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#### The Global Skills Marketplace

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## Foreword

In the wake of the global pandemic, the relationship between employees and employers shifted dramatically. Workers left their jobs in droves to find work that was a better fit with their values, leaving companies with a shortage of the talent they need to operate. Remote work offers an opportunity for companies to find the talent they need. Every disruption—and this one is no exception—creates winners and losers. In today's labor market, the winners will be companies that lean into remote hiring and take full advantage of the global talent marketplace. The potential gains are astronomical.

Taking advantage of global talent requires deep visibility into the state of remote work and the global talent footprint. Revelio Labs and Lightcast have come together to tackle the big task of surveying the footprint of global talent in this new economy.

While the overall potential of moving to remote work is enormous, there is a substantial diversity among which jobs are suitable for remote work, which skills can be found in which geographies, and which talent pools offer the highest payoff.

We are in a pivotal moment where labor markets stand to become more efficient than they have ever been before. With unparalleled visibility into talent pools across the entire globe, companies across every industry can expand their pool of potential workers and take advantage of an entire world of skills and capabilities.

Though the shift toward global remote work is still in its early stages, this report offers strong evidence for the potential of remote work and actionable takeaways for putting it to use. We encourage readers to read this report with an eye toward the future and think creatively about ways that specific organizations with specific needs can take full advantage of remote talent.





# ntroduction

Of all the changes that have shaped and disrupted the global workforce in the 2020s, remote work has been among the most pervasive, and its impact is here to stay. The door to remote work has opened to new regions and in new roles, meaning employers and workers alike now have access to the entire global labor market to find their best fits.

Remote work has proven to be popular among workers, who can use the increased flexibility to overcome job market obstacles like childcare, or just to spend less time commuting. But remote work is also opening up new opportunities for employers: with the ability to tap into a global pool of talent and expertise, they can expand their searches to find workers with the skills and experience they need to succeed in a rapidly changing world.

This new era is characterized by flexibility, adaptability, and innovation, and it promises to transform the relationships that define the modern labor market. Removing barriers to talent means getting even closer to a global labor market that works as fairly and efficiently as possible for everyone.

The shift toward remote work happened rapidly—while it had been possible but rare before 2020, it was normalized all at once in the initial months of the COVID-19 pandemic. Now, job posting numbers show that it has become widely established—in the US, over 3.5 million remote jobs were posted in 2022.

All else being equal, many managers would prefer an in-person workforce to a remote one, as remote work can make it more difficult to collaborate, build company culture, and onboard new employees. But all else is not equal: during the same period that remote work has gone mainstream, the labor market has become extraordinarily tight. In the US, there have been nearly twice as many job openings as unemployed workers, while unemployment reached its lowest level in decades.

Employers need workers at a time when they're hard to find—at least

locally. Global remote work provides a way forward. Data on job postings and worker profiles show that many employers are increasingly hiring from different countries within similar time zones, and these pairs of regions show that companies can operate remotely without needing to be fully asynchronous. Many of those pairs also show opportunities for businesses to save on costs without changing the skills required to do the jobs they need.

To understand the story of remote work across the globe, the first step is to understand how remote work has changed over time and what that means for employers. The second is to unpack how a global labor market can help support employer talent needs.

A fundamental shift in the relationship between the global workforce and its workplace is underway. By using labor market data to quantify that change, we can better understand what's happening in the present, and plan to take advantage in the future.





