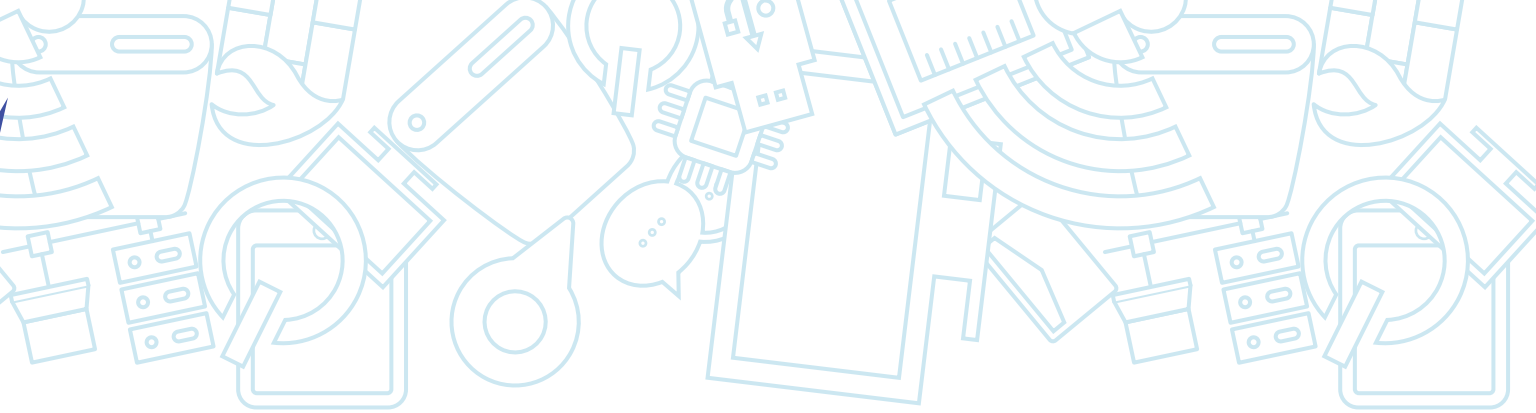




TECH TALENT SCRAMBLE

Global competition for a limited pool
of technology workers is heating up

Pedro Nicolaci da Costa



Darren Kidd was making six figures a year working in Chevron’s tech support department in Australia. He had never worked abroad before and had no plans to move his young family from their hometown of Perth, on Australia’s west coast.

Across the continent and the Tasman Sea, the city of Wellington, New Zealand, was struggling to attract enough tech workers with the right skills for its fledgling start-up scene. So officials came up with an ambitious plan to woo families like Kidd’s to the island nation: flying in 100 high-skilled workers and their families to the country’s capital to interview for jobs in person with its premier technology firms. More than 48,000 people from 28 countries applied.

Kidd, who at first wasn’t sure about living a nine-hour flight away from his hometown, discovered a vibrant city with a number of interesting jobs in start-ups and cloud computing—“a much more exciting prospect than many of the companies I was looking into in Perth.” The 32-year-old moved to Wellington in August to work as a developer for Xero Limited, a fast-growing accounting software company based in Wellington. The pay was comparable to what he had been earning in Australia when factoring differences in the cost of living, but the New Zealand capital’s strong commitment to embracing technology workers and helping their families transition, as well as the quality of life, proved a major draw.

Companies are finding their fortunes—and futures—increasingly tied to their ability to attract a limited pool of qualified technology workers. That shortage is expected to become more acute in coming years as the role of tech continues to expand across industries. Globally, tech spending was expected to grow to \$3.7 trillion last year, up 6 percent from 2017, according to estimates from Gartner Inc., a global research firm based in Stamford, Connecticut.

Technology and science jobs in the United States outnumbered qualified workers by roughly

3 million as of 2016, according to data from Netherlands-based human resources consulting firm Randstad NV. By 2030, there will be a global shortage of more than 85 million tech workers, representing \$8.5 trillion in lost annual revenue, according to management consulting firm Korn Ferry, based in Los Angeles.

Among the economies expected to be hit hardest are Brazil, Indonesia, and Japan, which could face shortages of up to 18 million workers apiece, according to Korn Ferry’s projections. The United States and Russia are expected to be short 6 million workers each, while China could face a deficit of 12 million.


“It’s pure supply and demand,” says Alan Guarino, a vice chairman at Korn Ferry. “Companies are paying more, they’re hiring more, but there is still a shortage of high-skilled tech workers. Technology is the thread that runs across every aspect of business.”

