

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized



WORKING WITHOUT BORDERS

The Promise and Peril of Online Gig Work

© 2023 International Bank for Reconstruction and Development / The World Bank.

1818 H Street NW, Washington, DC 20433, USA.

Telephone: 202–473–1000; Internet: www.worldbank.org.

Some rights reserved

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and Permissions

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <http://creativecommons.org/licenses/by/3.0/igo>. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

Attribution—Please cite the work as follows: Namita Datta and Rong Chen (with Sunamika Singh, Clara Stinshoff, Nadina Iacob, Natnael Simachew Nigatu, Mpumelelo Nxumalo and Luka Klimaviciute et al.), 2023: “Working without Borders: The Promise and Peril of Online Gig Work.” World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO.

Translations—If you create a translation of this work, please add the following disclaimer along with the attribution: *This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.*

Adaptations—If you create an adaptation of this work, please add the following disclaimer along with the attribution: *This is an adaptation of an original work by The World Bank. Views and opinions expressed in the adaptation are the sole responsibility of the author or authors of the adaptation and are not endorsed by The World Bank.*

Third-party content—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202–522–2625; e-mail: pubrights@worldbank.org.

WORKING WITHOUT BORDERS

The Promise and Peril
of Online Gig Work

CONTENTS

Acknowledgments	vii
SIX KEY MESSAGES	1
OVERVIEW	7
CHAPTER 1 How Many Online Gig Platforms Are There? Using Data Science to Build an Updated Global Database	35
1.1 Introduction	35
1.2 Methodology	36
1.3 Results	40
1.4 Conclusion	46
References	47
CHAPTER 2 How Many Gig Workers Are There? Using Two Methods to Estimate the Online Gig Workforce	49
2.1 Introduction	49
2.2 How have other studies approached this question?	50
2.3 Method 1: Web scraping and data science	52
2.4 Method 2: Estimation using an RDIT global survey	56
2.5 Conclusion	59
References	61
CHAPTER 3 The Emergence of Local and Regional Platforms	63
3.1 Introduction	63
3.2 What are local and regional platforms?	64
3.3 How do local platforms compare with global platforms? Some stylized facts	65
3.4 What role do local platforms play on the supply and demand sides?	68
3.5 Local platforms: Challenges and limitations	72
3.6 Conclusion	75
References	76
CHAPTER 4 How Inclusive Is the Online Gig Economy?	77
4.1 Introduction	77
4.2 Methodology	77
4.3 Age	79
4.4 Gender	83
4.5 Skills and education	88

4.6	Spatial inclusion	94
4.7	Language	99
4.8	Earnings and income	101
4.9	Conclusion	106
	References	107
CHAPTER 5	Demand for Online Gig Work	109
5.1	Introduction	109
5.2	Methodology	109
5.3	State of labor demand in the gig economy	110
5.4	Who is hiring gig workers?	114
5.5	Tasks demanded	117
5.6	Why do firms hire gig workers?	120
5.7	Emerging and future trends	124
5.8	Conclusion	127
	References	128
CHAPTER 6	Social Protection for Online Gig Workers	131
6.1	Introduction	131
6.2	What social insurance is and why it is important	131
6.3	Methodology	133
6.4	Social insurance coverage among surveyed gig workers	134
6.5	What constrains social insurance coverage for gig workers?	141
6.6	What are countries doing to protect informal and self-employed workers?	159
6.7	Are there opportunities for private sector-led models?	169
6.8	What can we do? A developing-country dilemma	175
	References	178
CHAPTER 7	Designing Programs: Tips for Operational Teams	183
7.1	Introduction	183
7.2	Methodology	183
7.3	Developing a strategy for online gig jobs programs	185
7.4	Developing a pipeline of trained online gig workers	190
7.5	Designing and delivering training programs	193
7.6	Increasing access to infrastructure and payment options	198
7.7	Linking program beneficiaries with demand and opportunities	205
	References	214
CHAPTER 8	What Can We Do? Policy Recommendations	217
8.1	Build digital skills while supporting people in earning additional income	218
8.2	Use online gig jobs as a short-term instrument to promote labor market inclusion	219
8.3	Invest in digital infrastructure and access to devices	219
8.4	Embed the jobs agenda in the infrastructure agenda	220
8.5	Engage with platforms to enhance social protection coverage for informal workers	220

8.6	Experiment with innovative social insurance models	221
8.7	Use e-governance reforms to create new digital work opportunities	221
8.8	Promote growth of the local private sector ecosystem	222
8.9	Promote crowd ratings and third-party accreditation	222
8.10	Support new models of collective bargaining	222
8.11	Address risks and increase transparency	223
8.12	Strengthen capacity to collect systematic data	223

APPENDIXES

Appendix A:	Stakeholder Interviews	225
Appendix B:	Methodology Global Mapping Database	227
Appendix C:	Methodology for Estimating the Number of Online Gig Workers Globally	233
Appendix D:	Methodology for Global RDIT Country Survey	239
Appendix E:	Platform Surveys and Country Deep Dives	255
Appendix F:	Interviews with Platforms	259
Appendix G:	Mapping of Tasks and Occupational Codes	263
Appendix H:	Demand Survey Methodology	267
Appendix I:	Social Insurance for Online Gig Workers: Methodology Note	277
Appendix J:	Social Security Welfare Schemes under the eShram Program	279
Appendix K:	Social Insurance Regulatory Developments in Select Countries	283
Appendix L:	Illustration of How Social Protection Instruments Offered by Private Markets Address Risk-Sharing Objectives	285
Appendix M:	Measuring Gig Work through Nationally Representative Surveys	287
Appendix N:	List of Projects Interviewed on Program Design	291
Appendix O:	Note on Funding of Platforms	297
Appendix P:	Pricing Schemes of Online Gig Work Platforms	299

ACKNOWLEDGMENTS

This report is the product of a collaborative effort of a core team led by Namita Datta and Rong Chen and comprising Sunamika Singh, Clara Alexandra Stinshoff, Nadina Alexandra Iacob, Natnael Simachew Nigatu, Mpumelelo Nxumalo, and Luka Klimaviciute, with important contributions from Yu Qiang Ang and Kloe Ng. The team received very constructive feedback from peer reviewers including Truman Packard, Nicholas K. W. Jones, Tania Priscilla Begazo Gomez, Siou Chew Kuek, and Fabian Stephany. Yan Liu and Oleksiy A. Sluchynskiy also provided valuable comments.

In addition, the team received substantive inputs on country deep dives from Ilsa Meidina (Indonesia), Tanya Adi Putri (Indonesia), Alyssa Farha Binti Jasmin (Malaysia), Amanina Binti Abdur Rahman (Malaysia), Shan Rehman (Pakistan), Natalija Gelvanovska-Garcia (Kosovo), and Siou Chew Kuek (Bangladesh).

Several colleagues in different parts of the World Bank provided very helpful guidance on methodology and surveys, including David Newhouse, Renos Vakis, Amparo Palacios-Lopez, Daniel Alejandro Pinzon Hernandez, Mohamad Chatila, and Jungkyu Rhys Lim. The team is grateful to colleagues who supported us in the implementation of our demand survey using social media platforms, including Margaret Allen, Priyanka Ripley, Dani Clark, and Joe Qian. Other colleagues supported the team's work on data gathering at different stages, including Medha Madhu Nair, Lisa Yen Zheng Ho, Meghna Chadha, Muhammad Yasin, Yaroslav Eferin, and Ole Teutloff. The team would also like to thank RIWI Corporation for their support on the global survey of online gig workers.

Several colleagues from Social Protection and Jobs provided advice and suggestions, including Himanshi Jain, Indhira Santos, Matteo Morgandi, Eliana Carranza, Mario Gronert, Dino Merotto, Michael Weber, Melis Guven, Friederike Uta Rother, Josefina Posadas, Jonathan Stöterau, and Harry Edmund Moroz.

The team is grateful to Federica Saliola, Casey Torgusson, and Ian Walker (in the early stages of the report) and to our directors—Michal Rutkowski and Christine Zhenwei Qiang—for their guidance and support.

The production and publication of this report has been made possible through financial support from the World Bank's Jobs Umbrella Multi-Donor Trust Fund (MDTF), which is supported by the UK's Foreign, Commonwealth & Development Office; the governments of Austria, Germany, and Italy; the Austrian Development Agency; and the Swedish International Development Cooperation Agency.

