

ASPIRATIONS FOR THE NEXT 50 YEARS

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Skill set workers need for the future job market



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As we fight to overcome the damages done by the Covid-19 pandemic and restart and recalibrate our economies, this is a golden opportunity to ask what we can do to prepare ourselves better for the next decade. One thing is certain. New technologies will emerge more rapidly now that we know how to adapt to a major catastrophic event such as the all-devouring Covid-19 virus and how to fight back. Innovative approaches to working and living will make the world in 2030 a different one than the one we had envisaged before the pandemic. And we all need to adapt to this new world. Bangladesh's challenge is to transform our education programmes and skills development infrastructure to deliver the talents needed for an innovative, digitised, and post-agricultural economy in the forthcoming Fourth Industrial Revolution.

Bangladesh's progress in manufacturing exports is comparable only to that of China and Vietnam. The apparent contradiction, however, lies in the fact that Bangladesh made such progress without any rapid structural transformation of the economy. Despite a very high share of manufacturing exports in total merchandise exports, the export basket of Bangladesh remained highly concentrated around low value-added and low-complexity products.

In the next decade, the largest challenge will be faced by women both in industrialised and emerging economies. Women hold jobs in areas that are predicted to grow, such as registered nurses and personal care aides—possibly accounting for 58 percent of new job growth. At the same time, women hold a large portion of shrinking jobs, like office clerks and



administrative assistants, customer service, food service, and community services.

An important component of structural transformation is that people will move out of agriculture, but this has not happened in case of employment in Bangladesh, according to Dhaka University's Professor Selim Raihan. The share of industry in employment is not very high. About 40 percent of the employment generated is being absorbed by the agriculture sector, the services sector is absorbing more than 40 percent, and the rest is being absorbed by the industrial sector, especially by the manufacturing and construction sector. Raihan is pointing the finger at our government for its failure to shift our workforce from low productivity to high productivity. "Therefore, there remains a big question mark for Bangladesh in terms

of structural transformation. How can Bangladesh transform from the current state of low value-added activities to high value-added activities?" Another relevant question that we as a society need to address is, "Is our education sector ready for the future challenges?"

In this essay, I plan to discuss four aspects of the future job market and the opportunities that have now opened up.

SECTORS WHERE JOBS WILL GROW

One does not have to be a genius to predict that technology will play an important role in all our existing sectors, including RMG, transport, communication, and manufacturing. Besides, new frontiers will emerge as the economy of the future takes shape. Medical science, biotech, information technology, alternative sources of energy, robotics, and automation will lead the way. We can get a sense of what the future society would look like from the race to develop autonomous vehicles, the rapid emergence of artificial intelligence, the growth of solar and wind power, new methods of carbon sequestration, application of machine learning in every area, and the phenomenal growth in tools to respond to future pandemics, climate change, and supply chain disruptions.

The biotech industry will grow fast in the coming decade in the wake of the recent pandemic to develop new therapeutics and technologies to reach patients faster. At a time when we face a devastating global pandemic, new life science community will emerge in South and South-East Asia tapping into the region's life science ecosystem and intellectual capital to discover new approaches to prevent and treat illness.

Bangladesh can borrow a page from India's biotech and pharmaceutical industry, in light of its successful collaboration during the vaccine development phase. New opportunities lie ahead in the gene therapy, gene editing, immunotherapy, and biotechnology. These types of therapies offer the potential to treat or even cure devastating rare diseases and more common diseases, such as cancer, rheumatoid arthritis, diabetes, Parkinson's, and Alzheimer's, among others. India's Bharat Biotech has applied to conduct trials in Bangladesh for its coronavirus vaccine recently approved for emergency use at home.

India is among the top 12 destinations for biotechnology in the world and Bangladesh can emerge as a partner and eventually, take a lead in many of the areas that India has gained experience in.

"In order to serve patients better and faster, you need global collaboration between academic, biotechnology and industry partners. Ideas must be fostered and tested, materials must be available for testing, and manufacturing options must be at hand to "create an ecosystem of the brightest minds across industries and immediate

manufacturing capabilities to accelerate therapies for patients." These words from Emmanuel Ligner, a leader in the biotechnology field indicates the possibilities globally and in Bangladesh.

If Bangladesh is to seek a niche in the biotech industry, it must adhere to "good manufacturing practices" (GMP), with a plan for cleanrooms, and tout a modular configuration that will enable the easy adoption of emerging technologies manufacturers. Globally, demand for these biological products, such as cell and viral vector products, is so high that the resulting manufacturing bottlenecks can ultimately limit the number of patients who are able to access medical breakthroughs produced using cell and viral vectors. Obviously, there is a role for a regional leader, to manage quality control, lab, office, and convening space designed to facilitate collaboration between scientists from the region's universities, hospitals, and industries. Bangladesh must prepare itself for this position.

