Decoding Global Reskilling and Career Paths

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A study of 209,000 people in 190 countries shows the appeal of professional reinvention at an uncertain time

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Decoding Global Reskilling and Career Paths

This is the third in a series about the pandemic's long-term impact on work.

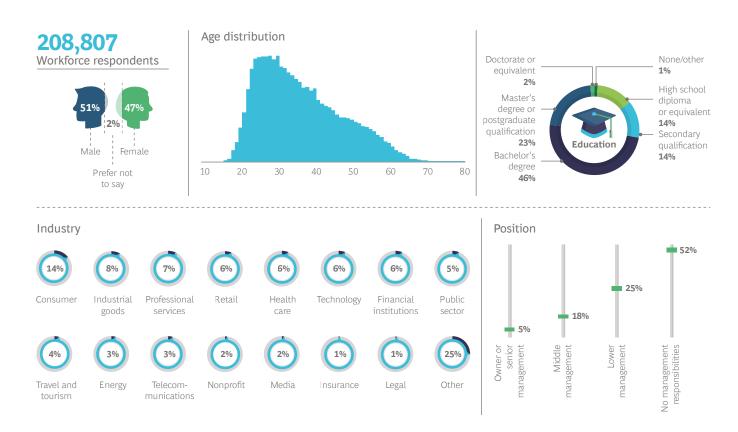
f you were working as a bank loan officer during the past few years, you might have had an uneasy feeling that somebody, somewhere, was creating software that could take your place. Retail managers had similar concerns, as foot traffic to their stores declined. So did automotive factory workers amid the rise of robotics.

But just because some tasks are becoming automated, it doesn't mean your livelihood is going away completely. And it's human nature to think any lull may be temporary. Or that you'll get an unmistakable signal before your job is truly in danger, so you'll have enough time to move to something more secure.

The pandemic eliminated a lot of that wishful thinking.

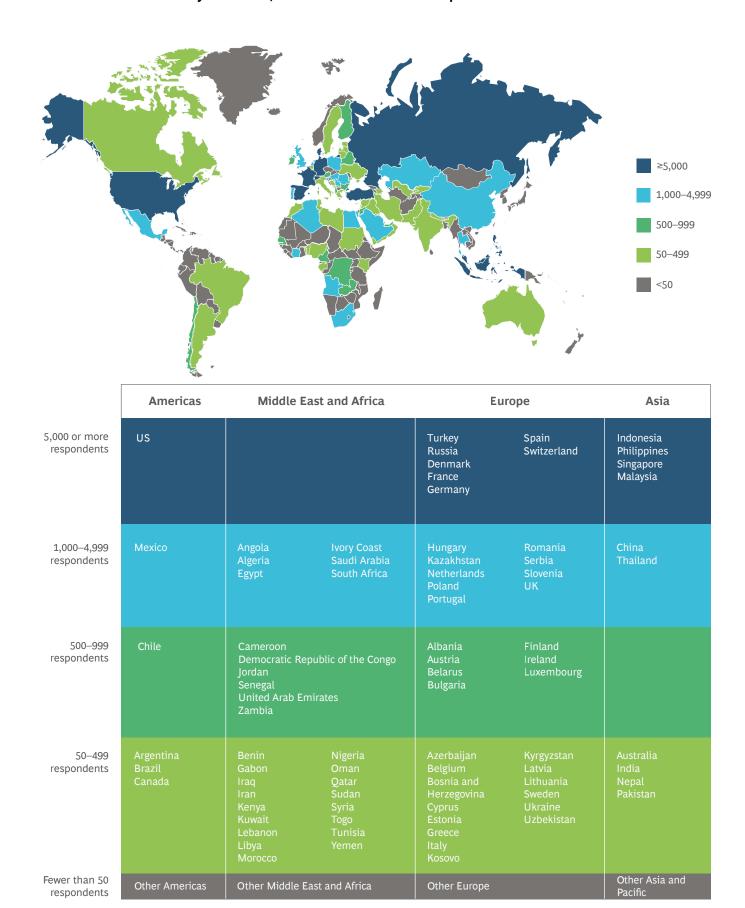
More than a third of workers globally were laid off or had to accept reduced working time because of business closures or slowdowns stemming from COVID-19, according to a study by Boston Consulting Group and The Network. The disruption to professional lives and incomes has many questioning whether the work they've done in the past will be the work they do in the future. And the feeling that one should prepare oneself for professional uncertainty isn't limited to those whose incomes have fallen during the pandemic. Almost seven in ten people say they are open to switching to completely different job roles, according to BCG and The Network's survey, which drew on responses from 209,000 workers in 190 countries. (See Exhibits 1 and 2.)

Exhibit 1 - Demographics of Survey Respondents



Source: 2020 BCG/The Network proprietary web survey and analysis. **Note:** Some percentages do not total 100 because of rounding.

Exhibit 2 - A Survey of 208,807 Workforce Respondents in 190 Countries



Source: 2020 BCG/The Network proprietary web survey and analysis.