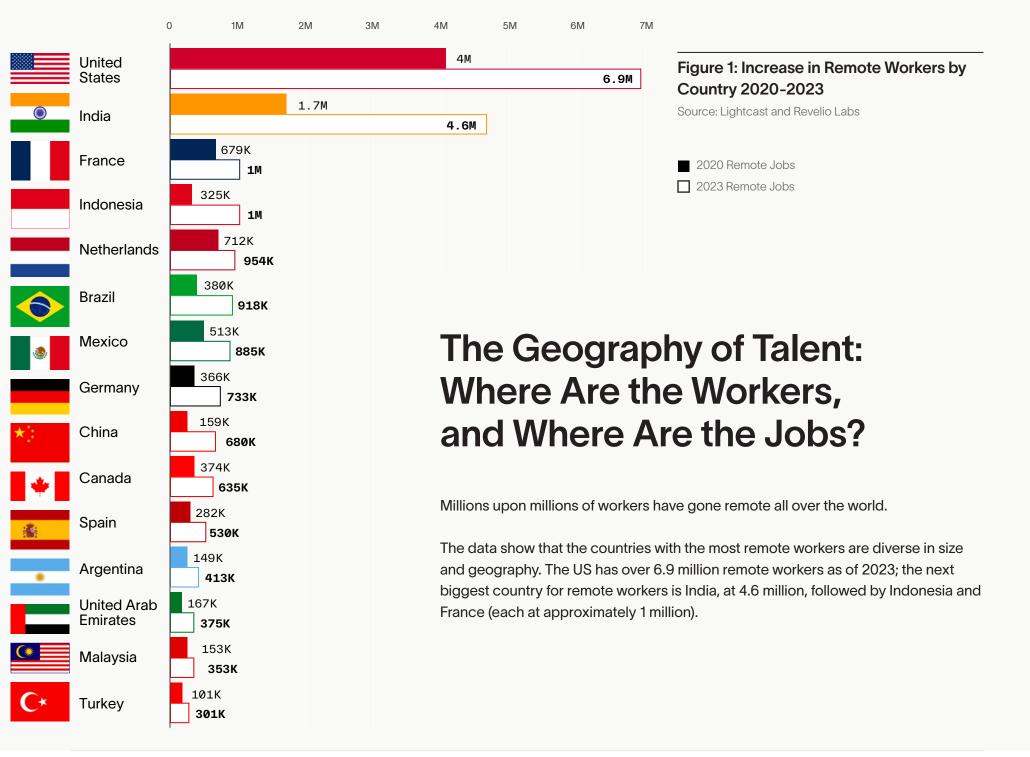
#### **Key Findings**

Remote work has become an established part of hiring strategy. Demand and supply of remote workers around the world have increased dramatically. In the US, employer demand for remote work has increased almost 400% since 2016, with over 3.5 million remote job postings listed in 2022. Between January 2020 and January 2023, the number of workers living and working in a different state is up 40%, and the number of workers living in the US and working for firms based elsewhere is up 36%.

Its potential is enormous. Worldwide, 153 million people have jobs in roles highly suitable for remote work—but only 18% are actually remote.

Remote and in-person work are very similar across skills and roles. 78% of jobs are highly similar between in-person and remote roles. In other words, companies can recruit internationally for even their most demanding and high-skill roles, because they can expect similar results from a worker across an ocean or across the hall.

Remote work gives employers significant new opportunities to shop for talent. Firms based in higher-paying regions are finding workers in lower-cost regions, expanding talent pools and saving costs. The greatest regions for cost savings are North American firms hiring in Central America and Western European firms hiring in North Africa.



It's important to note that these are fully remote roles, not counting those who work primarily from home but come into the office a few days per week. The <u>US</u>

<u>Census Bureau estimates 27 million</u>

<u>people</u> are working primarily from home, counting both categories.

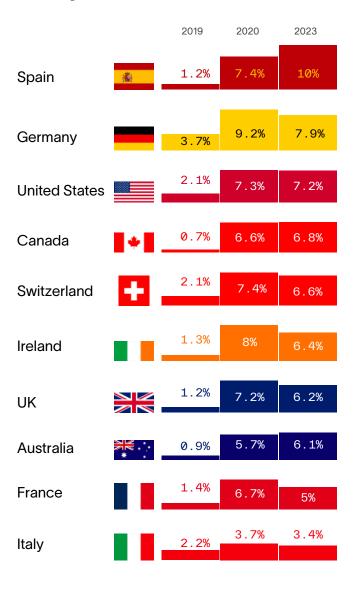
And just like the number of remote workers has increased all over the world, so has the number of remote job postings hoping to attract them. In the US, employer demand for remote work has increased almost 400% since 2016, with over 3.5 million remote job postings listed in 2022.

While the share of fully-remote postings has begun to decline in 2023, it's still far above its pre-pandemic baseline and gives no indication of falling dramatically.

Postings around the world show a similar pattern, up over 250% since 2019.

Figure 2: Growth in Remote Job Postings by Country, Comparing Pre-Pandemic, Peak Pandemic, and Present

Source: Lightcast and Revelio Labs





NICK BLOOM Economics Professor, Stanford

Before the pandemic, remote work in the US accounted for about 2% of all postings; now, that looks poised to flatten out at about 10%. That's a huge change, and I would be surprised if we ever see such a dramatic difference in such a short time ever again.

In the long run, there are a few offsetting forces that I think will keep shaping the future of this trend. Technological improvements continue to make remote work easier; better hardware and software will push the share of remote work higher as more people and firms have access to better devices and infrastructure that remote workers need, like cloud computing and videoconferencing.

At the same time, technological advances in AI could challenge that growth. Jobs with fewer skill requirements are at greatest risk of becoming automated, like roles in call centers or payment processing.

Global wage pressures will cause fully-remote jobs to drift toward lower-cost locations, and this could ultimately reduce the share of remote jobs in the US and Northern Europe and increase them in other locations.

Essentially, we should consider this change as being similar to free trade for services, just as the past few decades have seen the growth of free trade in manufacturing. I'd expect the overall economic impact to include an increase in the global labor supply, a reduction in average wages worldwide, and an increase in total economic output. Remote work is where we'll see globalization most clearly in the coming years.

Follow Nick Bloom:

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## Firms in Higher-Paying Regions Are Hiring Employees Living in Low-Cost Regions.

Data from social profiles can show where workers live and where their employers are based, giving insight into where businesses have found their global remote workforce. Increasingly, they show that businesses based in higher-paying regions are finding workers in lower-cost regions.

Often, these pairs are aligned north to south, in order to minimize time differences. An office on the east coast of the US might find it easier to navigate work with a South American contractor in the same time zone than one that's three hours behind in California.

The global nature of remote work is one reason it's likely to persist into the future. As much as managers may value having workers in the office, the cost savings of an international workforce can outweigh those concerns.

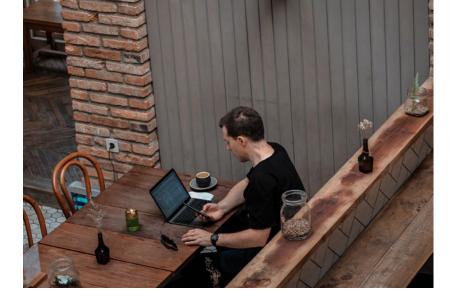
The region pairs with the highest increases in remote workers include:

- North American companies with workers in Central America and the Caribbean (300% growth since January 2020);
- Southern European companies with workers in Sub-Saharan Africa (200% growth since January 2020); and
- Southern Asian companies with workers in Eastern Asia (100% growth since January 2020).