INTELLIGENT WORK IN 2030

Research by global consulting firms such as Booz Allen, McKinsey and PwC shows that the greatest job growth will occur in the following occupations: health professionals, health aids, STEM professionals, technicians, and wellness. According to Gartner, a research and advisory firm providing information, advice, and tools for leaders in IT, almost 30 percent of human-based jobs

engage with each other. "Things" will dominate, having grown exponentially from Gartner's estimated 26 billion connected devices by 2020. As every product, service and process becomes digitalised, the product "cloud" may become more valuable than the product itself.

In the new workforce of 2030, the most successful organisations will optimise the usage of all their resources, both human and machine, for competitive advantage. "An increasing portion of your workforce will not be human," Steve Prentice of Gartner said. However, he warned that while machines are very good for consistency, performance, predictability, efficiency, and safety; they can't match humans' skills in ingenuity, novelty, art, creativity, emotion, and to address variability and provide context.

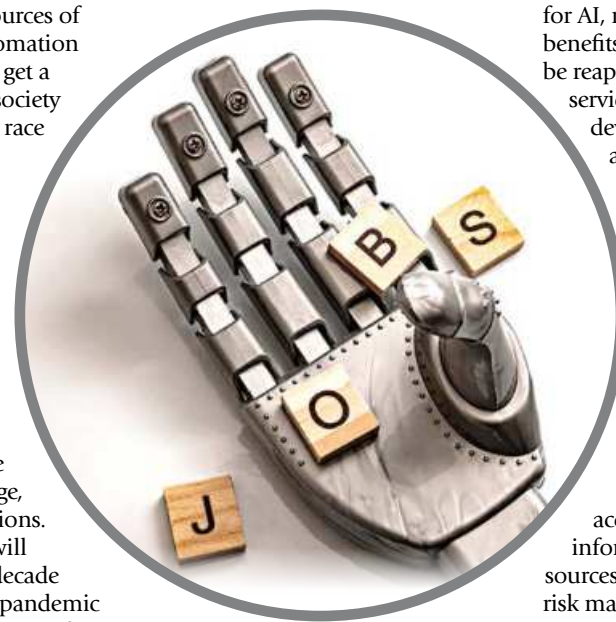
Artificial intelligence (AI) is adding depth and scale to the challenges posed by technology. Societies will need to determine what is wanted from human intelligence, how best human intelligence can work with AI, how human and artificial intelligence can complement each other and, as a consequence, what new knowledge and skills must be acquired and cultivated.

Compared with other technologies, AI has an unprecedented range of applications that can only be maximised through the creativity and imagination of the users and designers of AI. This malleability is a major advantage for AI, robotics and big data; but the benefits of these technologies can be reaped only if they are put to the service of original, visionary ideas developed by humans. These advances will profoundly affect the demand for skills by 2030. According to some researchers, the skill that most clearly distinguishes innovators from non-innovators is creativity more specifically, the ability to come up with new ideas and solutions and the willingness to question ideas.

In 2030, as we gain access to nearly unlimited information from multiple sources, digital ethics will be key to risk management. With everything connected and billions of smart machines, the opportunities to do the wrong thing and ignore privacy, favour machines, steal, etc. will constantly be there.

At this point, it is appropriate to mention the work of Isabelle Rouhan. In her book, *Les Métiers du Futur* (Jobs of the Future), published in 2020, Rouhan predicts that 85 percent of the jobs that we will have in 2030 do not exist yet. In an attempt to reveal what our future labour market will look like, she introduces us to new professions that will pop up in the next decade or so. The book recognises that our society is going through major transformations, technology is constantly evolving, and our lifestyles and consumption patterns are following suit. That's why some trades are disappearing while many others are expected to emerge over the next few years.

In a story published in the *Wall Street Journal* on January 8, 2020, entitled "Jobs in 2030", Gwynn Guilford writes that the healthcare sector will experience a boom, and "Millions of new jobs will emerge in healthcare and tech as society ages and digital transformation changes the nature of work". Five out of the 20 fastest growing industries for the next decade are in the healthcare and social assistance sector, the fastest growing major sector in all modern economies. Factors that are expected to contribute to the large increase include increased demand to care for the aging baby-boom population, longer life expectancies,



shall be replaced by robots by the year 2025. From shopping online to building cars, robots continue to take over more tasks and it is forecast that nearly 40 percent of US jobs are in occupations that are likely to shrink or be cut by 2030.

Also, by 2030, jobs that make use of new technologies, which include software developers and information security specialists, will increase by 37 percent. McKinsey's report indicates that "The development of automation technologies, including artificial intelligence (AI), could compound and accelerate both innovation and workforce transformations."

The US government's Bureau of Labor Statistics projections for 2020-29 released last September show that computer occupations are expected to see fast job growth as strong demand is expected for IT security and software development, and as new products associated with the Internet of Things (IoT) are developed. These occupations include software developers as well as information security analysts. Technological changes facilitating automation and e-commerce are expected to result in declining employment for office and administrative support occupations and for sales occupations. Even before the pandemic of 2020-21, there were unmistakable signs that the demand for remote work will grow.

By 2030, other technological trends will leave their imprints in the way we work, live and

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