In earlier parts of this series, we explored how the pandemic has changed people's mobility preferences and desired ways of working. This third report focuses on the risks to different job categories and on the challenges for employers as they reskill their workers for the future. (See the sidebar, "Methodology.")

The Pandemic's Impact on Workers, Jobs, and Industries

The pandemic has been hardest on workers who are very young or who have low levels of education. Almost half of all respondents younger than 20, or with no more than a high school diploma, reported a negative impact on their livelihoods—well above the global average of 36%. (See Exhibit 3.) Many jobs held by the very young or less educated—including sales, restaurant, and customer service jobs—don't involve long-term contracts and can be terminated easily. In many cases, the pandemic eliminated these sources of income overnight.

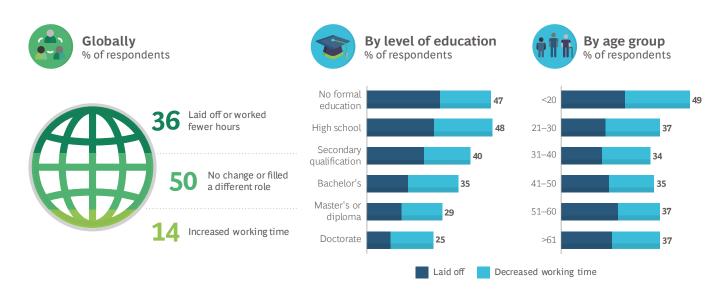
"The semiskilled and unskilled got impacted the most," said Sudha Lakshmi, a manager at a private-sector health insurance company in India. "Entire families are at a loss."

Not surprisingly, travel and tourism has been the hardesthit industry. Sixty-eight percent of travel and tourism workers have either been laid off or seen their hours cut. Media, professional services, and retail have also taken a major blow; 40% or more of the workers in those industries have either lost their jobs or been assigned fewer hours.

By contrast, there has been less of an impact in sectors where workers tend to be well educated or highly trained. IT and technology workers, for instance, haven't suffered a significant income loss. (See Exhibit 4.) And people in more specialized technology—digitization and automation, which includes roles like data scientist and user experience designer—have found themselves in higher demand and working longer hours. "I don't believe there was a better industry to be in during this pandemic than mine," said Tomilola Abiodun, who works for a top US software compa-

Exhibit 3 - Profile of Workers Hurt Most by the Pandemic

Young and less educated people are the most likely to have been laid off or asked to work fewer hours



Source: 2020 BCG/The Network proprietary web survey and analysis.



Methodology

BCG and The Network (together with its affiliate organizations) conducted this survey between October and early December of 2020. All told, 208,807 people, in 190 countries, participated. The sample includes about an equal proportion of men and women, most of whom work in commercial industries. (The public sector and nonprofits are also represented.) The respondents are mostly early-and mid-career, and the majority are 20 to 40 years of age. Almost three-quarters of them have a bachelor's degree or above.

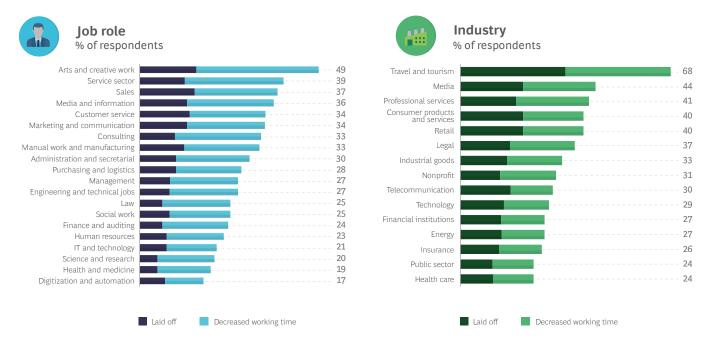
The 40-question survey elicited workers' attitudes regarding a variety of topics, including their willingness to work abroad, the countries (other than their own) that they would most like to work in, and the impact of COVID-19 on their work preferences, employment situation, and willingness to learn new skills.

The information gathered in the survey (which included people's nationalities and level of hierarchy in their organizations) made it possible to analyze workers' attitudes along a variety of parameters.

BCG also conducted follow-up Zoom interviews with select study participants around the world. Those interviews furnish the direct quotes that appear in this report.

Exhibit 4 - The Most Vulnerable Job Roles and Industries During COVID-19

Creative work has dried up or become less lucrative; service personnel and salespeople have also struggled



Source: 2020 BCG/The Network proprietary web survey and analysis.

ny as a product marketing manager. "I am not aware of my company doing any COVID-19-related layoffs. In fact, we were given more support, including pandemic leave days and wellness days."

The other types of workers who, in aggregate, have found themselves working more, rather than less, during the pandemic are those in health and medical jobs.

Geography has also played a role in the pandemic's employment effects. In broad terms, the impact has been worst in developing economies. (See Exhibit 5.) Asian countries that handled the first wave of COVID well, such as China and Singapore, seem to have done better; there has also been less of a hit to the livelihood of most workers in Europe. (The UK is an exception.) But it is not easy to find a clear explanation for these differences. Some of the differences may stem from the industries and job roles most prominent in particular countries.