SIX KEY MESSAGES

MESSAGE 1

Online gig work now constitutes a growing and non-negligible part of the labor market, accounting for 4.4 to 12.5 percent of the global labor force.

Although online gig work is rapidly growing, there are no reliable data sources to estimate its size. Using an innovative combination of mixed methods that include data science and proprietary firm databases, along with a global web survey in 17 countries in six regions using the experimental random domain intercept technology (RDIT), we estimate that the number of global online gig workers ranges from 154 million to 435 million. The data science–based approach, relying on web scraping and website traffic, finds that the number of unique registered online gig workers is 154 million globally, but this may be an underestimate. Meanwhile, the survey-based approach suggests that there are 132.5 million *main* gig workers, but when we include those who engage in gig work as *secondary* or *marginal* workers, the estimate may be as high as 435 million online gig workers globally, providing an upper bound estimate. In other words, the estimates show that the share of online gig workers in the global labor force ranges from 4.4 to 12.5 percent. Our estimates are higher than others, partly because our methodology made a concerted effort to track gig workers on regional/local platforms that most literature has overlooked, but also because there has been rapid growth in recent years, especially triggered by the COVID-19 pandemic. Although our study contributes to the literature by using multiple and nontraditional sources of data, more research is needed to explore different methodologies to understand and monitor the development of the gig economy in the absence of reliable labor market survey data.

MESSAGE 2

Online gig work is not only a developed-country phenomenon but is also becoming a popular source of employment in developing countries, with the emergence of many local gig platforms as well as increasing demand from the developing world.

We identify 545 online gig work platforms across the globe, with headquarters in 63 countries and platform workers and clients located in 186 countries. One unique contribution of this study is the special effort it makes to identify and understand regional/local platforms (in addition to the major global ones) that are often ignored in the literature on gig work. The comprehensive database mapping shows that almost three-quarters of the platforms can be considered regional/local—connecting

employers and workers from one or a few countries within a region. Together, low- and middle-income countries account for 40 percent of traffic to gig platforms. One-fifth of the visitors (18 percent) are from low- and lower-middle-income countries (driven by India, Ukraine, the Philippines, Indonesia, Pakistan, and Nigeria) and 22 percent of the visitors are from upper-middle-income countries: the Russian Federation, Brazil, Mexico, Belarus, and Türkiye.

Although developed countries still dominate the demand for online labor, the demand from developing countries is increasing at a faster rate. Our survey of over 20,000 firms—conducted through social media and targeted email outreach using proprietary firm databases—reveals that demand for online gig workers has risen faster in developing countries than in developed countries. For example, almost 60 percent of surveyed firms in lower-middle- or low-income countries confirm that the share of work outsourced to gig workers increased over time, while less than half of surveyed firms in the upper-middle- or high-income countries did so. More firms in developing countries have indicated they plan to hire more gig workers in the future. These trends are corroborated by data from the Oxford Internet Institute’s Online Labour Index (OLI).

MESSAGE 3

Local gig platforms play a vital but less known role in the local landscape by lowering entry barriers, but they face challenges in establishing a viable business model.

The role of regional and local platforms is almost entirely missing from the literature. Nevertheless, these platforms are essential in regional/local markets, often catering to local micro, small, and medium enterprises (MSMEs), start-ups, and self-employed/single-owner businesses. Local platforms can help employers find gig workers with similar cultural backgrounds or in the same time zone or for cost-effective and flexible talent. Regional/local platforms adapt to local constraints, such as online payment regulations or lack of access to digital devices. Some regional/local platforms partner with governments on issues that support development objectives—for instance, by providing training and work opportunities for youth and low-skilled people. Moreover, these platforms lower the entry barrier for non-English-speaking populations, as revealed by our global survey, which was conducted in 12 local languages in addition to English. Our survey in Chinese, for example, was able to get additional data on the Chinese gig workforce, which most studies find challenging to penetrate.

However, many regional/local platforms face challenges in establishing a viable commercial business model. The smaller size of their user base constrains their ability to tap into network effects, requiring them to pivot their business models—for instance, by serving as staffing agencies. Most owners of regional/local platforms are entrepreneurs with a background in technology but with limited financial or business experience.

MESSAGE 4

Online gig work can support inclusion on the supply side by providing work opportunities for youth, women, relatively low-skilled workers, or people in areas with insufficient local jobs while also widening the talent pool for MSMEs on the demand side, although people without internet access could remain excluded.

Most online gig workers tend to be youth under the age of 30 who seek to earn income, learn new skills, or have the flexibility to combine gig work with school or another job. Women in most regions are participating in the online gig economy to a greater extent than in the general labor market, in the services sector, or in the informal sector, although a considerable wage gap still exists between men and women. For example, a female online gig worker's wage level is equivalent to 68 percent of her male counterparts' wage on a major gig platform in Latin America. Workers with a variety of skill levels are participating in the online gig economy, although intermediate to highly skilled workers still dominate. Regional and local online gig work platforms tend to attract a slightly greater share of workers with intermediate education than global platforms do and offer more opportunities for non-English-speaking workers. Microtasks especially provide opportunities for low-skilled workers. Online gig work is an important means of earning supplemental income. Gig work is a secondary activity for 4 in 10 workers. A surprising finding is that 6 in 10 gig workers live in smaller cities, which points to the role that online gig work could play in addressing regional inequalities in job opportunities.

Our study confirmed findings from other research that firms benefit from a flexible workforce and use online gig workers to access a larger talent pool of labor, skills, and expertise, to reduce start-up and transaction costs and overcome conventional hiring constraints, and to enhance productivity, which is fundamental for the growth of new jobs in any economy. MSMEs drive the demand for gig workers. Not only are smaller businesses more likely to hire gig workers, but they also outsource through platforms a larger share of their work than large firms do. Our firm survey finds that the self-employed are most likely to hire gig workers for business and professional support as well as for sales and marketing support.

While gig work is creating new work opportunities, it comes with significant challenges. Risks and inequalities still exist in the gig economy. Those without access to the internet or to digital devices such as laptops, smartphones, and tablets remain excluded. Many workers experience discrimination in accessing work or high-paying tasks, particularly women and workers in developing countries. Besides, gig jobs are sporadic, do not always provide clear career progression pathways for youth, and leave many people spending long hours searching for gig tasks without success.

MESSAGE 5

Gig work, although a relatively new form of work, resembles many long-standing work arrangements in developing countries (albeit with a digital tool that serves as an intermediary) where it needs to be examined within the context of high levels of informality and low levels of social protection in the labor market.

Gig work shares characteristics with informal work and other diverse forms of nonstandard work that are widely prevalent in developing countries, where most people work outside the purview of labor regulations and without access to social insurance and benefits. Social insurance coverage is low among gig workers. About half of surveyed gig workers do not subscribe to a pension or retirement program, but this proportion can be as high as 73 percent among surveyed gig workers in República Bolivariana de Venezuela and 75 percent in Nigeria. In Indonesia, only 34 percent of

gig workers have precautionary savings and around 60 percent of them are struggling to meet their financial obligations. As a benchmark, the International Labour Organization (ILO) estimates that about 70 percent of the world's population lacks social insurance coverage. In low-income countries, over 90 percent of the workforce is in the informal sector. In such a context, the most effective approach, in line with the World Bank's Social Protection Compass, would be to extend coverage to informal and self-employed workers more broadly, thus also including gig workers without segmenting the labor market. Some governments such as those of Brazil, Colombia, India, Kenya, Malaysia, Rwanda, Uruguay, and others are taking steps to extend social insurance to informal and self-employed workers (including gig workers).

In addition to traditional benefits, gig workers also desire unconventional benefits such as access to training and access to credit or loans to buy equipment, laptops, and internet access. These needs offer an entry point for innovative benefit programs for gig workers. To that end, private companies are developing solutions to facilitate tax planning, savings, and financial access for gig workers. Catch, a United States-based company, helps automate tax reporting for freelancers by linking the individual's bank account to the state and federal tax platforms. Kenyan firm Koa developed an application to allow gig workers to contribute to savings and often works with digital gig platforms to extend financial literacy training to gig workers. More innovation is needed in the design of social insurance products for workers with sporadic incomes.