Countries are finding their fortunes increasingly tied to their ability to attract a limited pool of qualified technology workers.

The economic stakes are rising as technology permeates a growing number of sectors. The tech share of US GDP has surged more than sixfold since 1980, according to figures from professional services firm PwC, although employment in the sector has not expanded materially, indicating the magnitude of productivity gains. With productivity growth slowing worldwide since the Great Recession, demand for tech-skilled workers has remained strong, especially outside the United States.

There is high demand, Guarino says, for data scientists, software engineers, programmers, and





cloud computing experts, not just at software firms and traditional tech powerhouses like IBM and Cisco, but also in retail companies and financial firms, leading companies and municipalities to become increasingly aggressive in how they recruit new workers.

Government is also getting in on the act. School districts, cities—even entire countries—are competing to poach employees from each other by offering targeted financial incentives including higher salaries and tax breaks. Government officials increasingly realize the speed of technological change raises the chances of being left behind. The race for talent, it turns out, has also become something of a public function.

A recent high-profile example: the competition among US and Canadian cities to become home to Amazon's second headquarters campus. After an exhaustive race that had local governments and development agencies competing to offer new incentives, the company ended up choosing fairly predictable locations precisely because of their abundance of tech talent. In a measure of the intensity of the scramble for talent, Amazon was to receive incentives worth nearly \$2.5 billion from the selected locations, New York City and Arlington, Virginia. Amazon later abandoned plans for a New York base following objections from some local officials.

On the national level, countries like Israel and Poland have become success stories when it comes to filling tech jobs, in part because both had a high domestic tech skill base to begin with. Sometimes called the "Start-up Nation," Israel has more start-ups per capita than any other country. Poland also boasts a strong start-up community along with a highly educated workforce with lots of English speakers. These made Warsaw an attractive location for Google to launch a new campus in 2016.

Crisis-stricken Greece is trying to revive its economy by partnering with venture capitalists to invest in homegrown tech companies. Athens-based Marathon Venture Capital, which has been investing in Greek start-ups for 12 years, says in a 2018 report that the local talent pool is attracting the attention of multinational tech companies like Oracle, Samsung, and Citrix, all of which have acquired Greek tech companies.

Portugal is offering residency and the prospect of eventual citizenship to tech workers and entrepreneurs. And India, already a technological hub for many international firms—like Microsoft and SAP Software Solutions—and homegrown tech companies like Tata Consultancy Services, is looking to retain its stronghold by offering broad training programs for the next generation of workers in IT, telecommunications, and other related fields. Prime Minister Narendra Modi launched a wide-ranging program called Skill India in 2015, looking to nurture tech skills in the younger generation.

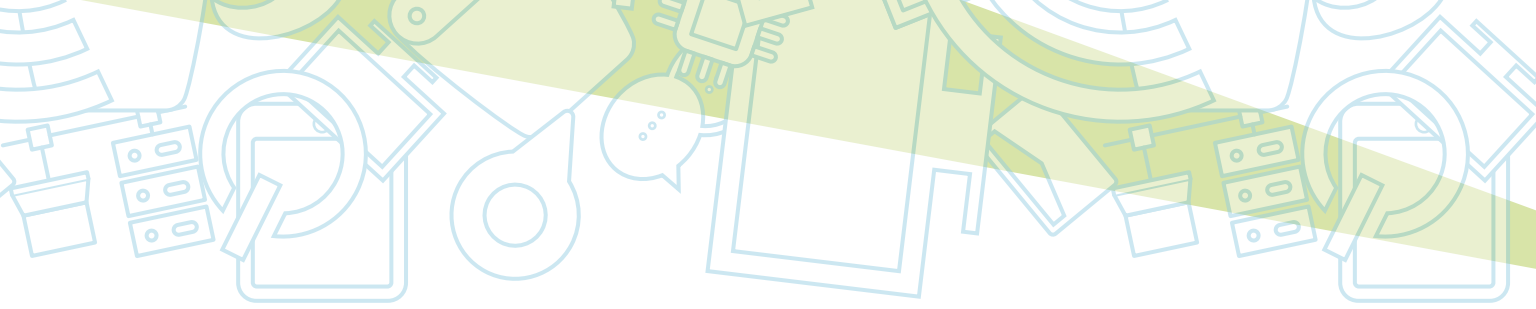
China has seen mixed results. While it sends millions of young students overseas for secondary education, many for training in science and technology fields, China has until recently achieved limited success at attracting those students to work back home. Language and cultural barriers have also made it tougher for China to attract talent from abroad.

