TECHNOLOGY AND DEMOGRAPHIC PRESSURES ARE SET TO TRANSFORM THE GULF WORKPLACE. WHAT'S THERE TO BE AFRAID OF?

BY STIAN OVERDAHL

It may be time for doctors, lawyers and journalists to stop feeling so smug. While people in diverse vocations–factory workers, retailers and in banking–have seen their functions replaced partly or fully by machines or software, rapid advancements in technology, especially artificial intelligence, signal that areas of work once thought to be solely the province of human workers may be ripe for disruption. In March, AlphaGo, a program developed by Google DeepMind, defeated Lee Se-dol in Go, a board game which originated in ancient China, which–with many more permutations than chess–has long been considered the holy grail of AI research. After the defeat of Se-dol, a South Korean grandmaster and one of the world's top Go players, the South Korean government hastily announced a 1 trillion won ($855 million) fund to boost research in AI. It was impossible to miss the wider significance of a computer system that taught itself to learn, a process meeting many people's definitions of intelligence. "People are saying AlphaGo showed creativity and imagination, the equivalent of which can be applied in legal matters, in healthcare, in accounting," says Rohit Talwar, a futurist who in February spoke about the implications of extended lifespans for employment at the World Government Summit in Dubai. "In any walk of life, the things that we used to think were the domain of bright humans, all of that is potentially within the grasp of AI within the next few years."

Increasingly, jobs will be digitised, automated, virtualised or carried out by robots, many experts believe. "There's one key word that you don't want in the future and that's 'routine'," says Gerd Leonhard, a futurist and author. "If your job is routine–and it doesn't matter if it's cognitive or manual–it will be automated." And while there's well-placed scepticism about to what extent certain jobs can be carried out via software or machines, as cost benefits become clear, vocations will be redesigned so that they can be partly automated, says Talwar. "It's not saying, look at the role of a lawyer, well you can't automate because of the way a lawyer works. It's actually saying, how can we change what the lawyer does? How do we change the law so it can be automated?"

The million-dollar question is whether these technological advances will create more jobs than they destroy. »

Futurists such as Leonhard predict large-scale job losses that will lead to major social and cultural changes, such as shorter working hours, implementation of universal incomes, and even “automation taxes” on private companies. Talwar says net job creation in the Gulf will be positive, but foresees more and more roles becoming part time. Still, examples from history show that in the past, fears about job losses have proven misplaced, with automation of existing processes happening in parallel with creation of new jobs elsewhere. The most potent example is the automation of agriculture in the United States, which in 1870 employed 50 per cent of the labour force; by 2014 this had fallen to less than 2 per cent without concomitant mass unemployment.

“New technological developments have always created new opportunities,” says Saif Al Aleeli, the CEO of the Dubai Museum of the Future Foundation. He’s optimistic that technology will create new job avenues in every sector of industry, noting that most specialist jobs we see today didn’t exist a few years back. It’s estimated that 65 per cent of children entering primary school today will end up working in completely new job types that don’t yet exist, says Al Aleeli. “What is however important is that we must anticipate the changes and prepare for the coming transition.” As for key white-collar roles, Leonhard envisages automation and digitisation paring off the routine aspects of a job, leaving workers free to focus on the intellectual, creative and complex functions that machines aren’t capable of. Perhaps doctors, lawyers, and journalists can breathe easy after all.

Gulf leaders have been quick to recognise the economic opportunities of future technologies. In Dubai, for example, initiatives include the formation of a Global Blockchain Council to guide digital currency research and uptake; by 2030, a quarter of all transportation trips in the emirate are targeted to be driverless; while the inaugural World Drone Prix garnered global headlines—all part of the UAE’s wider drive to further develop its knowledge economy. Dubai’s Museum of the Future—its gleaming modern building is scheduled to open in 2018—will empower creative minds to test, fund and market ideas for futuristic prototypes and services, and act as a platform to demonstrate and test the latest inventions, from startups and technology giants, says Al Aleeli. He views robotics and artificial intelligence as two significant technologies with the potential to affect sectors such as education and healthcare, as well as society as a whole.