Figure 3: Region Pairs with Highest Increase in Remote Workers from 2020 to 2023







## Comparing Both Listings and Workers, There Is No Substantial Skill Gap between In-Person and Remote Work.

In nearly 80% of cases, there is little difference in skills between the remote and in-person versions of the same job.

Using the definition of "similarity" created for understanding relationships between jobs (usually for identifying career pathways or reskilling opportunities), 78% of occupations meet this criteria. So for example, we compared all remote "UI/UX Designer/Developer" roles to all in-person jobs for the same position, and found they're essentially the same. This means that remote workers aren't doing different or less-challenging work compared to their colleagues in the office—they're just doing it in a different place.

#### Figure 4: Skill Similarity Between Remote and Non-Remote Positions by Occupation

Source: Lightcast and Revelio Labs

#### Account Manager / Representative

Skills Needed

- Marketing
- Account Management
- Customer Relationship
- Management
- Selling Techniques

Additional skills needed for remote:

 Software As A Service (SaaS)

#### Cyber / Information Security Engineer / Analyst

Skills Needed

- Cyber Security
- Computer Science
- Vulnerability
- Risk Analysis
- Information Systems

Additional skills needed for remote:

Amazon Web Services

#### Recruiter

Skills Needed

- Talent Acquisition
- Applicant Tracking Systems
- Full-Cycle Recruitment
- Talent Sourcing

Additional skills needed for remote:

- LinkedIn
- Recruiting

#### Logistics / Supply Chain Analyst

Skills Needed

- Supply Chain
- Logistics
- Purchasing
- Data Analysis
- Process Improvement

Additional skills needed for remote:

- SQL (Programming Language)
- Microsoft Access

#### **Travel Agent**

Skills Needed

- Booking (Sales)
- Travel Arrangements
- Corporate Travel
- Management
- Marketing

Additional skills needed for remote:

 Zoom (Video Conferencing Tool)

#### **Tutor**

Skills Needed

- Math Tutoring
- Learning Styles
- Lesson Planning
   Washing With
- Working With Children
- Study Skills

Additional skills needed for remote:

- Computer Science
- Zoom (Video Conferencing Tool)

This level of similarity expands possibilities for remote work. In the past, employers might have looked internationally to fill roles that were tangential or siloed off from the main business function and leadership at the home office. But since the skills employers list on job postings are generally the same for inperson or remote work, they indicate that recruiters expect to fill both kinds of jobs with the same caliber of candidate. Now, even key decision-makers can be recruited from different countries.

Where there is a difference between listings, it often comes down to the level of specificity. Comparing postings for Software Developers at different organizations, we found that remote jobs generally demand more soft skills like leadership and interpersonal communications. Non-remote jobs tend to lay out more specific technical skills than remote roles.



JOSH BERSIN
Founder,
The Josh Bersin Company

Remote work is a massive trend, and it reflects the larger long-term pattern of globalization. It is now very common for companies of any size to hire engineers in one country, sales teams in customers' countries, and often have senior leaders elsewhere.

One other element worth noting is what I call "the pixelated workforce," where the overall labor force, as well as individual workers, are split between full-time employment and part-time contractor work. Today about 35% of US workers are contingent, and remote work has an outsized impact on them; an Uber driver, for instance, isn't coming into an office or working a set schedule.

The cost savings of an international workforce are significant. Hiring software engineers in India or eastern Europe is common practice among tech companies, for example. The strategy also works to attract talent that simply can't be found in hubs like San Francisco, Austin, or New York, where there are too many openings for not enough people as challenges like housing come into play.

As far as getting people back into the office, our research pretty clearly shows that forcing people back to the office is neither productive nor necessary. Remote work teams are often treated like a satellite office, and leaders set deadlines and meetings in such a way that accommodates time changes without too much effort. From an organizational perspective, most HR leaders have plenty of experience with remote hiring, so infrastructure isn't prohibitive. Vendors like Deel, Rippling, and Workday are helping with this.

So logistically, remote work is very tenable. Where it gets complicated is with things like taxes, which is a heavier lift for an HR operation. What often helps is a local recruiting team to help understand the market, navigate location-specific challenges, and drive an employment brand.

So yes, there are challenges to remote work, but they aren't unsurmountable. A deliberate strategy goes a long way, and this is becoming accessible to more and more organizations. I'd say this has gone mainstream.

Follow W @Josh\_Bersin

## Education Requirements and Skills-Based Hiring in a Remote Work Context

Besides being highly skilled, profile data on remote workers also show they have high educational attainment compared to all workers.

Matching this pattern, roles that have gone remote generally require more education relative to non-remote roles: more education leads to more remote work opportunities. This difference is mainly shown at the high school degree level—roles not requiring one are far more underrepresented in remote work than any other level of education. Roles requiring a bachelor's degree are most overrepresented in remote work compared to all postings.

But while jobs that require degrees are overrepresented in remote jobs now, changing demand for education requirements is likely to shift that balance in the future.