MESSAGE 6

Governments can use the promise of the gig economy to build digital skills, increase income-earning opportunities, and engage with platforms to expand social protection coverage of informal workers through carefully designed targeted programs and improved access to digital infrastructure and payment options, while also safeguarding against peril and protecting gig workers through modern forms of collective bargaining.

Gig opportunities can be used as a short-term measure to support labor market inclusion for women and youth in areas that lack local jobs. Governments can partner with platforms to provide support and training for vulnerable and disadvantaged groups to access these income-earning opportunities. Training programs for gig workers need to include socioemotional skills such as teamwork, empathy, conflict resolution, and relationship management in addition to digital technical skills. Platforms create strategic opportunities for governments to extend social protection coverage to informal workers, offering some level of organization to the otherwise unorganized informal sector. Governments can use innovative partnership models to engage with platforms to design short-term social insurance products or to conduct outreach to increase enrollment in social plans or connect workers to social registries. Digital public works are another mechanism for providing opportunities for short-term income generation to low-income populations while also building digital skills and boosting demand for online workers. The capacity of local small and medium enterprises and other businesses also needs to be boosted for them to see the benefits of digital adoption, including the use of platforms to access talent.

Provision of equitable, affordable access to connectivity infrastructure, digital services, and devices for all—in particular to disadvantaged groups such as youth and women and to rural areas and poor neighborhoods—is essential to support new forms of work.

Despite the opportunities provided by gig work, governments must mitigate the risks associated with gig jobs (such as low wages, employer pressure, and harassment; “geofencing” that limits access to gig jobs to developing-country workers; and so on) by extending coverage of social protection and insurance to a broad range of workers outside standard employment, by supporting new models of collective bargaining and modern labor market institutions, and by building their own capacity to collect and monitor data.

OVERVIEW

INTRODUCTION

Jobs are crucial for individual well-being. They provide a livelihood and, equally important, a sense of dignity. They are also crucial for collective well-being and economic growth. Over the past decade, technology has fundamentally shifted traditional work patterns, creating new ways in which work is contracted, performed, managed, scheduled, and remunerated. New business models—digital platform firms—are allowing the effects of technology to reach more people more quickly, bringing economic opportunity to millions of people who do not live in industrialized countries or even industrial areas, simply with access to broadband and a digital device (World Bank 2019). Digital labor platforms play a role in the process of structural transformation especially by triggering organizational and occupational transformations—for example, by enhancing labor productivity and formalization in service sectors (Nayyar, Hallward-Driemeier, and Davies 2021). New forms of work, known as gig jobs, enabled by digital platforms, have now gained momentum (Eurofound 2020).

WHAT IS A GIG JOB?

The term “gig” comes from the music industry and can be understood as a one-off job for which a worker is paid for a particular task or for a defined period. Musicians with such gigs have no expectation of recording at the same studio the following day or playing with the same band the following night. The specific type of gig work discussed in this study is that mediated through internet platforms in which the worker is not an employee of the enterprise that operates the platform. The platform acts as an intermediary between the gig worker and the person or business that needs the work done. The paid tasks (or gigs) could be food delivery, ride hailing, care work, photo tagging, data entry, translation, design, software development, and so forth. The supply (gig worker) and the demand (business or person who wants the job done) are matched through either an app or a website. The platform provides a participative infrastructure for such interactions that includes governance structures and rules for the work to be carried out and is enabled by an algorithm. A gig worker is usually paid on a project, piece rate, or hourly basis. There are two types of platform-based gig jobs (figure 0.1):

1. **Location-based gig jobs**, in which digital platforms allocate work that is tangible and/or delivered to a client in a physical location (for example, taxi, delivery, domestic care, and home services or platform work through [Uber](https://www.uber.com/),¹ [TaskRabbit](https://www.taskrabbit.com/),² and so on).
2. **Online gig jobs**, which include tasks or work assignments such as image tagging, data entry, website design or software development that are performed and delivered online by workers. Online gig work is of two types.³

¹ See: <https://www.uber.com/>.

² See: <https://www.taskrabbit.com/>.

³ The recent International Labour Organization (ILO) study lists four categories of online gig work: microwork, freelancing, competitive programming, and medical consultation (ILO 2021).

- a. **Online freelancing**, also called e-lancing, tends to involve larger projects that are performed over longer times and typically includes complex tasks targeting more intermediate- or high-skilled workers—for example, software development, graphic design, and e-marketing (Raftree et al. 2017).
- b. **Microwork**, on the other hand, involves projects and tasks that are broken down into small subtasks that can be completed in seconds or minutes by remote workers through online platforms (Kuek et al. 2015). Microworkers are typically paid small amounts of money for each completed task, which can often be performed with basic numeracy and literacy skills. These tasks include image tagging, text transcription, and data entry (Raftree et al. 2017). Microwork has lower barriers to entry than online freelancing, making it an attractive income-generating opportunity for unemployed and underemployed individuals with few or no specialized skills.

In this study, we focus mainly on the second category of gig work—that is, *online gig work* (although the discussion on social protection does include some developments driven by location-based platforms).

FIGURE 0.1: Types of online gig work



Source: Elaboration by study team.
Note: IT = information technology.

IS GIG WORK DIFFERENT FROM OTHER FORMS OF WORK?

Although a relatively new form of work, from a labor market perspective gig work resembles many long-standing work arrangements in developing countries, albeit with a digital tool that serves as an intermediary (table 0.1) (Berg et al. 2018). Online gig work in developing countries should be examined within the context of *high levels of informality*⁴ as well as within the context of the growth and diversification of *nonstandard forms of work*.

TABLE 0.1: Diverse forms of work in developing countries

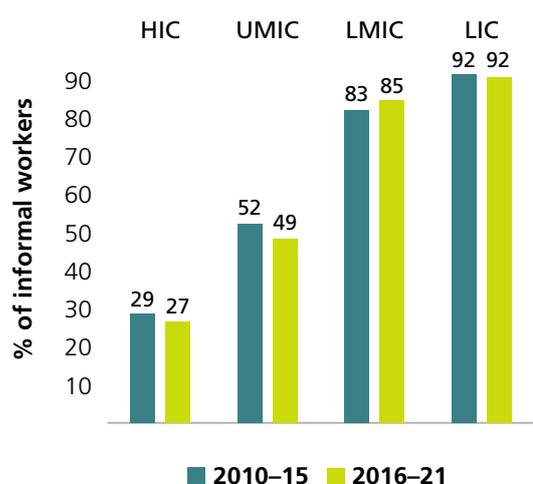
Classification criteria	Fixed term	Temporary agency work	Parttime	Casual work	On-call work	Working from home	Dependent self-employment	Gig work
1. Length of employment contract								
Specific period/task based	X	X				X		X
Occasional and intermittent				X		X		X
Specific number of hours, days, or weeks			X		X	X		
Permanent/continuous						X		
Unspecified time/no contract				X			X	X
2. Working hours								
Less than 35 hours per week	X	X	X	X	X	X	X	X
Full time	X	X		X	X	X		X
Highly variable				X	X		X	X
3. Relationship between employer and employee								
Direct	X	X	X	X	X	X	X	
Multiple party		X						X
4. Workplace								
With employer	X	X	X	X	X			
Not in the place of employer	X	X	X	X	X	X	X	X
5. Earnings								
Paid per hours, days, or weeks	X	X	X	X	X	X		
Paid per month	X					X		
Paid per task				X			X	X
6. National labor regulations								
Regulated by national labor law	X	X	X			X		
Not regulated by national labor law				X	X		X	X

Source: Developed by the study team in consultation with the World Bank Social Protection and Jobs (SPJ) team, Indonesia.

⁴ The International Conference of Labour Statisticians (2003) defines informal employment to include the following: (1) own-account workers and employers in their own informal sector enterprises, (2) contributing family workers, (3) members of informal producers' cooperatives, and (4) employees holding informal jobs.