Manufacturing is identified as a sector that will grow in importance in the Gulf thanks to technological developments. 3D printing can lower entry costs for manufacturing, reduce reliance on a large component-supplier footprint, and allow for a fast pace from ideation to prototyping to a market-ready product. A process that once would have taken months can be boiled down to weeks, while the lower base costs mean that the sector becomes more accessible, creating opportunities for entrepreneurship and youth, says Rania Rostom, chief innovation officer at GE Middle East. “3D printing expands the economic possibilities of manufacturing, and invites for a lot more inclusion, and that’s what we believe has real sustainable growth value for the economies.”

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Existing non-oil sectors such as travel, tourism, healthcare and education may also receive a boost as human life-spans continue to lengthen, while automation of jobs will mean that many people will have more time to dedicate to travel, leisure and learning, says Talwar. He also sees a chance for the region to become a centre for innovative thinking about future government and how to deliver government services. “You could see all the big tech companies, consultancies, and audit firms having some sort of research and innovation centre in the region to be part of that ecosystem. That could be a huge growth industry.”

The growing use of technology will also allow companies to organise their workforce more efficiently, and businesses are expected to increasingly rely on freelancers and part-time workers, reducing their permanent labour force and optimising their workforce costs. “It’s possible that in the next 10 years we will see many organisations that do not have any fixed workforce, apart from at C-level, and are entirely built using the concept of the ‘liquid workforce,’” says Asif Javed, Middle East technology head at Accenture. He views the film crew as the ideal model for the workforce of the future: a set of specialists brought together for the duration of a project and then disbanded. This trend could have some unique benefits for the Middle East: Untethering workers from physical offices or standard workdays could provide a boost for women’s economic opportunity, says Jamie McAuliffe, the president and CEO of Education for Employment (EFE), a MENA-focused non-profit organisation that provides youth with vocational skills training via local affiliates. A 2015 survey EFE undertook with Bayt.com and YouGov identified a lack of suitable transportation and the need for flexible working hours as top barriers to first jobs for young women in MENA. “The ability to work from home and with a flexible schedule could be a decisive factor in facilitating the entry of more women into the workforce,” says McAuliffe.

Still, to take advantage of these trends many companies will need to learn to trust working with outside workers. In the experience of Loulou Khazen, the founder and CEO of Nabbesh, the region’s first freelance finder website, while companies are normally excited when they first learn about opportunities for freelancing or outsourcing, lack of trust can be a stumbling block. In the West, companies are comfortable putting briefs online and hiring a person online without talking to them first. In the Middle East companies want to talk to people and meet people before they hire them, even for small, non-core jobs. Many companies also want freelancers to work on-site in their office. “We’re still very much a traditional market when it comes to how we look at hiring people,” says Khazen. However the benefits of freelancers—including lower costs, quicker on-boarding and labour force flexibility—will continue to drive demand, she says. Outsiders can also provide an injection of knowledge and fresh ideas into a company, including industry-specific insights.

Over time, Nabbesh has evolved its model to be more of a tailored marketplace, hand-picking verified candidates for a particular job to streamline the hiring process. "Normally the first interaction between a company and hiring requires a lot of hand-holding. After that, companies become more comfortable with the process," she says. Businesses will need to employ collaboration and flexibility in their workforce to be successful, including being open to collaborating with other organisations, says Javed. While it will require a shift in mindset from many Gulf businesses in order to take advantage of these trends, for Javed this—along with high adoption of consumer technology and agility among policy makers in the region—is a source of optimism. "This represents a great opportunity for the Gulf to lead in this area by developing new models for business and workforce collaboration."

In other sectors, a reliance on low-cost labour is likely to retard the uptake of automation technologies. Construction sites in the Gulf teem with workers, and low wages—a general labourer in the UAE costs $5 per hour, compared with $31 per hour in Sydney, Australia, according to research by Turner & Townsend—means there's little incentive for the industry to adopt more high-tech methods of work. Higher wages would not only boost productivity but could also increase the number of attractive jobs for nationals from the six Gulf Cooperation Council countries.