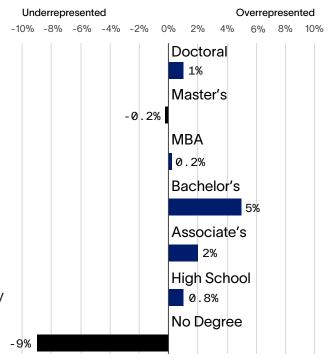
Alongside remote work, another major trend in hiring over the past several years has been the rise of skills-based hiring. Essentially, this is the practice of dropping degree requirements in favor of more specific skill requirements.

For employers, this expands the pipeline of available talent by opening the door to workers without a degree—while also increasing diversity and equity in the workforce. In the context of global remote work, skills-based hiring takes on even more importance. Education requirements might be viable when hiring in just one region, but parsing and standardizing those requirements across multiple regions creates logistical challenges that skills-based hiring avoids.

Instead of asking whether it's better to hire a candidate with a four-year bachelor's degree compared to one with a degree that took three years, or even a worker without a degree, a recruiter can make an applesto-apples comparison based on each candidate's skills. This enables the greatest possible level of clarity, equity, and efficiency in the hiring process.

#### Figure 5: Education Levels for Remote Workers vs. Non-Remote Workers

Education levels of in-person workers are our baseline (0%). The bars represent how the remote workforce compares—i.e., remote workers are more likely to have a bachelor's degree, and less likely to have no degree.



## Putting the Remote Advantage to Work: Identifying New Talent Pools

The new landscape of remote work presents tremendous opportunities for companies in search of global talent. Specifically, this global labor marketplace allows employers to use "wage arbitrage" to tap into skilled talent wherever it might be, and potentially at lower cost. The workers are out there and have similar skills to in-person workers—but one last question remains: which roles can successfully be taken remote?

In order to understand where there are untapped talent pools for companies looking for global talent, we used job postings data to understand how suitable each occupation is for remote work. An occupation with a higher proportion of remote job postings has a higher remote suitability ranking.

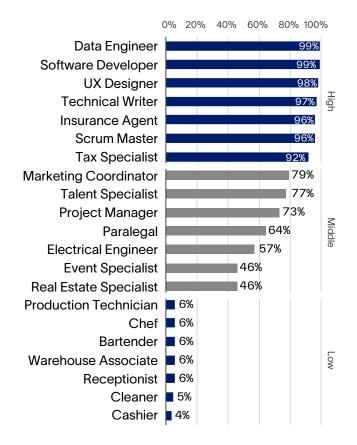
The results don't present any major surprises for any one role, but taken together, they provide a useful snapshot for understanding at a glance which jobs can go remote.

Highly remote roles include Web Developer, Data Engineer, Consulting, Recruiting, and Marketing; roles that are moderately remote-suitable include Employee Relations and Commercial Operations; and on the low end of the remote-suitability

scale we find occupations including Optician, Contractor, and Baker.

#### Figure 6: Examples of High, Middle and Low Remote Suitable Roles

Source: Lightcast and Revelio Labs





### PAPIA DEBROY Senior Vice President, Insights Opportunity@Work

As the future of work continuously evolves, we must activate entire workforces across the globe. In the US, that includes the more than 60 million workers who have a bachelor's degree, as well as the 70+ million workers who are skilled through alternative routes, or STARs.

To do this effectively, employers will need to shift away from traditional hiring practices that use education, previous employers, years of experience, and job titles to indicate a job candidate's capabilities and move toward practices that focus intentionally on the specific skills needed to do the job.

Skills-based hiring allows companies to diversify and widen

candidate pools to include workers who have cultivated transferable skills through relevant experience in other roles and fields.

In moving to skills-based hiring practices, especially in a remote-work context, employers can expect to see an increase in the quality of new hires as well as increases in productivity, employee engagement, and retention. In addition, the focus on skills serves to clarify the needs of a role, which in turn can inform stronger onboarding plans and performance management.

Follow: W @DebroyPapia

The remote suitability score allows us to assess talent pools of potential candidates for remote work across the globe. For each occupation with high remote suitability, we can see how many current workers are in that occupation across different countries. Summing those up across the globe, we see how many workers are currently in jobs that are highly suitable for remote work—whether they're currently remote or not.

#### Worldwide, 153 million people work in occupations highly suitable for remote work.

Among workers in those roles, just 18% are actually remote. And while that's still a large number—28 million people across the globe—it's a small fraction of the total. The potential for remote work is far greater.

The number of available workers is correlated with population, but not entirely defined by it.

The US leads the way by a large margin, with well over 30 million workers, followed by India (over 17 million), then China and Brazil (each near 8 million), and the UK (at over 6.5 million).

Estimates from other researchers indicate that the number of US workers with the option to work remotely range from 75 million to 96 million, and since those statistics include those working from home part-time, it follows that a substantial subset could go fully remote.

Figure 7: Number of Workers in Remote-Suitable Roles by Country



#### **Certain Regions Pair Together**

Just as we saw region pairs earlier, where some higher-paying areas were working with a large share of workers in lower-cost areas, we can also see where new pairs have the potential to develop. These considerations include not just supply and demand, but also time differences and language compatibility.

It's worth noting that in certain cases, pairs with high potential are the same as the pairs already seeing high growth. The two aren't mutually exclusive—even though many Central American workers are already employed by North American firms, others can still join.

