to finding optimal and affordable solutions. Going forward, the key

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sectors are going to be agriculture, clean-tech, digital and defence manufacturing. In each of these, and all other sectors too, the secret is going to be the integration of AI and all other technologies into the field of work, ensuring that people remain in control and central to industry, services and agriculture. In doing so, we will ensure growth and gain.

## Notes

1. See 'Trouble in the Making?: The Future of Manufacturing-led Development', Report of The World Bank, 2017.
2. See 'Technology at Work v2.0: The Future is not what it used to be', Oxford Martin School and CITI.
3. See 'Why Artificial Intelligence is the Future of Growth', Accenture, 2017. [https://www.accenture.com/t20170524T055435\\_\\_w\\_\\_/ca-en/\\_acnmedia/PDF-52/Accenture-Why-AI-is-the-Future-of-Growth.pdf](https://www.accenture.com/t20170524T055435__w__/ca-en/_acnmedia/PDF-52/Accenture-Why-AI-is-the-Future-of-Growth.pdf).
4. See 'Report of the Task Force on Improving Employment Data', Niti Aayog, 2017. [www.niti.gov.in](http://www.niti.gov.in).
5. See 'India Facing Problem of Severe Underemployment, says Niti Aayog', *The Hindu*, Niti Aayog, 2018. <https://www.thehindu.com/business/Economy/india-facing-problem-of-severe-under-employment-says-niti/article19570289.ece>.
6. Mohandas Pai, at the 16th edition of Madras Management Association for Managerial Excellence, 2017 Award. <https://www.thehindubusinessline.com/companies/innovation-is-the-key-for-survival-mohandas-pai/article9768690.ece>.
7. See Population Census, 2011. Office of the Registrar General and Census Commissioner, India Ministry of Home Affairs, Government of India, Delhi. <https://www.census2011.co.in/>
8. See 'Non-standard Forms of Employment', ILO, 2015, Geneva. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---travail/documents/meetingdocument/wcms\\_336934.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/meetingdocument/wcms_336934.pdf).
9. See 'Report of the Global Commission on the Future of Work: Work for a Brighter Future', ILO, 2019, Geneva. <https://www.ilo.org/global/topics/future-of-work/brighter-future/lang--en/index.htm>.

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