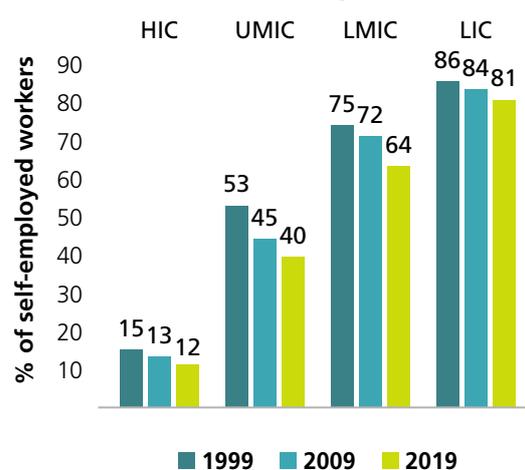
Gig work is yet another form of informal work, remaining well outside labor regulations or social protection coverage. Almost 90 percent of the labor force in low-income countries is doing informal work, such as agricultural day laborers and self-employed firm owners. This percentage has not shown much decline over time (figures 0.2 and 0.3) (Ohnsorge and Yu 2022).⁵ Informal workers are not covered by any national labor legislation, income taxation, social protection, or employment benefits that are normally associated with formal, full-time, direct employment contracts, such as advance notice of dismissal, severance pay, and paid annual or sick leave (Hussmanns 2004).

FIGURE 0.2: Average proportion of informal workers over time



Source: Study team calculations based on ILOSTAT.
 Note: The figure compares the average percentage of informal employment between 2010 and 2015 with the same average between 2016 and 2021. Data are missing for several countries, notably China, which has shown a fast transformation over the past few decades.
 HIC = high-income countries; LIC = low-income countries
 LMIC = lower-middle-income countries;
 UMIC = upper-middle-income countries.

FIGURE 0.3: Proportion of self-employed workers across income groups



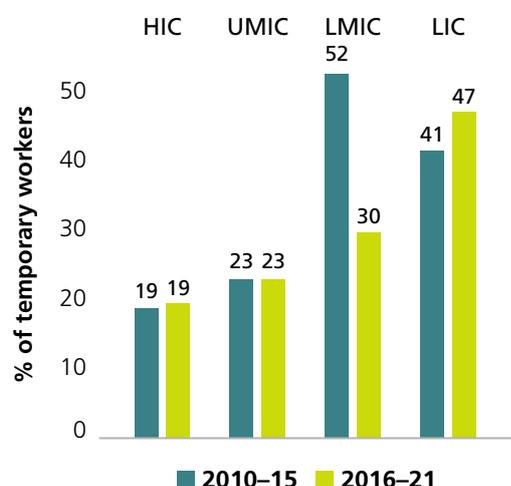
Source: Study team calculations based on ILOSTAT.
 Note: HIC = high-income countries; LIC = low-income countries
 LMIC = lower-middle-income countries;
 UMIC = upper-middle-income countries.

Gig work can also be understood as a part of an overall category of nonstandard work, in which standard work is classified as continuous and full-time work, with a direct linkage between employer and employees, and includes formal jobs with associated social protection and regulations governing minimum wages and other aspects of the work (ILO 2016). Although there is no generally agreed definition, nonstandard work is an umbrella term for work arrangements that deviate from the standard and often includes four types (ILO 2016): (a) temporary employment, (b) part-time work, (c) temporary agency or multiple-party work, and (d) disguised self-employment and dependent self-employment.⁶ Even in advanced economies, the payroll-based social insurance model is increasingly challenged by working arrangements outside standard employment contracts.

⁵ However, there could be within-group compositional changes. One caveat is that the available data do not include countries such as China, which has had tremendous transformation over the past few decades.

⁶ However, the International Labour Organization (ILO) definition doesn't include all types of self-employment as nonstandard employment. It particularly refers to disguised self-employment and dependent self-employment as part of nonstandard work.

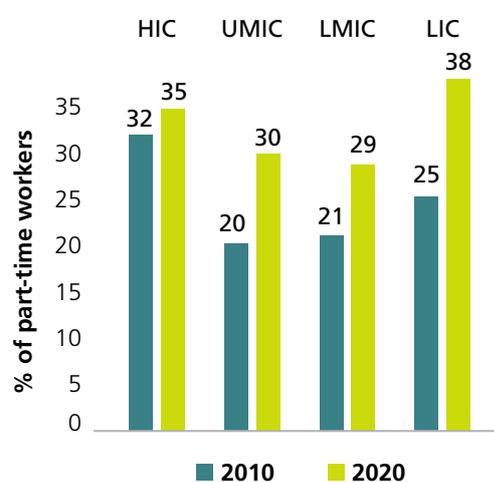
FIGURE 0.4: Average percentage of temporary workers across income groups over time



Source: ILOSTAT.

Note: To maximize country coverage, we compared the average percentage of temporary workers between 2010 and 2015 with the same measures between 2016 and 2021 for similar sets of countries. HIC = high-income countries; LIC = low-income countries; LMIC = lower-middle-income countries; UMIC = upper-middle-income countries.

FIGURE 0.5: Percentage of part-time workers across income groups between 2010 and 2020

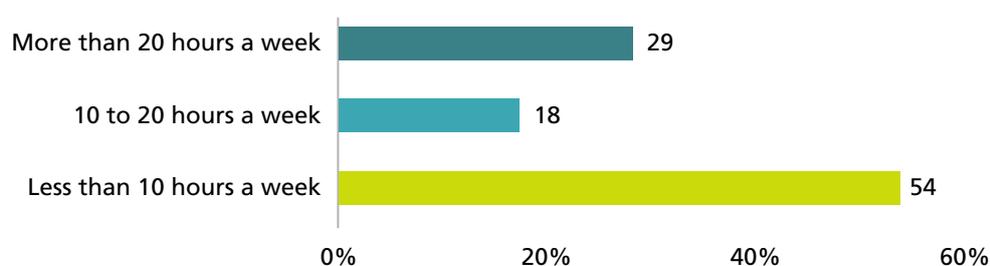


Source: ILOSTAT.

Note: HIC = high-income countries; LIC = low-income countries; LMIC = lower-middle-income countries; UMIC = upper-middle-income countries.

Most workers in developing countries, not just gig workers, are outside the definition of standard work. For example, close to half of workers (46 percent) in low-income countries do *temporary work*, which is defined as engagements lasting for a specific period, including fixed-term and project- or task-based contracts as well as seasonal or casual work, including day labor (figure 0.4) (ILO 2016). Gig work shares some characteristics of temporary work, as most gigs are short-term projects or assignments, though some contracts could be long term. Similarly, gig work also shares some characteristics of *part-time work*, another form of nonstandard work that includes a significant number of workers in both low-income and high-income countries (figure 0.5).⁷ When an employee's normal hours of work are fewer than those of comparable full-time workers, the employment is defined as part-time work (ILO 2016). By that definition, most gig workers work part time; 53 percent of online gig workers in non-high-income countries work less than 10 hours per week (figure 0.6).

FIGURE 0.6: Average working hours of online gig workers per week

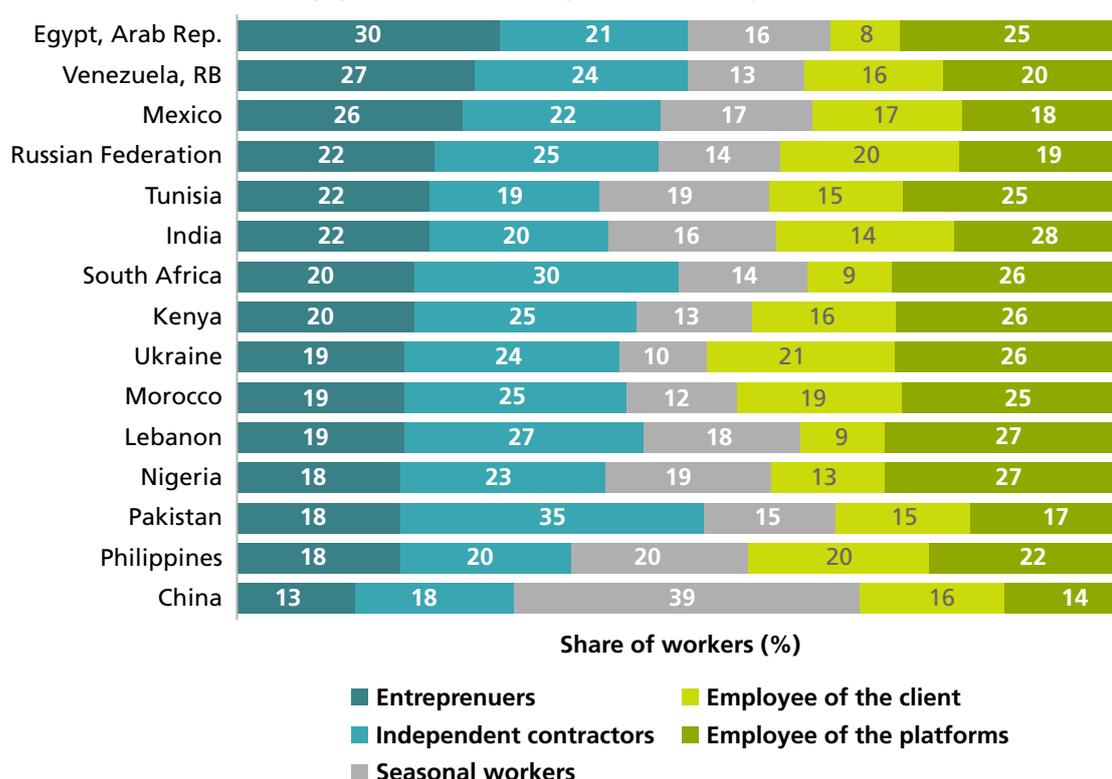


Source: Global survey conducted by the study team.