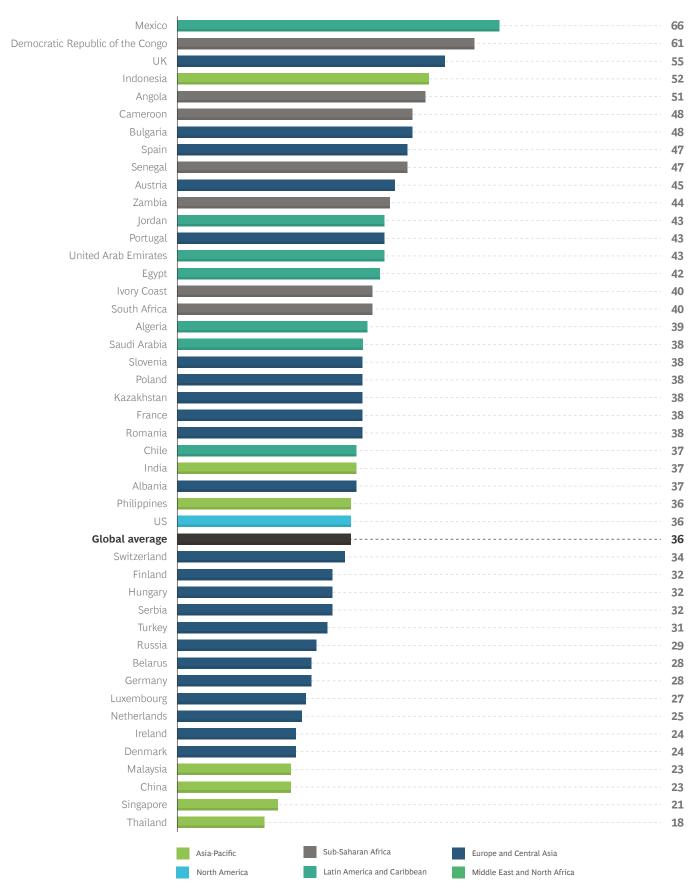
Automation's Impact on Workers, Jobs, and Industries

While the pandemic has posed a dramatic new threat to many jobs, questions about job security had already been on people's minds because of automation.

In our survey, concerns about automation were especially common among younger workers, with 46% of those in their twenties and 41% of those in their thirties saying they had become more worried since the prior year about technology putting them out of work. The inverse relationship between age and concern about automation has a certain logic: younger respondents realize there is simply too much time left "on the clock" for them to be confident of not being there when the change comes.

Exhibit 5 - Impact of COVID-19 by Country

Percentage of people who either were laid off or worked fewer hours during the pandemic

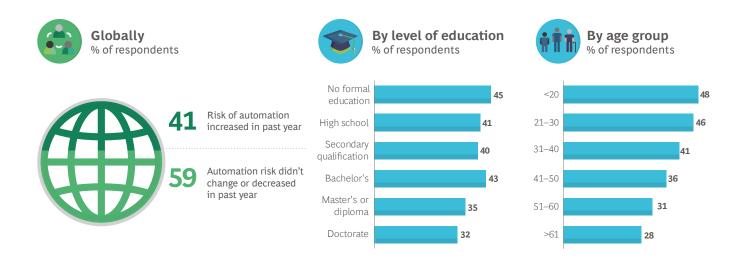


Source: 2020 BCG/The Network proprietary web survey and analysis.

Note: Countries shown had more than 500 survey respondents.

Exhibit 6 - Profile of Workers Concerned About Automation

Respondents say the automation threat has increased from a year ago



Source: 2020 BCG/The Network proprietary web survey and analysis.

Education doesn't seem to have much of an impact on workers' automation concerns, except for those with advanced university degrees who feel that their jobs are much less replaceable. (See Exhibit 6.)

Just about every kind of worker, in every field, has some level of concern about automation. For instance, in New York's film production industry, more and more jobs are being threatened by technology, said Sophie Franc, a free-lance production coordinator there. Video projects have less of a need for imaging technicians now that software is making it easier for nontechnical producers to get the effects they want. And the drivers who pick up equipment are starting to wonder when autonomous vehicles will take their place, according to Franc, who recently went back to school to ready herself for opportunities outside the field.

Concerns about automation are particularly high among customer service workers and those in white-collar jobs that involve repetitive tasks, such as auditing, HR, and administration. (See Exhibit 7.) People with jobs in media and information also have significant concerns about automation; so do manual and manufacturing workers (partly because of robotic solutions in factories). Even IT and technology workers sense a threat—perhaps because of the speed of change in their field.

The only categories of jobs that seem largely beyond technology's reach are those that are rooted in human contact (like health care and social work) or that rely on specialized knowledge (like law and research). People in management positions are also relatively unconcerned about automation. Managers may think that machines aren't suited to complex human interactions. Or they may believe that technology itself needs to be managed by someone.