Some pairs with high growth potential include:

- North American companies with workers in South America;
- Western European companies with workers in North Africa; and
- Central Asian companies with workers in Southern Asia.

#### Figure 8: Region Pairs with Largest Differences in Local vs. Remote Wages

Source: Lightcast and Revelio Labs

These wage arbitrage opportunities correlate with growth in remote workers by region pairs. Some of the country pairs seeing the highest growth are also those where salary differences are greatest, including North American companies hiring in Central America and the Caribbean, and firms in southern Europe hiring in sub-Saharan Africa.

This analysis of social profiles also allows us to understand which countries specialize in which roles that are highly suitable for remote work. For example, India has a high concentration of Technology Analysts, whereas Egypt has a high concentration of Accountants. Bangladesh sees a high concentration of Graphic Designers while Indonesia has a high concentration of workers in marketing.

-90% -80% -70% -60% -50% -40% -30% -20% -10% Southern America ► Northern America Northern Africa Western Europe Northern Europe Northern Africa ► Sub-Saharan Africa → Western Europe Sub-Saharan Africa → Northern Europe Central America ► Northern America Northern Africa ► → Arab States Northern Africa Southern Europe Sub-Saharan Africa -Arab States Sub-Saharan Africa ► Southern Europe Southern Asia > Central Asia Southern Asia > Eastern Asia Northern Africa - Eastern Europe Eastern Europe > → Western Europe South-Eastern Asia Central Asia South-Eastern Asia Eastern Asia Southern Asia - South-Eastern Asia Southern America Central America Eastern Asia > Central Asia

Living in

Working in

Employers looking for specific remote talent can use this information to understand where to source talent from for specific roles based on their own time zone or regulatory constraints.

Figure 9 shows more roles that are highly represented in certain countries.

Putting all this together, we can see meaningful, actionable opportunities based on the data. If "Accountant" is an occupation highly suited for remote work, Egypt has a high concentration of accountants, and North Africa presents a significant cost opportunity for firms based in Western Europe, then it's clear that any company based there needing accountants should consider recruiting for them in Egypt—there's only a two-hour time difference between GMT and Cairo.

Labor market data analysis provides the opportunity to apply this kind of granular insight to any occupation, region, and need.

#### Figure 9: Countries and their Relative Remote Role Speciality

Source: Lightcast and Revelio Labs





**Liliana Olarte**, Economist, International Finance Corporation (IFC)



Juliana Guáqueta Senior Education Specialist, IFC



Rohan Kulkarni, Chief Marketing Officer, Revelo



Juliana Uechi, Head of Marketing Analytics and Growth, Revelo

For developed economies such as the US, Asia has traditionally been the go-to destination for IT outsourcing and remote tech hiring. India, China, and Vietnam are major hubs of tech talent supply, with a large number of software engineers. While Latin America presents itself as ideal for US clients thanks to geographical proximity, time-zone compatibility and lower costs, the region's tech sector and tech talent supply has lagged its Asian counterparts.

This landscape, however, has started to shift in the last couple of years. Between 2015 – 2022, Latin America's investment volume in venture capital, which is typically geared towards tech companies, has grown over 50% per year standing at nearly US\$8 billion by 2022-end. In addition, Brazil and Mexico, the region's largest economies, are among the top 15 countries in

the world in terms of unicorns (privately held startups valued at over \$8 billion USD).

Revelo, a tech talent platform founded in 2014, sought to bridge a gap between the increasing demand for tech talent in the US and the Latin American market where tech opportunities for locals are relatively limited and mostly local. The company built a talent network for software engineers and developers based in Latin America, helping local and international employers source,

hire and manage remote tech talent from the region.

Remote hiring from Latin America can be advantageous for US based firms across various dimensions including budget efficiency and time to hire for building tech teams. According to data provided by Revelo from its platform and Lightcast's salary data, remote tech workers from Latin America can be, on average, nearly 30% more cost effective than local US hires or remote hires within the US. The largest savings

are observed for Full-stack developers, DevOps specialists and Quality Assurance specialists (See Figures 11, 12).

Time to hire tech talent can be relatively fast when using talent platforms/marketplaces. Data from Revelo shows that most key roles such as Back-end, Data Engineer, Front-end, Full-stack and Mobile specialists can be filled in less than a month. The longest role to fill is DevOps, which takes nearly 50 days (See Figure 12).

#### Figure 10: Average Annual Salary: Local US Hires vs. LAC-Based Remote Hires

Source: Revelio Labs (local US hires) and Revelo (LAC-based remote hires)

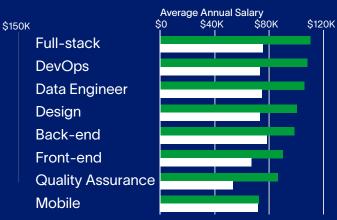


LAC-based Remote Hires

U.S. Hires

### Figure 11: Average Annual Salary for Remote US Hires vs. LAC-based Remote Hires

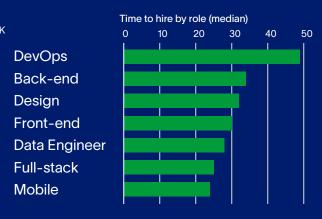
Source: Revelio Labs (Remote US Hires) and Revelo (LAC-based Remote Hires)



Note: Revelo data mostly contains mid-senior level developers that are in demand in the US, so the cost difference between similar seniority in the US might be even higher.