John Taylor is the CEO at Sitech Gulf, which sells technology to automate the operation of construction equipment—such as bulldozers or excavators—used to build roads, airports and other projects. He says that while the technology is widely used in developed markets, local contractors have been slow to play ball. On road construction sites in North America, penetration stands above 50 per cent; in Australia it is above 70 per cent, while in the GCC it's about 1 per cent, Taylor says, citing industry figures. Although using machine control on a large job site could eliminate as many as 500 jobs, contractors are reluctant to invest, partly because of a pervasive view that "labour is cheap," says Taylor. Many companies underestimate the full cost of employing large numbers of workers, he says, while in some cases, purchasing managers are reluctant to invest in technology that could shorten project durations. "Companies aren't incentivised to be productive," says Taylor.

Construction is one sector, but it's a similar story in other sectors—including hospitality and manufacturing—where reliance on low-cost workers means that companies are less likely to invest in upskilling their workforce or buying more efficient tools, which would lead to creation of higher value goods and services. Labour productivity, estimated as non-oil output per worker, declined from 2000-2012 in Bahrain, Oman, Qatar, and the United Arab Emirates, according to calculations by the IMF. Lack of competition in labour markets—in some cases due to visa regimes limiting free movement of workers—also contributes to keeping wages low. Beyond the long-term economic implications, it means that sectors

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are less likely to create private sector roles attractive to national citizens, with labour markets highly segmented, along the lines of nationality and level of job. "If wages and working conditions were boosted across the board, this would provide a boost to productivity and nationalisation," says Radhika Punshi, an organisational psychologist and managing director of the Talent Enterprise.

This status quo was sustainable for as long as the public service could act as the engine of job growth for GCC nationals. But two significant factors—the large numbers of youth set to join the labour force in the coming years, and the impact of low oil prices on government budgets—have rendered this dynamic obsolete. Punshi says that in her 10 years of working in the Gulf as an HR professional, the last six months have been the most exciting time she's witnessed. Policy makers are faced with the dual pressures of needing to grow financial revenue—achievable through the opening up of economies and labour markets—as well as the social-economic pressure to focus on creating jobs for nationals. "A lot of conflicting priorities are coming through," she says.

Some countries are implementing new policies in a bid to make their labour markets more competitive. In Bahrain, legislation making it more expensive to bring in foreign labour as well as creating more circulation within the domestic labour market has created a new logic for businesses to be more efficient, to invest in technology, and—by raising wages across the board—to make hiring locals more attractive, says Karen Young, senior resident scholar at the Arab Gulf States Institute in Washington. The UAE too has adopted new visa rules to make it easier for expat workers to change roles. In Oman, public authority workers have had benefits including healthcare slashed, a measure that will remove market distortions. "What I'm excited about is that for the first time there are opportunities of governance that are really experimental and distinct across the GCC," says Young.

The scale of job creation needed is best illustrated by Saudi Arabia. The largest economy in the Gulf, it has the lowest labour force participation, and the kingdom needs to create as many as 6 million new jobs for its citizens by 2030, according to consultancy firm McKinsey. Yet even in 2015, though the kingdom created 417,000 new jobs, 88 per cent of these were filled by foreign workers, according to research by Jadwa Investment.

For other Gulf countries, the task is numerically smaller but equally significant. While most developed countries will experience the broad technology-driven changes to work when birth rates are declining and their major generational bulge—baby boomers—crosses into retirement age, the GCC's generational bulge is just entering the workforce. In many respects that's a considerable asset: Gulf millennials are highly tech savvy, and adoption of consumer technologies such as smartphones is among the highest in the world. Meanwhile, investments in IT infrastructure and education over the past decades have positioned GCC countries to succeed amid disruptive change, » says McAuliffe. “Far from passive witnesses to ‘future of work’ transformation, many Gulf economies are helping to drive it, and as such are well-positioned to benefit—provided they can equip their populations with the right skills and motivations to ‘buy in.’”

Negative perceptions remain a key challenge to boosting private sector employment among nationals, especially millennials, McAuliffe says. Gulf youth and their families perceive public sector jobs as higher-prestige, less demanding, and more secure and financially remunerative than private sector roles. In addition, there’s a stigma among many fresh graduates about assuming an entry-level position, as opposed to a management-level role, he says. “At EFE we’ve found that educating youth around the role that an entry-level job in the private sector can play in one’s professional development and career trajectory can reduce resistance to this type of employment, though it’s crucial that companies and governments themselves implement hiring and incentive systems that underscore this message.”