⁷ However, the data do not reveal whether the growth in part-time jobs is involuntary or voluntary.

While there is debate about whether *self-employment* constitutes nonstandard work, it is the dominant form of employment in developing countries (figure 0.3). The International Labour Organization (ILO) definition of nonstandard work includes only disguised self-employment and dependent self-employment. There is extensive academic, regulatory, and legal debate on whether gig workers have a dependent employment relationship with platform firms or are self-employed workers who use platforms to offer their services, discussed briefly in chapter 6. The surveys our team conducted show that a large proportion of online freelancers consider themselves self-employed or independent contractors (figure 0.7).⁸

FIGURE 0.7: How do gig workers classify their employment status?



Source: Global survey conducted by the World Bank study team.

Online gig work shares characteristics with informal work and other forms of nonstandard work that are widely prevalent in developing countries. This suggests that regulation of gig work cannot be an isolated exercise but must consider the overall context of a labor market that has diverse forms of work in which most people work outside the purview of labor regulations and without access to social insurance and benefits.

WHY SHOULD WE PAY ATTENTION TO THIS NEW FORM OF WORK?

Gig work is growing rapidly, but we still do not know much about the size, scale, and patterns of this emerging form of work, especially in developing countries. Demand for gig work has increased 41 percent between 2016 and the first quarter of 2023. Gig platforms reduce friction and transaction costs for firms when they hire specific expertise by improving supply-demand matching in the labor market, thus increasing productivity. This growth in demand for a flexible workforce has deep and wide-ranging implications for the geography, skill content, and modes of delivery of jobs that

⁸ However, survey data collected from the Microworkers platform show that most of the gig workers consider themselves employees of the digital platform or of the clients (employers).

challenge our traditional concepts of work but are not yet fully understood. These ramifications might further require shifts in policy and regulation that are complex and even less well understood. A key difficulty is navigating trade-offs between competing policy goals—for instance between incentivizing job growth and safeguarding workers' rights. Other challenges relate to the invisible nature of gig work (especially online work), the international nature of gig platforms, and the difficulty in measuring the size, growth, and patterns of this workforce.

Another significant regulatory challenge, especially for online gig work, is the cross-border coordination mechanisms that may be necessary between countries to determine the applicable tax, labor, and social security regulations. Not only is this form of work challenging for labor regulation, but also there are several other aspects of the policy and regulation that are affected—for example, competition (antitrust), tax, intellectual property, corporate governance, privacy, and data. While these regulatory challenges are beyond the scope of this report, they are particularly important and require new ways of thinking. For all the reasons previously discussed, measurement of and understanding of patterns in gig work are important for labor market, economic growth, and private sector development policies. Moreover, gig work offers a range of new economic opportunities but also several risks that policy makers need to understand, track, and assess in order to adapt policies.

WHAT ARE THE KEY QUESTIONS WE TRY TO ADDRESS IN THIS STUDY?

While there has been a recent increase in global and academic research on gig work, several critical knowledge gaps remain, some of which are addressed in this study.

Question 1: How many online gig workers are there?

Despite the recent rapid growth in digital labor platforms and studies of gig work, it has been challenging to estimate the size of the gig work market. Traditional labor market surveys do not capture gig work, which is often sporadic and supplemental work that may be classified with other forms of nontraditional work arrangements, such as day labor and independent contracts or self-employment.⁹ (More discussion is given in chapter 6). Tax returns also do not provide information about gig workers because these platforms are global in nature. Therefore, there are no reliable known sources of data, rendering this new workforce largely unknown and invisible. Thus, estimating the size and scale of gig work is an important issue for policy makers, which we address in chapters 1 and 2.

Question 2: In a market dominated by a few large global platforms, what is the role of local platforms?

In the literature, there is almost no systematic study of the regional/local labor platforms to understand their role in the ecosystem. Our study addresses that vital knowledge gap. Most studies of the gig economy have focused on the top 5 to 10 online global work platforms¹⁰ and omit data, experiences, and lessons learned from domestic and regional online platforms, which may have lower entry barriers for people in developing countries, especially those platforms where English is not the spoken language (Agrawal, Lacetera, and Lyons 2016; Online Labour Index 2020). How many such regional/local platforms are there? What are the differences between global and regional/local platforms in terms of how they work and the types of workers and firms they attract? Can regional/local platforms lower entry barriers for some types of workers or firms? Our study addresses these questions in chapters 1 and 3.

⁹ For a detailed discussion of challenges in systematic measurement of gig work through labor force surveys, see chapter 6 on social insurance.

¹⁰ Platforms tracked by the Online Labour Index (OLI) of the Oxford Internet Institute include the big five (Amazon Mechanical Turk, Fiverr, Freelancer, PeoplePerHour, Upwork). Although OLI did recently add another five platforms in Spanish and Russian to its index, the representation of regional platforms on the index remains limited.

Question 3: The supply side: How inclusive is the online gig economy?

How do gig workers compare with their peers in the labor force, those working in the informal or services sector, or those working in similar occupations in a country? How do they compare in six aspects—age, education, gender, location, occupation, and income? We use a global survey of 17 countries to address those question in chapter 4.

Question 4: The demand side: What types of firms are demanding gig workers, for what tasks, and why?

Very few studies have examined the demand side of gig work because it is hard to gather firm-level data. Our study uses a global survey sent to 20,000 firms, conducted through social media and targeted outreach using company lists in proprietary databases to understand the motivation of firms that hire through platforms and the trends in tasks demanded by different businesses. We also explore new emerging drivers of demand from governments, start-ups, and so on in chapter 5.

Question 5: How should developing countries deal with the lack of social insurance for these workers?

Although there has been plenty of recent study on the lack of social protection for gig workers, there has been limited analysis of viable solutions, especially in the context of developing countries, where informal and nonstandard work is the norm. These new forms of work require a new way of designing social protection and insurance that do not depend on a formal employer-employee relationship. Our report discusses recent developments and suggests possible innovative approaches, such as through public-private partnerships in the context of developing countries, in chapter 6.

Question 6: How can operational programs be designed to benefit from the opportunity but also safeguard workers?

COVID-19 has rapidly increased interest from client governments seeking operational support from the World Bank Group on new ways to bring digital jobs, obs to those who remain excluded from labor markets, especially taking advantage of the recent penetration of broadband and mobile phones. However, there are limited operational models that can support the design of programs while also addressing the risks associated with such types of work. This report provides practical tips for operational teams in chapter 7.

WHAT THIS REPORT DOES *NOT* COVER

As explained earlier, the study team has tried to focus on very specific knowledge gaps and has not attempted to be comprehensive on all aspects of gig work.

- This report **will not discuss location-based platforms** or e-commerce or retail platforms. While both types of gig work (online and location based) depend on technology-driven platforms, online gig platforms are more global in nature (which has implications for policy and regulation), while location-based platforms operate within more location-specific contexts. For this reason, online gig work has the potential to widen the job market for people in regions or countries that have limited domestic private sector demand and job opportunities. Furthermore, the online nature of this work creates opportunities for people with mobility constraints (for example, women, people with disabilities, and refugees). Most regulatory initiatives, including those in developed countries, have been driven by the emergence of location-based gig work such as taxi and food delivery services, which tend to be more visible to policy makers. Online gig workers, on the other hand, have remained largely invisible to policy makers in developing countries. Therefore, given the limited resources for this study, the team decided to focus on

only one category of platforms, not both, although the location-based platforms merit a separate study of their own.