Geographically, there are also big differences in the number of people who see automation jeopardizing their livelihoods. The perception of a threat appears to be most common in economies with few worker protections and high levels of digitization (meaning a good chance of one's job being affected by technology). This is the situation in Singapore, in China, and in a fair number of other Asian countries. It is also the situation in the US, which has relatively light employee regulations and a tradition of at-will employment.

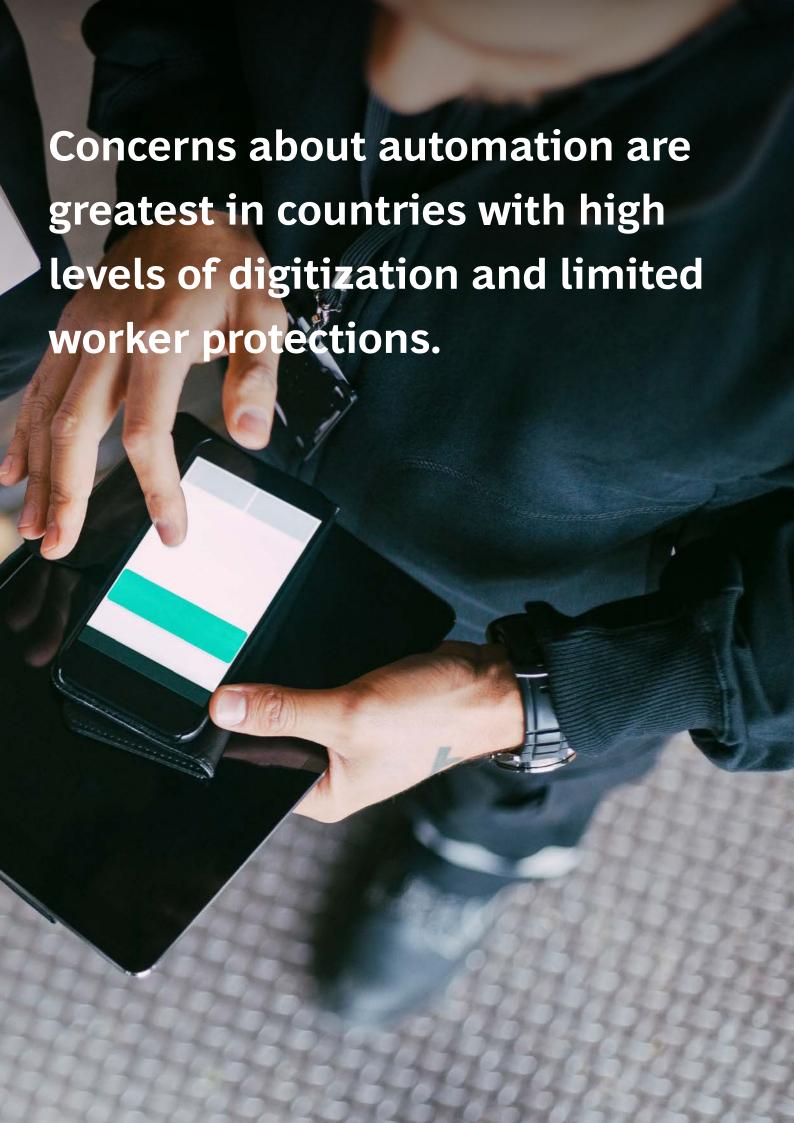
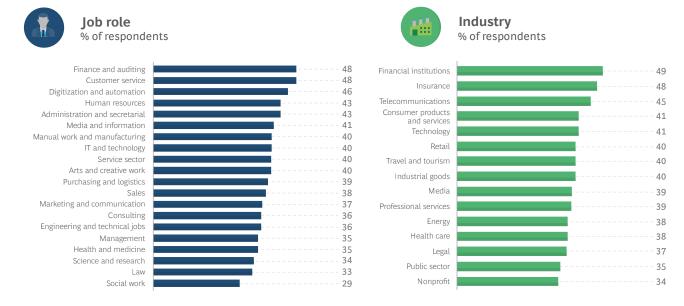


Exhibit 7 - Perceived Threat of Automation to One's Job

Respondents who are more concerned now than they were a year ago



Source: 2020 BCG/The Network proprietary web survey and analysis.

African respondents are also concerned, with workers in South Africa, Ivory Coast, and Cameroon ranking particularly high. "With the pandemic, companies have started automating more jobs," said Cherif Ahmed Alexandre, an engineer from Ivory Coast. "This is becoming a growing issue for me."