#### Figure 12: Average Time to Fill a Role (Days)

Source: Revelo



[1] IFC calculations using data from the Global Private Capital Association (2022)

[2] Statista (2022); CBInsights (2022)



**Juliana Guáqueta**, Senior Education Specialist, IFC



Liliana Olarte, Economist, IFC The pandemic accelerated ongoing trends of online learning and remote work, expanding possibilities for people across the globe to access education and training and apply those skills in global organizations. However, access to these benefits is unequal: a World Bank Group study estimates that in highincome countries, 1 in 3 jobs can be done remotely while in low-income countries it is only 1 in 26 jobs. While there are big differences between and within countries in these estimates, the research found that having access to reliable and equal access to internet connectivity is key for remote work to benefit people in emerging markets. In addition to internet connectivity, having access to high-quality education and training pathways also matters to connect workers in emerging markets to the growing pool of high-skilled jobs that can be done remotely.

Yet global hiring of remote workers from emerging markets seems to be quite dynamic already.

Analysis of global hiring data from Deel, a hiring and payments service provider, shows that global hiring sustained momentum in 2022 relative to 2021 and that it is contributing to rising average starting salaries in some countries like Philippines, India, and Brazil. In addition, it finds that Latin America and Asia Pacific are the regions experiencing the fastest growth in terms of the number of workers being hired by global employers. While this data is not representative and is skewed towards the tech industry, it helps gleam how the remote work trend is playing out at a global level.

We, at IFC, invest in edtech startups that expand access to learning and industry-relevant training opportunities and in global talent marketplaces, which together, can help level the playing field for workers in emerging markets to access high-quality jobs in the digital economy.

Revelo and Andela, IFC portfolio companies, are tech platforms that connect candidates from emerging markets with global

technology organizations and enterprises seeking remote talent. A case study published by IFC on Andela shows that technologists hired through the platform earn nearly 90% more than what they were earning before. On the demand side, a study published by Revelo, showed that cost was the least important consideration for firms when doing remote hiring, indicating that firms are willing to pay higher salaries for their desired talent. Their experience also shows that workers need to upskill continuously to stay up to date in their fields or to reskill to transition to better paid roles, which makes evident the virtuous cycle between remote work and upskilling.

More research is needed to understand the wider effects of global remote work in emerging markets, particularly in terms of local wages, unemployment, and the supply of local talent in knowledge areas where there is relative skills scarcity.





#### **Occupation Spotlights**

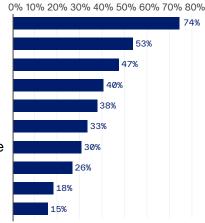
In terms of growth, the career areas of Marketing and Engineering roles saw the greatest increase in overall share of remote work.

We can zoom in on a few specific occupations within those high-growth remote career areas to gain more insight. In the US, remote postings grew in particular for **Marketing Specialists** (20% remote in 2022), **Software Developers** (30% remote in 2022) and **Training and Development Specialists** (10% remote in 2022).

Figure 13: Change in Remote Postings by Career Area, 2019-2022

Source: Lightcast and Revelio Labs

Marketing and Public Relations
Engineering
Manufacturing and Production
Performing Arts
Science and Research
Information Technology
Construction, Extraction, and Architecture
Business Management and Operations
Law, Compliance, and Public Safety
Finance



#### MARKETING SPECIALIST

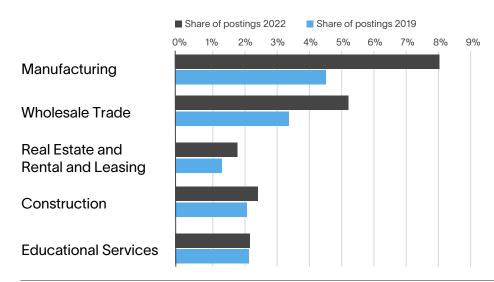
Remote postings for marketing specialists have increased the most in Manufacturing, Wholesale Trade, Real Estate, Construction, and Educational Services.

Options for employers looking for remote marketing talent include Indonesia and Vietnam, where there is a high concentration of marketing roles. Freelancers' average hourly rate varies for this work across different countries, with US freelancers commanding the highest average rate.

We also found that Marketing Specialists are more commonly remote in the Finance and Insurance industry, whereas in-person Marketing Specialists are more likely in the industries of Manufacturing and Construction.

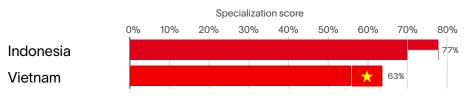
Figure 14: Growth in Remote Postings by Industry for Marketing Specialists 2019-2022

Source: Lightcast and Revelio Labs



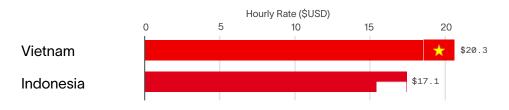
#### Figure 15: Countries Specializing in Marketing