- This report complements other work within the World Bank. While the regulatory challenge is a complex issue, this study **will not address issues regarding labor regulations** because another, ongoing investigation at the World Bank “Better Labor Regulations for the Digital Economy and Beyond: Protecting Workers and Facilitating Labor Markets for the New Forms of Work” (P176553) will study this aspect in more detail.
- This report will also **not cover the issue of regulations on competition law, taxation, data privacy, and so on**, which are the subject of another Advisory Service and Analytics project, “Digital Platforms for Development: Opportunities and Policy Options to Boost Take-Up and Mitigate Risks” (P178019) and another by colleagues in Finance, Competitiveness and Innovation in the Latin America region. “A Digital Economy Framework for Inclusive Growth” (P179481).
- This report is mainly an empirical data-driven analysis of online gig work from both the demand and the supply sides. It will contribute to the development of a more detailed conceptual framework that will build on the upcoming Jobs Flagship report and will include a more comprehensive understanding of other types of digital-platform-enabled forms of work.

OUR EMPIRICAL STRATEGY

In the absence of systematic data on gig work, the study develops a new approach that combines (a) data science methods and website traffic data and (b) a global RDIT survey in 17 countries and 12 languages, in addition to other survey instruments and country deep dives. Detailed methodology sections are in the appendixes. Our methods include the following:

1. **Data science-based methods.** Data science-based methods, including web scraping and natural language processing, were combined with web traffic data to create a consolidated database of firms and estimate the number of workers. The team used two proprietary databases of businesses (CB Insights and Pitchbook) and an openly accessible database of 500 online gig work platforms (EC 2021; Kässi, Lehdonvira, and Stephany 2021),¹¹ which were filtered by a keyword approach and then combined with website traffic indicators, such as clickstream data from Semrush, a software-as-service (SaaS) platform in the search engine marketing industry, complemented with venture indicators. See appendixes B and C for detailed methodology.
2. **Global survey using the experimental RDIT patented by RIWI¹² in 17 countries and 12 languages in addition to English.** The RDIT methodology assumes a random distribution of the survey to the internet population in the targeted countries.¹³ The opt-in survey was accessible on a variety of devices (desktop, mobile, tablet) and was designed to take as little time as possible to complete. Respondents could leave the survey at any point, resulting in complete responses (from respondents who filled out the entire survey) and partial responses (from respondents who completed only several questions in the survey). The survey was conducted in 12 languages in addition to English to reach non-English-speaking populations. **One of the key advantages of the global RDIT survey is the ability to reach a broad audience in a variety of countries.** In addition to collecting data from non-English-speaking populations, this method allowed the team to gather data on the Chinese supply of online gig workers, a market for which capturing

¹¹ In addition to these two sources, World Bank colleagues and private interviews with counterparts provided inputs to this initial database.

¹² See <https://riwi.com/technology>

¹³ This methodology has recently been used by other World Bank studies, such as those of Hoy (2022), Mellon et al. (2021), and Soundararajan et al. (2019), among others.

data has been difficult.¹⁴ Complete responses were collected from 7,015 respondents in the 17 countries, with 956 responses from online gig workers and the rest from respondents who had never done any gig work.¹⁵ The 17 countries, **representing some of the largest gig work countries in each of the six regions, are** Arab Republic of Egypt, Argentina, Bangladesh, China, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, Pakistan, the Philippines, República Bolivariana de Venezuela, Russian Federation, South Africa, Tunisia, and Ukraine. See appendix D for detailed methodology.

3. **Five country deep dives.** Our team worked with World Bank country teams from Social Protection and Jobs (SPJ), Social Sustainability and Inclusion (SSI), and Digital Development (DD) to conduct country deep dives in **Bangladesh, Indonesia, Kosovo, Malaysia, and Pakistan**. See appendix E for a detailed description of the country-level surveys. The team received platform data from Malaysia-based platform eRezeki (2016–20) and the GLOW PENJANA program (2020–21),¹⁶ provided by the Malaysia Digital Economy Corporation (MDEC) and analyzed with the support of World Bank colleagues in Malaysia. In Indonesia, our team collaborated with the SPJ team, who also provided data analysis, to conduct a large survey of over 4,000 informal workers. In Pakistan, we worked with the SSI country team, which had implemented an operation in Khyber Pakhtunkhwa and was keen to roll out an end-of-operation survey. We worked with the team to conduct the survey. In Kosovo, we worked with the DD team to trace beneficiaries of a DD pilot on gig work. In Bangladesh, we worked with client counterparts in the Ministry of Information and Communication Technology to roll out a small-scale survey on gig workers. See appendix E for details.
4. **Ten platform-based surveys.** Ten platform-based surveys, including nine online freelancing platforms and one microwork platform, were conducted between April and December 2022. All nine online freelance platforms were regional/local in nature. The surveys were conducted in collaboration with the nine freelancing platforms, relying on a variety of distribution channels, including emails sent by the platforms to gig workers and promotion of the survey on the platforms. The survey conducted on the microwork platform was posted as a task, and online gig workers were invited to complete the survey just as they would complete any other task (see appendix E for a detailed description of the platform surveys). Table 0.2 lists the platform surveys conducted. Platform-level information was collected from several platforms, in addition to data from our surveys.¹⁷ Our team partnered with the Inter-American Development Bank (IDB) Social Protection team to conduct the survey on the Latin American platform Workana.

¹⁴ For instance, the OLI features limited data on the supply of online gig workers from China, given that the index is based on a selection of top online gig work platforms that does not include Chinese platforms. For more information, please see <http://onlinelabourobservatory.org/oli-supply/>.

¹⁵ RIWI allows internet users around the globe to opt in to anonymous surveys on any web-enabled device. As people are using the web or apps, there is a chance of their coming across a RIWI survey via dormant domains (websites that are no longer in use), incorrect URLs, and links within apps and websites. Instead of encountering a “page does not exist” notification or an advertisement, a RIWI survey or message test is rendered full site on the page. Web users then decide whether they would like to anonymously participate in the research and do so without incentivization. Some strengths of using RIWI technology include rapid data collection, diverse respondent sets, and respondent anonymity. Because of the scale of internet users and the ability to sample the entire population of a country using the internet it is possible to obtain very large samples in a short time and to engage large samples of previously unengaged voices. Respondents are not part of a panel or discussion group, which usually come from specific demographic subsets. The survey was a questionnaire of 12 queries. A total of 20,010 respondents completed the first question in the survey.

¹⁶ The GLOW PENJANA program was developed by MDEC as a spin-off to the eRezeki platform to support individuals affected by the COVID-19 pandemic. The program provides training to aspiring online gig workers.

¹⁷ The interview with YouDo was conducted on February 10, 2022, days before the Ukraine crisis.

TABLE 0.2: Platform surveys

Platform	Region / Country	Number of responses
Workana	Latin America (HQ in Argentina; active in EAP; regional office in Malaysia)	3,702
SoyFreelancer	Latin America (HQ in El Salvador)	324
SheWorks!	Latin America (HQ in United States)	36
Truelancer	South Asia (HQ in India)	746
Flexiport	South Asia (active only in India)	11
Wowzi	Africa (active primarily in Kenya)	960
Onesha	Africa (active primarily in Kenya)	82
Jolancer	Africa (HQ in Nigeria)	19
Elharefa	MENA (HQ in Egypt, Arab Rep.)	41
Microworkers	Global microwork platform	1,073

Sources: World Bank, except for Workana, which was conducted in collaboration with the IDB Social Protection team.

Note: EAP = East Asia and Pacific; HQ = headquarters; MENA = Middle East and North Africa.