European respondents tend to be the least worried, likely because of the strong worker protections they enjoy. In the Netherlands and France, only about one in every four workers worries about automation; in Denmark, only one in five does—half the global average. (See Exhibit 8.) People in these countries may think that even if workplace technology advances, their jobs will be protected or they will be supported and given time to find new jobs in their fields

Willingness to Retrain

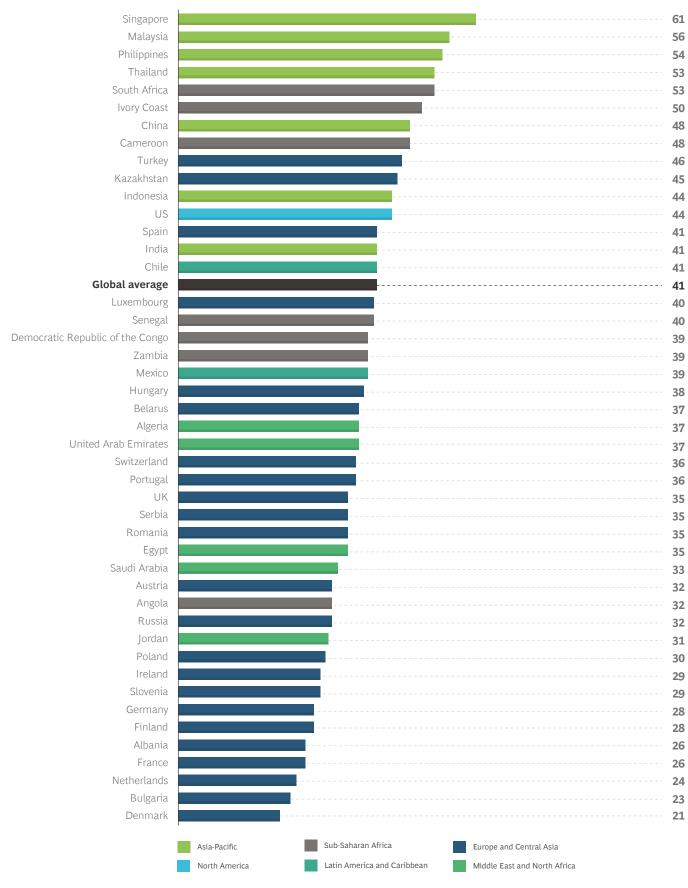
If people feel that their jobs are risk—owing to either COVID-19 or automation—it makes sense for them to at least entertain the possibility of a career change.

Retraining willingness is an indicator of this flexibility. Altogether, 68% of our survey takers said they are willing to retrain and only 4% said they are unwilling to retrain under any circumstances—similar to the numbers who said this in 2018, when we last asked the question. The willingness is particularly high among people in the earlier and middle parts of their careers; it's lower among the youngest workers and those older than 60 (some of whom may be nearing retirement). Willingness to retrain is also lower among the most educated workers, such as those with doctorates. (See Exhibit 9.)

Manuel Milliery is an example of someone open to retraining. An entrepreneur in his late thirties living in Paris and previously focused on software and digital services, Milliery spent the early part of the pandemic learning about chemistry and developing a product that produces environmentally friendly packaging. "I didn't have any skills in chemistry—I had to learn everything there was on the topic," he said. Websites and mobile apps were his sources of learning during a period of unwanted idleness, which he took advantage of to develop new skills.

Exhibit 8 - Perceived Automation Threat by Country

Percentage of people who say technology is a bigger job risk now than it was a year ago

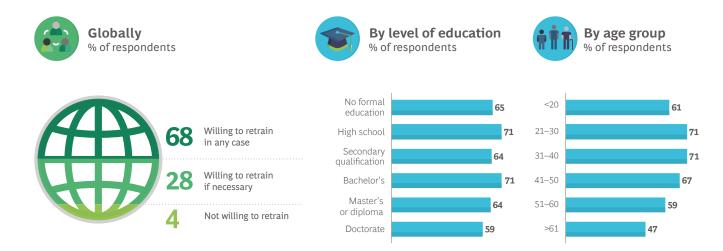


Source: 2020 BCG/The Network proprietary web survey and analysis.

Note: Countries shown had more than 500 survey respondents.

Exhibit 9 - Appetite for Retraining Peaks in People's Twenties and Thirties

Who would retrain for a completely different job role—and under what circumstances



Source: 2020 BCG/The Network proprietary web survey and analysis.

When looking at job roles, there is a certain realism to different people's attitudes about retraining. (See Exhibit 10.) In job roles that face the most risk of technology replacement—and that have endured the most disruption during the pandemic—retraining willingness exceeds 70%. This is the percentage of retraining willingness among service-sector workers, customer service people, and salespeople. Those in job roles seen as less vulnerable—science and research, health and medicine, and social work—generally aren't as willing to retrain. Arts and creative work is the one job category where there seems to be something of a disconnect between perceived risk and a willingness to retrain. Even here, though, retraining willingness is above 50%.