There’s broad consensus that education is a key factor for success in job creation for nationals. While the Gulf states have ramped up investment in education in recent decades, by a number of measures—including standardised testing—it underperforms. According to surveys of private sector companies, students aren’t adequately prepared for the workforce—both in terms of hard and soft skills. Randa Bahsoun, a partner at PwC Middle East, says that there is “undoubtedly a gap” between the talent demands of the private sector and the talent availability among nationals. “This regional skills gap is in part due to the challenges in aligning local educational and training systems to the increasingly complex demands of corporations.” Part of the problem may also lie with employers, and a lack of connections to educators: The private sector needs to be encouraged to think long-term about industry skill needs, and formal platforms for sharing this information with the education sector are needed, says McAuliffe.

In the meantime, the preference for public sector roles means that many GCC nationals pursue educational tracks suited to management positions, rather than more specialist or technical studies—problematic given that specialisation is expected to be crucial to succeeding in the future workplace. David Jones, a labour market economist and founder and CEO at the Talent Enterprise, says that according to their in-house research, the GCC spends more money on leadership development than anywhere else in the world. The value of that training may be lessened if employment becomes more automated—for example if a person is managing a fleet of drones delivering documents, rather than people on motorbikes. “Then the nature of leadership is completely different. You don’t need to motivate the drone, understand it and know what its family situation is, or build a relationship—you just need to be able to monitor it in a much more technocratic way,” says Jones.

In the task of driving nationalisation of the private sector, many experts say increased opportunities for workplace experience—such as through internships—could yield quick results. “If a four-year degree across the Gulf required a six-month internship, and companies could then ease into the nationalisation process by having unpaid workers, that would probably help a lot,” says Young. Programmes that have been implemented have produced broad results. Dubai Science Park, part of TECOM, has worked to connect students from local universities with industry via internships, final-year projects and job fairs. Prior to these experiences, many students were simply not aware of the job opportunities available in the private sector, such as searching for commercial applications rather than purely conducting research, says Marwan Abdulaziz, head of DSP. “For the students it was very refreshing, they saw that what they have learnt can be used in many different ways.”

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Skills-driven nationalisation can deliver benefits to companies that expat workers can’t provide. With businesses reliant on the cultural dimension when increasing brand awareness or growing sales, having employees that can help guide and advise companies for the private market is crucial, says Hamza Zaouali, managing director at Iris Executives, a head-hunting firm specialised in Emiratisation. “If a private company does not have UAE nationals in their workforce at strategic positions, it’s always going to be a superficial approach to the region,” he says.

While there’s a body of research that says the higher wages in the public sector cause many Gulf nationals to pass over opportunities within the private sector, there are also signs that this causality is fragile. Fresh graduates in the UAE are increasingly open to working in the private sector, Zaouali says. “We are surprised ourselves at how quickly things are changing.” Jobs in the private sector can be more dynamic and offer a wider variety of functions, including ongoing specialisation. These aspects matter: a recent survey of Emirati students and private sector employers in the UAE by Mercer Middle East found that students ranked training and development opportunities as the second most important factor—behind pay—when choosing an employer (employers ranked this only 16th on their list to attract young Emirati talent).

Private sector experience may also yield long-term benefits for workers: governmental entities that are looking to hire for a mid- or senior level role will prioritise candidates with private sector experience, especially with a multinational corporation, says Zaouali. He sees positive developments in sectors including consulting and insurance. (The financial services sector, which across the Gulf has been the most successful in terms of nationalisation, is currently facing market pressures as well as seeing cost efficiencies arising from digitisation). Still, a focus by the private sector on hiring nationals at a graduate level may make it harder for more experienced candidates to find senior roles, Zaouali says. Still, the slowdown in public sector hiring across the GCC means that quick uptake is needed by the private sector. “The next 12 months will be a very interesting time,” says Zaouali. “The moment of truth of whether Emiratis can go to the private sector, and the private sector can welcome them with open arms.” B