5. **Firm survey to understand the demand side.** Our team worked with the World Bank External and Corporate Relations (ECR) team to conduct a global survey of firms through (a) social media—distributed via Twitter, LinkedIn,¹⁸ World Bank’s Jobs and Development blog,¹⁹ and Facebook groups used to hire gig workers—and (b) direct emails targeted to 14,083 firms from a proprietary database (Pitchbook), which had contact details and another 6,202 firms through their generic email addresses. The team was able to gather 1,174 responses, including 366 from firms that hire gig workers. See appendix H for methodology.
6. **Three focus group discussions with online gig workers.** Focus group discussions were held to collect qualitative information about the challenges and benefits of online gig work. Working with the SSI Global Practice team in the Pakistan country office, two discussions were organized with Pakistani online gig workers (one with women and one with men). A third focus group discussion was organized with the Kenya-based platform Onesha.
7. **Interviews with 28 platforms.** Of 28 platforms interviewed, 24 are regional/local platforms and 3 are global (including Freelancer and Upwork).²⁰ The regional platforms selected were among the top platforms by traffic data in each of the six regions to draw context-specific insights, their business models, and so forth. Descriptions of the platforms and questions asked of representatives are presented in appendix F. The platform stakeholders interviewed are listed in table A.1 in appendix A.
8. **Interviews with policy makers, partners, and practitioners.** Interviews were conducted with representatives from governments, development organizations, and a variety of programs designed to promote online gig work and train aspiring workers (see appendix A).
9. **Interviews with the private sector.** The team also interviewed representatives from businesses, private banks, and financial institutions working with platforms to offer health insurance or savings plans to online gig workers, as well as other organizations supporting the inclusion of vulnerable groups in the online gig economy (for instance, refugees) (see appendix A).
10. **Consultations with World Bank Group teams/team task leaders:** The team has consulted a wide variety of World Bank colleagues in the process of developing this report.

¹⁸ See <https://www.linkedin.com/company/solutions-for-youth-employment>.

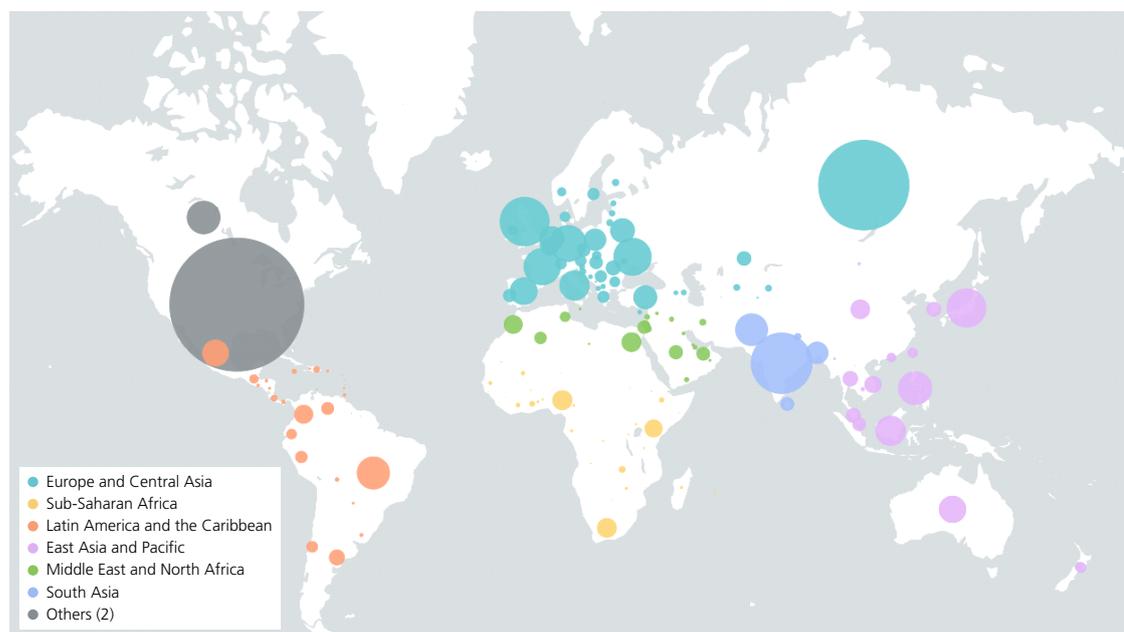
¹⁹ The blog post aimed to promote the survey and engage more businesses to respond. The blog post is available at <https://blogs.worldbank.org/jobs/help-world-bank-figure-out-piece-puzzle-gig-jobs>.

²⁰ Representatives of the following platforms were interviewed: Apna, Asuqu, BeMyEye, Bookings Africa, The Bot platform, Elharefa (previously Al7arefa), Findworka, Flexiport, Freelancer, Hsub (the company that runs the Khamsat and Mostaq platforms), Jolancer, Karya, M4JAM, MDEC (which runs the eRezeki and GLOW programs), Meaningful Gigs, Motionwares, Native Teams, Onesha, SheWorks!, SoyFreelancer, Truelancer, UREED, Voices.com, Workana, Wowzi, and YouDo.

KEY FINDINGS: THE PROMISE AND THE PERIL

The study identified a total of 545 online gig work platforms across the globe, with headquarters in 63 countries and platform workers and clients located in 186 countries (figure 0.8). The team used a data science methodology to develop a database of online gig work platforms. Employing information from prior lists of gig platforms and using keyword analytics platforms and natural language processing methods, the study team developed a list of keywords that are relevant for identifying platforms. These were applied to two proprietary databases of firms (CB Insights and Pitchbook) to identify a comprehensive list of online work platforms across the globe.

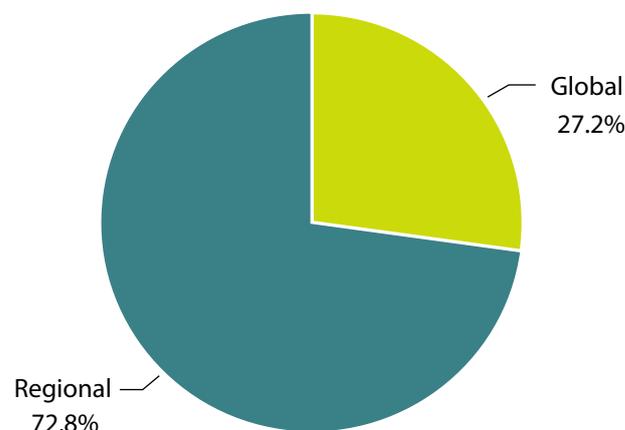
FIGURE 0.8: Global distribution of online gig work platforms, by traffic



Source: Team database from CB Insights, Pitchbook, and Semrush.

Note: The figure shows the traffic towards gig work platforms, with size depicting magnitude and colors showing different WB Regions.

Contrary to popular perception, most online gig work platforms are regional/local, connecting employers and workers from one country or a few countries within a region (figure 0.9). One special contribution of our study to the gig work literature is the effort to identify and understand regional and local platforms. Identifying such local platforms is not straightforward, given a lack of publicly accessible transaction data on the platform level. In the absence of firsthand data, we used a second-best method that relies on web traffic as a proxy indicator for platform operations. We used data from Semrush, a proprietary SaaS platform, on how many people visit specific URLs, the number of unique visitors, the average duration and pages visited, clickstream data, and bounce rates (when a person visits a website but leaves the home page in seconds) over the course of 2022. We then developed a model to classify platforms as global or regional/local on the basis of the share of web traffic from one region, accounting for the number of internet users. The results show that 73 percent of platforms in the mapping can be considered regional/local. However, they attract only 29 percent of the overall traffic, which can be interpreted as network effects in favor of global platforms at work.

FIGURE 0.9: Global and regional/local online gig platforms

Source: Team database.