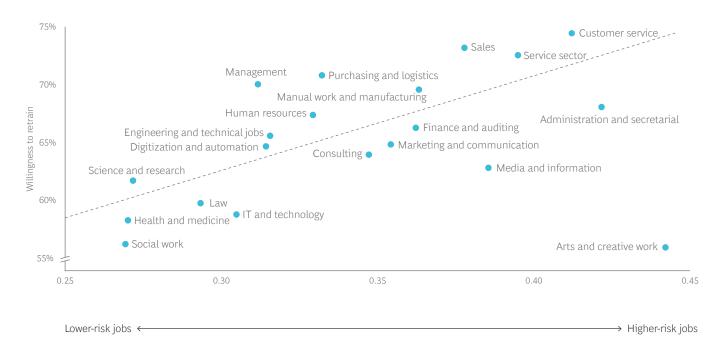
African countries lead the world in retraining willingness, accounting for six of the top ten countries by share of respondents ready to reskill. US workers are close to the bottom on this measure, despite the lack of formal protections in the country and despite economic disruptions that devastated many small US businesses during the COVID-19 crisis.

The relatively low level of automation concern expressed by Europeans may be one reason why they are less willing to retrain, with countries including Austria, Germany, Denmark, and the Netherlands at the bottom of the list. Europe is also a place where people still take considerable pride in the training and education they have received and often regard the professions they have chosen as their lifelong job focus. (See Exhibit 11.)

And then there are the people whose willingness to retrain is not a function of their job, country, or age but of individual characteristics, such as an appetite for personal or professional reinvention. "I have already changed careers twice in my life," said Muriel Giroud-Villaine, an independent French consultant who works with companies in the mining, pharmaceutical, and technology fields. "I would not mind doing it again if something comes up in a field I'd like to try."

Exhibit 10 - How Retraining and Job Security Are Related

People whose livelihoods are threatened see the most value in learning something new



Source: 2020 BCG/The Network proprietary web survey and analysis.

Note: Job risk reflects two factors: the extent of employment impact during the pandemic and the perceived threat from automation according to workers in each field.

New Careers That People Favor

As people think about retraining, an important question is which new careers they would embrace. A few answers emerge from our survey. (See Exhibit 12.) Digital and IT jobs top the list, probably because of the generally good compensation such jobs offer and the expanding opportunities in those fields. Office and management jobs (like consulting, marketing, and HR) also get attention, possibly because of the perceived ease of the transition into those jobs for a variety of workers.

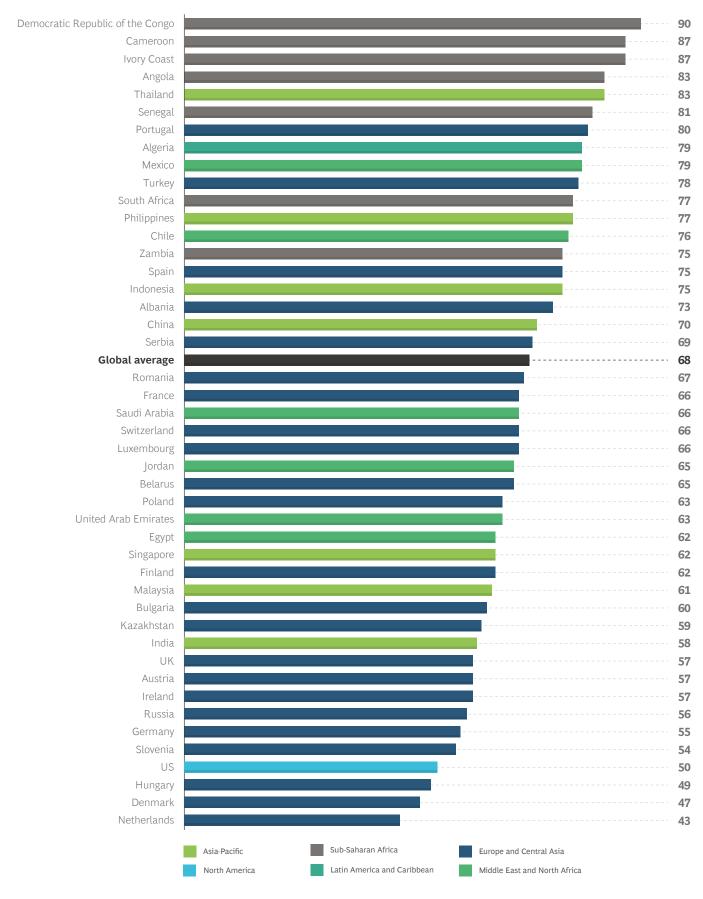
Indeed, one thing that comes through clearly in our survey is the preference that would-be career switchers have for job clusters that feel familiar. This explains the interest among IT and technology workers in digitization jobs, and vice versa. Likewise, social workers and health care workers could see themselves entering each other's professional domains. The same is true of people in media, marketing, and sales. All three of those job roles—looked at in a certain way—have similarities.

In another sign of people's realism after a year of staggering challenge, most of the areas of retraining willingness involve moves into fields that, at least for the moment, seem less risky. For instance, manual workers' top retraining choice is the field of engineering—in which there are a wide variety of jobs. To people currently in arts or creative roles, media and marketing are the favored retraining categories.

One exception to the logic of reskilling targets: those in customer service anticipate a move into administrative and secretarial roles—which, in fact, are pretty far out on the risk continuum. These jobs will likely continue to contract in the future.