Source: Lightcast and Revelio Labs

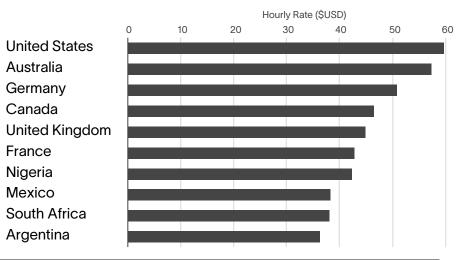


#### Figure 16: Hourly Wage for Marketing Freelancers

Source: Lightcast and Revelio Labs



#### Figure 17: Freelancers' Average Hourly Rate for Marketing Roles



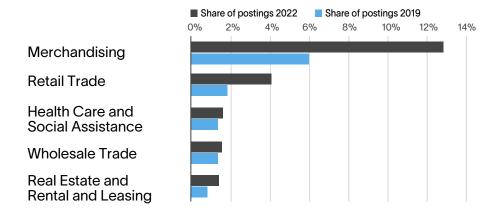
#### SOFTWARE DEVELOPER/ENGINEER

Remote postings have increased by the most in Retail Trade, Manufacturing, Real Estate, Health, and Wholesale Trade.

India, South Korea, Japan, and Israel have high specialization scores in Software Engineering.

#### Figure 18: Growth in Remote Postings by Industry for Software Developers / Engineers 2019-2022

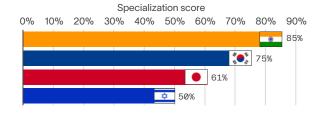
Source: Lightcast and Revelio Labs



#### Figure 19: Countries Specializing in Software Engineering

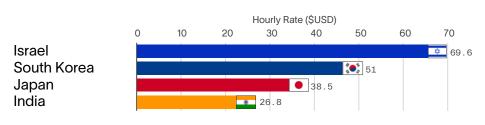
Source: Lightcast and Revelio Labs



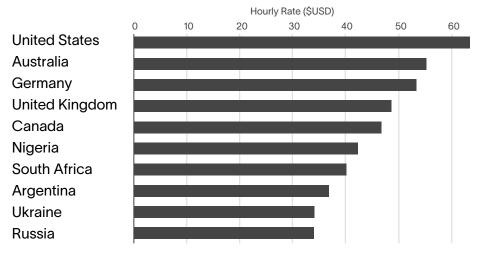


#### Figure 20: Hourly Wage for Software Engineering Freelancers

Source: Lightcast and Revelio Labs



#### Figure 21: Freelancer's Average Hourly Rate for Software Engineering Roles



#### TRAINING AND DEVELOPMENT SPECIALIST

Remote Training and Development Specialists are higher in demand than non-remote in Finance and Insurance, as well as Information. Non-remote Training and Development Specialists are much more demanded in Retail Trade.

Remote postings have increased most in Real Estate, Finance, Health, Wholesale Trade, and Professional Services

South and Central American countries have a high concentration and supply of Learning and Development Specialists.

Figure 22: Growth in Remote Postings by Industry for L&D Specialists 2019-2022

Source: Lightcast and Revelio Labs

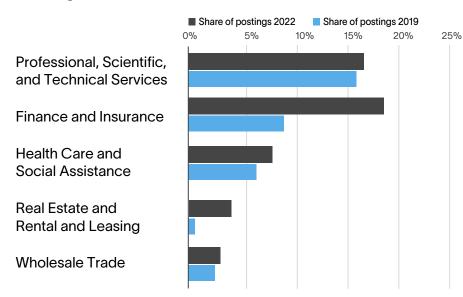
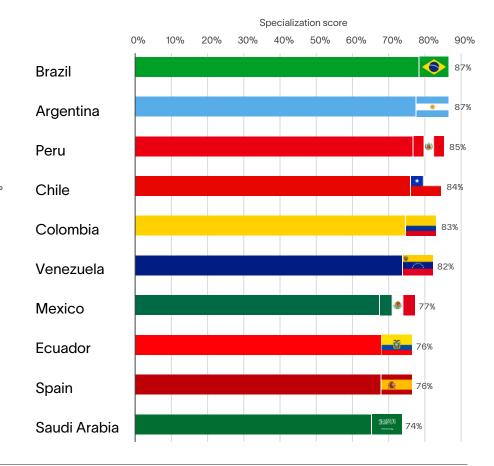


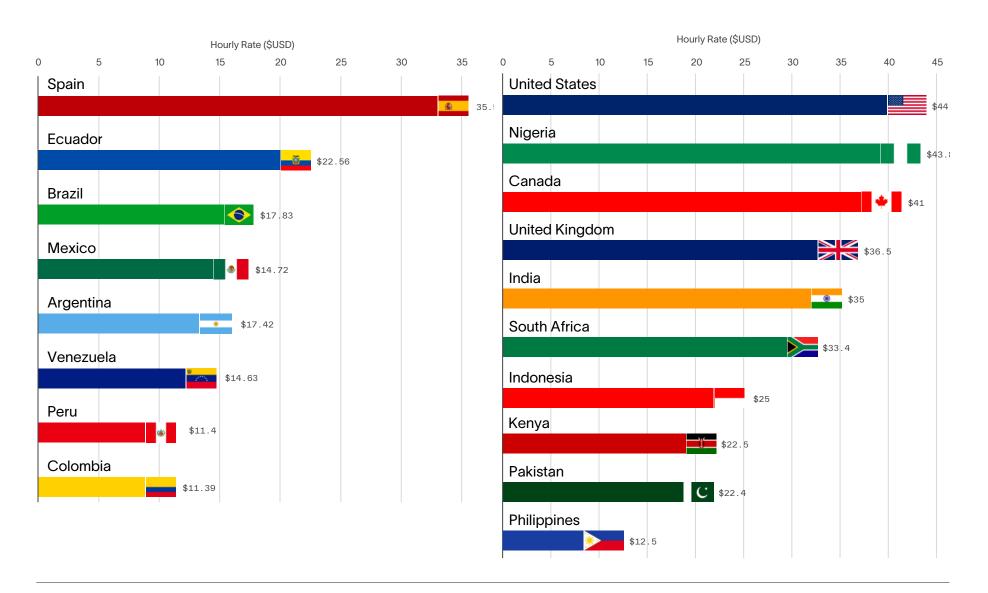
Figure 23: Countries Specializing in Learning and Development



