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Northwestern University in Evanston, Illinois. US institutions are in the grip of a recruitment moratorium.

JUNIOR RESEARCHERS HIT BY HIRING FREEZES

With student enrolment projected to fall as a result of the coronavirus, some US and UK institutions have halted recruitment. By Chris Woolston

uan Manuel Vazquez thought he knew where his career would take him after he wrapped up his PhD in genetics at the University of Chicago in Illinois in May. But the COVID-19 pandemic threatened to upend his plans. Vazquez had accepted a postdoctoral position in the lab of Peter Sudmant at the University of California, Berkeley, and was getting ready to start in July. But when he sent Sudmant an e-mail in April,

he received a startling response. "He told me there was a hiring freeze, so we'd have to see if we could actually get me hired."

Vazquez and Sudmant petitioned the university for an exemption, on the grounds that the position had already been offered and accepted. After three weeks of waiting and worrying, Vazquez learnt that the petition had been successful and he could start his postdoc as planned. "I feel very fortunate, but my

eyes are wide open," he says. "The longer this pandemic goes on, the more institutions will have to spend on the problem."

Career calamity

In a matter of months, the COVID-19 pandemic has brought the academic job market close to collapse in many parts of the world, says John Holmwood, a sociologist at the University of Nottingham, UK, and co-founder of the

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Campaign for the Public University. He says that the situation is especially dire in countries where institutions depend on tuition fees for survival, such as the United States and the United Kingdom. Projected drops in UK enrolment – up to 16% for domestic students and 47% for international students, according to some estimates – have forced those institutions to slash spending, putting an untold number of hiring decisions in doubt. "In a funding crisis, you have to take your savings where you can get them," says Holmwood. "Early-career academics are the ones that take the hit. It's hellish for the ones who are immediately graduating."

Hiring freezes are the new normal in the United States. Karen Kelsky, an academic career coach and former tenured faculty member based in Eugene, Oregon, is compiling a list of universities and university systems that have imposed hiring slowdowns or freezes. Built in part by submissions and tips from academics and posted on her website The Professor Is In, the list included around 400 institutions by mid-June, among them major research entities such as Harvard University in Cambridge, Massachusetts, and Stanford University in California, as well as the entire University of California system. Berkeley announced "a campus-wide hiring freeze" on 1 April. A follow-up the next day added that "no new positions may be posted and no offers may be made for existing positions or positions that are currently posted without an exception approved by the Finance Committee".

"It's a calamity," Kelsky says. Junior researchers who were hoping to find a tenure-track job are now thinking about a plan B, and recent graduates are struggling to find a career path. "New PhDs who haven't started their first postdoc are the most endangered," she says.

The situation in Europe

In the United Kingdom, the University of Oxford announced a "recruitment freeze" on 21 April, an early sign of trouble. Enrolment and admissions at many universities have held steady so far, but Universities UK, which represents 137 institutions, projected that the university sector as a whole will shed nearly £800 million (US\$990 million) in fiscal year 2019–20 as a result of COVID-related impacts, such as a loss of accommodation fees, cancelled conferences and the cost of moving courses online. The shortfall for the next fiscal year is expected to be "extreme", with a projected loss of nearly £7 billion in fees from international students.

Many UK universities have yet to formally acknowledge any slowdowns or halts in hiring, but the freeze has probably spread across the country, Holmwood says. He suspects that all UK institutions have suspended recruitment to some degree, even if they say otherwise. Institutions, he says, are reluctant to show any signs of distress that could further drive down

student enrolment. He has observed that many universities seem to be waiting for students to confirm enrolment before announcing any sort of social-distancing plans for the next academic year. "You have a big poker game going on," he says. "Universities might not want to admit that they are in trouble."

De facto freezes can show up in subtle ways, even if they aren't formally announced. Holmwood was on a committee that was about to hire a candidate in late March, during the first week of the UK lockdown. The university said that the committee could fill the new position, but it would have to be offset by someone else being made redundant. "In effect, we could appoint someone, but we'd be making one of our colleagues vulnerable," he says. The committee decided against hiring the candidate.

Holmwood notes that COVID-related hiring freezes have yet to grip universities in the European Union, where most researchers are funded by the government or external agencies. "There's no sense that universities

"New PhDs who haven't started their first postdoc are the most endangered."

in Germany, the Netherlands, Sweden or elsewhere are in financial crisis," he says.

The Young Academy of Europe, an association of early-career researchers, cautiously corroborates that. "It is too early to tell what impact the pandemic will have on university budgets and hiring, but certainly this should be carefully monitored," it told *Nature*. "We also stress that since basic research is vital for preparing for future crises, the budgets of both Horizon Europe and the European Research Council should be protected."

Still, some EU universities pay faculty members directly, and those positions could be affected by hiring moratoriums.

Tina Persson, a science career coach based in Stockholm, says that she's seen no signs of alarm in academia in her country. "People are still applying for postdocs and careers at the universities," she says. "As long you can bring in funding, they will support you." At least one media outlet has reported that the number of applications to Swedish institutions from international students has risen by 12% compared with the same period in 2019.

So far, Sweden has not enacted the types of sweeping lockdown seen in some countries, but Persson says that citizens and institutions take the pandemic very seriously. Universities are frantically working to make adjustments. "They've had to change all their routines," she says. "They've been extremely occupied."

Germany's Max Planck Society, which has institutes across Europe as well as in the United States and South Korea, continues to advertise

job openings for early-career researchers, including postdocs, and technicians. "The Max Planck Society has no reason to curtail hiring of postdocs or PhDs at our institutes," says spokesperson Christina Beck. If researchers need to suspend their work for a few months because of the pandemic, the society will extend their contracts. Beck adds that the Pact for Research and Innovation, a funding plan renewed by the German government last year, should keep budgets at the Max Planck Society and other German research organizations intact for the next decade.

Navigating a freeze

In regions where hiring freezes are a new fact of life, early-career scientists with academic ambitions will have to proceed with great caution, Holmwood says. "If you're heading to the UK as a newly tenured faculty member, I would seek assurance that your position has been deemed to be 'business critical,'" a label that suggests it won't be cut, he says. If that assurance can't be made, he says, the position might not be worth the risk. "In that case, I wouldn't give up a current post to come to a university."

Although his postdoc is secure for now, Vazquez doesn't take any future in academia for granted. "Even as an undergrad, I was aware that a career in academia would be an uphill battle," he says. To be safe, he's always stayed aware of possible opportunities in industry. "I've kept my foot in both doors. As I was doing my postdoc search, I updated my CV in case I had to switch gears and find a job in industry."

Even with a back-up plan, the dimming prospects of a job in academia can be painful. For Vazquez, who is from Puerto Rico, the potential setback is more than just personal. He rarely saw any Hispanic people in lifesciences faculty positions during his graduate and undergraduate education. "I feel like we were just starting to make a push at various institutions to increase diversity," he says. He wanted to be part of that trend, but now the entire movement is on hold. "That's what kills me the most about the hiring freeze," he says.

The hard times are unlikely to last forever. "My expectation is that there will be a oneor two-year hit to early-career academics," Holmwood says. He suspects that some senior faculty members might retire or relocate, opening up spaces. "I think the demographic structure of the universities will be rebalanced."

Kelsky notes that many universities never fully recovered from the recession that began in late 2007 and lasted until mid-2009, and she expects the current crisis to be much more damaging and longer-lasting. "Universities will survive, and there will still be a need for professors," she says. "But even in the best-case scenario, the loss will be felt for a long time."

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