Exhibit 11 - A Geographical Look at the Appetite for Retraining

Percentage of people who are willing to retrain for a completely new job role



Source: 2020 BCG/The Network proprietary web survey and analysis.

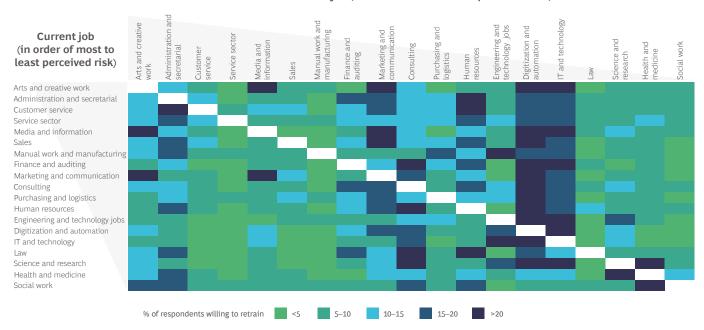
Note: Countries shown had more than 500 survey respondents.

When people think about reskilling, digital and IT jobs are at the top of the list.



Exhibit 12 - "Yes" to Retraining. But to Do What?

Possible future job (in order of most to least perceived risk)



Source: 2020 BCG/The Network proprietary web survey and analysis.

Note: Job risk reflects two factors: the extent of employment impact during COVID-19 and the perceived threat from automation according to workers in each field.

Learning Habits

Learning has been a priority of the global workforce for at least the last few years and remains a priority today. In 2018, 65% of respondents to our survey said they had spent a significant amount of time—a few weeks or more—on learning in the previous year. The proportion is almost identical now. And it's the rare worker who spends no time at all on learning.

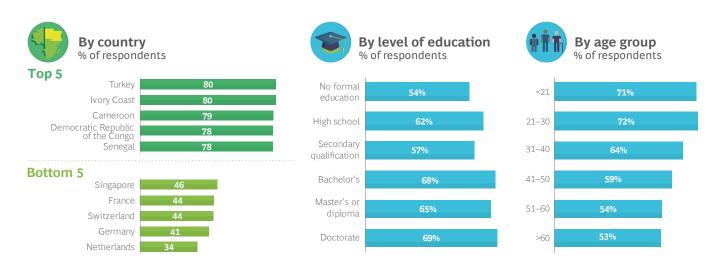
Time spent on learning largely tracks the geographic willingness-to-retrain metric, with African countries mostly at the top of the list and European countries close to the bottom. (US workers are also pretty far down the list.) This may be partly because of differing education systems. People in western economies often go through lengthy, highly structured education processes that give them skills they can immediately apply in the working world. Churning out highly skilled graduates is not as common in Africa, and Africa's less developed economies may be another reason why there is a higher interest in training there—it's more common for Africans to switch fields.

Other factors, besides a worker's home country, affect learning habits. Age is one factor. The habit of learning is strongest among those early in their careers and tails off later. Previously attained level of education is also a factor in time spent on learning, with the most educated being more likely to spend time each year refreshing their skills. Educated people also tend to be employed in knowledge-based jobs (engineering, science, and law are examples), where to not continually be learning is to risk obsolescence. (See Exhibit 13.)

Miloš Vukadinović is a good example of someone with a continuous-learning mindset. A Serbian who works as a municipal adviser, Vukadinović, 36, recently completed an online training course offered by an organization located in The Hague, Netherlands. He would eventually like to take classes in AutoCAD and Photoshop as well. "I am not looking to become an expert on these topics," he said. "I just want to broaden my set of skills."

Exhibit 13 - Who Spends the Most (and Least) Time on Learning

Respondents who spend at least a few weeks on training every year



Source: 2020 BCG/The Network proprietary web survey and analysis.

Preferred Ways to Learn

The Hague—located class that Vukadinović took during the pandemic hadn't previously been available online. And this is one of the biggest changes in learning in the last year: the rapid growth of online tools. Greater supply partly explains the shift—more online classes are available today than in the past. And people are also more open than they used to be to learning outside of a physical classroom. Indeed, some people now prefer it.

One convert is Giroud-Villaine, the French consultant. She has been doing online courses for several years and really likes the approach. "I tried once or twice to go back to a more traditional type of classroom training, but I prefer online because you can do it in your own environment and on your own schedule."

The proportion of people who use either an online education institution or a mobile app for learning (48% and 36%, respectively) has jumped substantially since 2018. Both still trail on-the-job training and independent study, the most popular approaches to workplace learning, but they are catching up.

Another change since 2018 is increased use of government training programs. The use of such programs has more than doubled, perhaps because of governments' efforts to upskill and reskill workers during the pandemic. (See Exhibit 14.)

Implications: How Companies Can Prepare for an Uncertain Future

COVID-19 is just the latest global shock—after the 2001 terrorist attacks and the 2008 financial crisis—to create economic turmoil in the early years of this century. No one knows what the next shock will be, of course. But it'll come. Unpredictable challenges combined with the increasing march toward automation threaten organizational stability and will require adjustments from workers all over the world.