#### Figure 24: Hourly Wage for Learning and Development Freelancers

Source: Lightcast and Revelio Labs

#### Figure 25: Freelancers' Average Hourly Rate for Learning and Development Roles



# Conclusion

The worldwide shift toward remote work represents a huge change in how businesses approach talent acquisition and compensation all across the globe.

A global remote workforce gives employers the opportunity to find the skilled talent they need, with the added advantage of having the best workers in the world to choose from. The combination of wage arbitrage and similar skill requirements mean that those hiring can save salary costs without lowering standards for workers. The shift has also empowered workers with the expectation of greater flexibility—and if they can't get it from one employer, they'll look for it in another.

The impact of remote work is set to reverberate throughout the labor market, and any company that does not embrace it will be at a disadvantage.

Every business needs every possible edge in order to succeed in a tight and fast-evolving labor market, and remote work can help provide it. With over 150 million workers currently in roles that are highly suitable for remote work, this new approach has tremendous potential reach.

But this rapid change doesn't need to create uncertainty. Labor market insight allows us to look closely at specific roles, industries, occupations, and regions, in order to see the best possible alignment to unlock economic success for businesses and individuals.

The growth of remote work is a fundamental shift that will permanently reorient the way businesses look for talent. By understanding, on both a big-picture and a granular level, how this pattern is affecting the labor market today, companies can be better prepared to succeed tomorrow—creating new opportunities in the labor market for everyone.

#### Methodology

#### **Remote Job Postings**

Remote job postings are provided by Lightcast. Lightcast collects postings from over 51,000 online job sites to develop a comprehensive, real-time portrait of labor market demand. It aggregates job postings, removes duplicates, and extracts data from job postings text. From this large dataset of job postings, this report focuses on remote job postings, which are job postings that explicitly mention remote work, in contrast with postings that explicitly mention work that is in-person or hybrid.

#### **Remote Workers**

Remote workers numbers are provided by Revelio Labs. Revelio Labs collects 1.3 billion public employment records from professional online profiles. The authors deem a worker to work remotely when their location of residence is a different state than the location of their job.

#### **Worker Salaries**

Revelio Labs provides salary predictions for every job in their database. The output is a personalized salary prediction based on the worker's job title, company, seniority level, years of experience and education, location and the year. The salary is a sophisticated machine learning model, which is trained on a rich set of training datasets, ranging from administrative labor certification data, job postings as well as crowd sourced data. 'Wage arbitrage' opportunities are calculated by looking at the average salaries of workers in an occupation in the employer's country, and comparing them to the average salaries of workers in the same occupation in the remote workers' chosen country of residence.

#### **Remote Suitable Jobs**

A remote suitability score is calculated based on the share of job postings that mention remote working arrangements by occupations. We define jobs to be 'highly remote suitable' if their job falls into the top 25% most remote suitable occupations.

#### **Potentially Remote Workers**

A potentially remote worker works in a 'highly remote suitable' occupation, irrespective of whether their actual current job is a remote job or not. This is calculated based on the frequency of remote work mentioned in postings by occupation.

#### **Remote Worker Country Specialty**

The remote worker speciality is calculated for each country by determining which highly remote suitable occupation is overrepresented. We determine overrepresentation by getting the share each highly remote suitable occupation makes up as a total of all workers. Then, we compare each share to the global average share this occupation makes up, if all countries had the same occupational distribution. We then rank overrepresented occupations for all countries and determine their relative uniquely overrepresented occupation.

#### **Skill Similarity Score**

We compare the top 20 skills demanded by occupation for remote and non-remote postings. We use these comparisons to develop a score (the Euclidean similarity) that measures the skill similarity.

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Lightcast provides trusted global labor market data, analytics, and expert guidance that empowers communities, corporations, and learning providers to make informed decisions and navigate the increasingly complex world of work. With a database of more than one billion job postings and career profiles, our team provides best-in-class customer service with robust data, clear analysis, and expert guidance on skills, jobs, and opportunities.

Headquartered in Boston, Massachusetts, and Moscow, Idaho, Lightcast is active in more than 30 countries and has offices in the United Kingdom, Canada, Italy, New Zealand, and India. The company is backed by global private equity leader KKR. For more, visit lightcast.io.

#### revelio labs

Revelio Labs is a workforce intelligence company. Revelio Labs absorbs and standardizes hundreds of millions of public employment records to create the world's first universal HR database, allowing anyone to see the workforce dynamics and trends of any organization. The company's customers include investors, corporate strategists, HR teams, and governments, empowering them to make actionable, data driven decisions. Learn more reveliolabs.com.

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