In Europe, the tech industry's fate has been closely linked to the fortunes of the continent's economy, which wobbled during the 2012 crisis but has since recovered. When Pedro Presa, a Portuguese entrepreneur, started scouting for the perfect city in which to launch his dream project, a streaming soccer video service called Mycujoo, he narrowed his search to three cities: London, Berlin, and Amsterdam (Presa was based in Zurich at the time but knew he didn't want to stay there).

He quickly ruled out the first two—too expensive, he says—and homed in on the Netherlands, which allows foreign workers to earn 30 percent of their income tax-free, making it easy for him to recruit high-skilled workers.

"It's very attractive here to hire expats because of the 30 percent rule," Presa says, adding that it's also easier to hire workers than in countries like Switzerland that have immigrant worker quotas.

He set up shop in 2014 but had always hoped to find a way to do business back home in Portugal. That opportunity came in 2016, when Portugal—recovering from a deep financial crisis—began creating new incentives to attract tech firms like Presa's. At the same time, a stronger Dutch economy meant greater internal competition for workers. In addition to other measures, Portugal this year started to offer a path to a European Union passport for anyone willing to hire at least 10 workers or make other major investments in the local economy.



Presa's firm, Mycujoo, opened an office in Lisbon two years ago. It now has 18 employees, and he expects to hire three dozen more in the next year.

"The government has been speaking with us about potentially creating a financial incentive for us as long as we reinvest in hiring people," he says, adding that he hopes to eventually move back to Lisbon himself. "Portugal has a really good quality of life and is not very expensive—so it just became an attractive place for people to move."

Some parts of the world can offer neither competitive salaries nor an attractive lifestyle to lure

His solution was to partner with local universities to run workshops and develop courses to groom new workers who can navigate the company's newest technologies, which include sensors that help farmers increase productivity.

"Once they graduate, they join us," Ekekwe says. "We provide them with road maps of emerging technologies."

But, he says, that solution can present a new challenge: preventing the workers he has invested so much in from being poached by multinational companies hunting for skilled workers.

Some parts of the world can offer neither competitive salaries nor an attractive lifestyle to lure skilled employees.



skilled employees. This leaves companies to tap into a pool of remote workers, who may not have to physically move in order to switch jobs. That's a double-edged sword, though. Reliance on remote workers makes it that much easier for international firms to hire away each other's employees, says Igor Rubenstein, managing director of Ukraine Tech, an IT recruitment firm in Kiev. After all, he says, "there's a shortage of IT workers all across the globe."

Where recruiting tech employees from abroad is not an option, some companies and governments are seeking to train their own. Kenya, Nigeria, and South Africa are looking to Google to train 10 million high-skilled workers. The tech giant launched a free training program aimed at closing the so-called digital divide between rich and poor nations, starting in March 2017. Locals say the services are fairly basic, but they are free—and much needed, especially in more rural regions.

The program will help close the deficit of skilled workers faced by Ndubuisi Ekekwe, who started an electronic design firm in Nigeria in 2010.

Ekekwe, the founder of First Atlantic Semiconductors & Microelectronics, says few locals have the specialized skills he's often looking for. Those who do tend to work for high-paying, foreign-funded start-ups or run their own companies. Recruiting high-skilled workers from other continents, he added, tends to be impractical because it is difficult to match international salaries.

He's sometimes had to take extreme measures. After a number of employees were lured away, he moved his headquarters from Lagos to Owerri, a city of 1.2 million people about an hour's flight from the capital where there are fewer competitors and a lot less traffic and pollution. Another advantage of being outside the capital: his design and technical teams are now less likely to be snatched away by corporate headhunters, he says.

In Wellington, city managers were going for the opposite approach: flying in Kidd and other workers to meet with headhunters from a number of different firms. Although the companies were effectively vying against each other for the same pool of candidates, the program was successful in drawing thousands of qualified applicants, says David Perks, general manager of the Wellington Regional Economic Development Agency.

Perks says the partnership with domestic firms like Xero was crucial to the program's success in drawing qualified candidates from around the world.

The gorgeous surroundings, including the blue-ocean beaches and tree-covered mountaintops, didn't hurt either: "You can't beat Wellington on a good day," says Kidd, who adds that New Zealand now feels like home. **FD**

PEDRO NICOLACI DA COSTA is communications director at the Economic Policy Institute in Washington, DC. He was previously a financial journalist at Reuters, the *Wall Street Journal*, and *Business Insider*.