If there were any doubts that workers understand how uncertain things have become, our survey dispels them. It shows the types of jobs that, from workers' own perspectives, are most in danger of disappearing. And it shows—through retraining willingness—the jobs for which, in the future, there may well be a wider pool of talent.

The aftermath of the pandemic will create both opportunities and imperatives for organizations. In previous reports in this series, we have gone into detail on one of the opportunities (the trend of remote foreign work) and one of the imperatives (the need to continue offering work-from-home models after the pandemic ends). But there are other things that organizations should do too.

Exhibit 14 - A Jump in the Adoption of Digital Learning Tools

Percentage of respondents using each resource, in 2018 and now, to train or develop skills



2020 top learning resources		
On-the-job training (including coaching and job rotation)	65	
Self-study	62	
Online educational institutions (such as digital academies and MOOCs)	48	→ +18 pp
Conferences and seminars	41	
Traditional educational institutions (such as academic and vocational degrees)	37	
Mobile apps	36	→ +12 pp
Government programs	16	

Source: 2020 BCG/The Network proprietary web survey and analysis **Note:** MOOCs=massive open online courses. pp=percentage points.

Make strategic workforce planning a dynamic pro-

cess. In the past, we have made the case for organizations to use a strategic workforce-planning (SWP) process to forecast their talent and skill needs. Many employers have started to use SWP but usually only as an occasional exercise: once a year or less frequently. That isn't enough. Instead, employers should think of SWP as a toolkit and capability that would allow for workforce plans to be changed in real time, as new economic conditions and business circumstances emerge. The advantage of building a "weather station" rather than "being able to forecast the weather once in a while" is the way one executive put it to us in explaining his preference for an always-on SWP capability.

Consider candidates with unusual career paths.

Rules-based shortcuts for applicant evaluation—such as the ones used in automated resumé reviews—have their place. But those shortcuts could work to the detriment of recruiters in the wake of the pandemic, when many workers will be learning new skills and redefining themselves. Some typical requirements, such as uninterrupted employment, should almost certainly be rethought.

Governments may have an enabling role to play in this area. For instance, they may want to reevaluate any regulations—including with respect to mandatory educational credentials or prior work experience—that impede the flow of talent.

Upskill at scale. Despite the current uncertainty, there are already a few skill areas—for example, digital skills and agile working—for which the development need is almost universal. Our advice to companies that have an obvious upskilling need in any area is to go ahead and build a large-scale upskilling program. The rudiments of this are good skills management—being able to assess and track workers' proficiency in key areas—and a learning-journey approach that can be rolled out and customized to thousands of people efficiently.

Governments can support organizations' moves in this direction through national upskilling initiatives or by coordinating industry-wide learning programs.

Invest in building a learning organization. If you want to make it possible for your people to learn and adapt continuously, you have to set up the right culture, incentives, and infrastructure to support those goals. This means making learning a key part of your employer value proposition, ensuring that executives act as role models, and incorporating learning metrics into performance evaluations at your organization. It may also mean investing in modern learning IT solutions and subsidizing workers' time spent away from their regular jobs in order to develop new skills.

Governments can encourage this by offering financial incentives to employers, including tax credits on learning-related costs.

Give employees autonomy over their learning decisions. For both practical and psychological reasons, it's probably best—once you've laid the groundwork for learning—to make employees responsible for their own reskilling. For governments, this could mean offering individual learning accounts (ILAs), with employees amassing credits that they can use to take work-related courses. (The French are furthest along in supporting ILAs.) Companies can offer flexible menus of learning courses or subsidize the cost of employee-designed learning programs that they believe will work in their long-term interests.

Emphasize self-driven, on-the-job learning methods.

Our data shows that workers prefer to learn by them-selves—either on the job or online. Indeed, if they don't use what they've learned within a few days, people tend to forget it. It's thus a much better practice to integrate learning into daily workflows, including through microlearning apps that incorporate virtual coaching, nudges, and gamification. Another way to increase learning effectiveness is to have workers collaborate closely with experts in up-and-coming areas, such as digital skills or agile work approaches. Apprenticeships are another model for on-the-job retraining and can be particularly effective for younger workers.

Cultivate people's ability to learn. Learning is most effective when people are truly present in the moment. Said another way, there's a meta aspect to learning that should probably be tackled even before the attempt to actually impart new skills. Such readiness can be encouraged through mindfulness training or meditation practices—anything companies can do to help workers free up mental capacity, reduce stress, be more self-aware, or open themselves up to new knowledge. Governments can support this effort by requiring high school or university students to take "learning readiness" classes as a prerequisite to graduation.

In the aftermath of COVID-19, no one would believe an employer that said a job came with a lifetime guarantee. But an employer can say, if it is true, that part of its organizational mission is to help employees continually remake themselves for the jobs that will exist in the future. That is all that anyone can ask for, and it could become a point of differentiation for companies in attracting and retaining talent

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