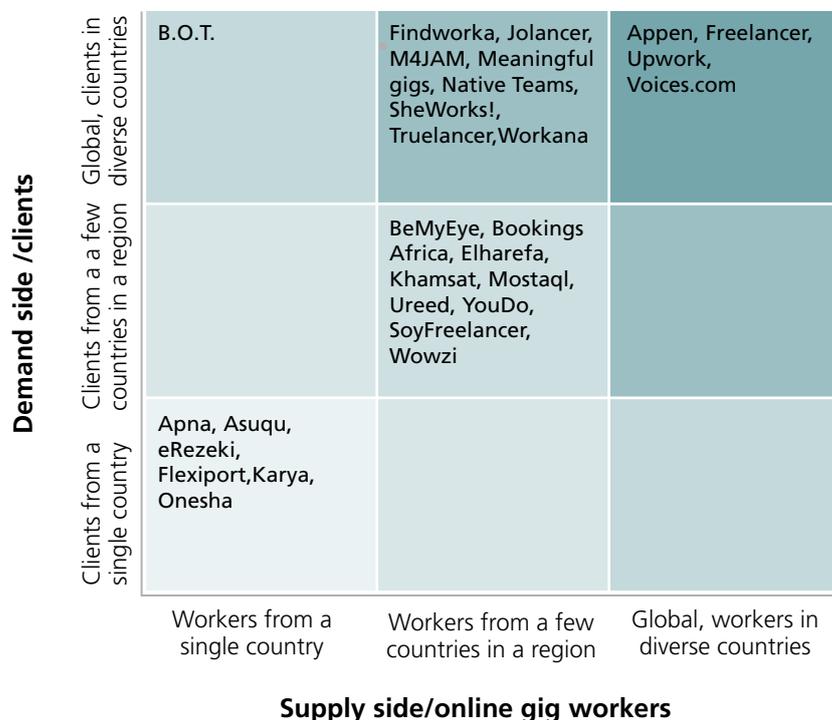
While regional/ local platforms may not have received as much attention as global platforms, they seem to play an important role not just for the local labor market but also for the local private sector ecosystem in many developing countries (figure 0.10). First, local platforms have several advantages over global platforms that may make them better suited for some types of work (for example, work requiring understanding of cultural context). Second, they often have features (use of local languages, local payment mechanisms) that may make it easier for groups previously excluded from global platforms to participate in the gig economy. Third, regional/ local platforms play an important role for local private sector development in terms of being talent resources for local MSMEs and start-ups in developing countries, which often don't have the capacity to hire expensive talent. Finally, because regional/local platforms are concentrated in one or a few select countries or regions, such platforms may be more inclined to collaborate with national governments on development policy goals, such as training or social insurance measures initiated by the government. Nevertheless, many regional/local platforms struggle to reap the benefits of network effects or establish a sustainable business model and are likely to seek alternative business models (for instance, becoming staffing agencies) to be able to grow.

Online gig workers are now a non-negligible part of the global labor force, with about 154 million to 435 million people doing gig jobs, which is almost 4.4 to 12.5 percent of the total. The last World Bank study on this topic, in 2015, estimated that there were 48 million registered online gig workers at that time (Kuek et al. 2015). Our study almost eight years later shows a much higher number, partly because our methodology made a concerted effort to track gig workers on regional/local platforms that most literature has overlooked, but also because there has been a rapid growth in recent years, especially triggered by the COVID-19 pandemic. While all estimates are based on several assumptions in the absence of clear data, there is no doubt that gig work is growing and hence needs policy attention.

For two in three workers, gig work is a secondary occupation or performed only sporadically. Gig workers often vary widely in terms of how much time they spend doing gigs and what fraction of their overall income is generated by them. The team's global survey in 17 countries conducted in 12 languages estimates that there could be about 132.5 million main, 173.7 million secondary, and 106.2 million marginal gig workers globally (figure 0.11).²¹

²¹ Figure 0.11 doesn't include North America.

FIGURE 0.10: Classification of interviewed global and regional/local platforms



Source: Study team.

FIGURE 0.11: Classification of gig workers based on earnings and working hours

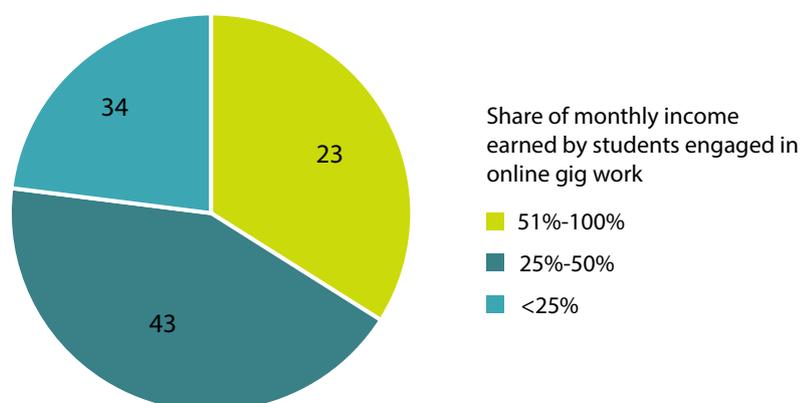


Sources: Table adapted from Urzi Brancati, Pesole, and Fernández-Macías 2020; team analysis based on the global RDIT survey.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean region; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

Gig work attracts people because it provides workers the flexibility to learn digital skills while earning an income. Gig income can help manage risk and smooth income during periods of shock or transition, acting as almost a type of unemployment insurance where none exists, in the event of job loss, for example. For youth still in school, a side gig is a way to earn income while also attending school (figure 0.12). This supplemental income was especially important for many during COVID-19.

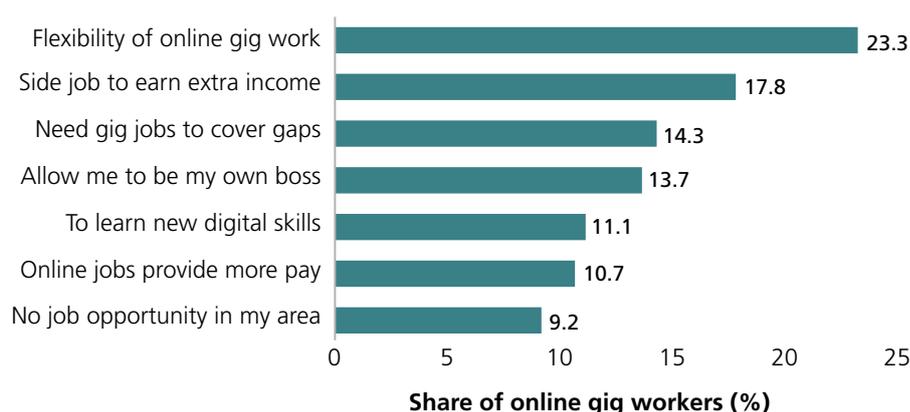
FIGURE 0.12: Share of monthly income earned by students engaged in online gig work



Source: Team analysis of global survey conducted by the team.

Gig work can support inclusion in the labor market but is not a panacea in addressing inequality and poverty. Gig jobs, especially those performed online (not location based), can be important for people who face mobility constraints in accessing offline labor markets (figure 0.13)—for example, people with disabilities, young women who have caretaking responsibilities, or low-income youth who require flexibility in work schedules to earn extra income while still in school. Nevertheless, landing a gig job is not straightforward. Workers need access to the internet and to internet-enabled devices. In addition, workers need some level of digital literacy. Gig work is also becoming increasingly competitive, with gig workers not finding enough well-paid tasks or having to spend long hours searching for and landing a task (Wood, Lehdonvirta, and Graham 2018). There are also concerns about finding enough career progression pathways to move out of gig work to a more secure, stable job.

FIGURE 0.13: Motivation to engage in online gig work

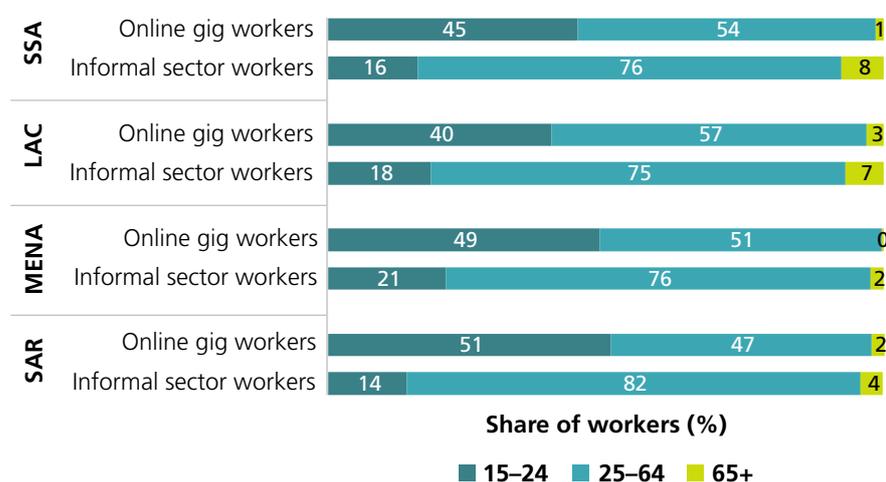


Source: Team analysis of global survey conducted by the team.

Over half of online gig workers are youth. The team conducted a global survey using the experimental RDIT patented by RIWI in 17 low- and middle-income countries, which represent among the largest gig work countries in each region. We used the survey findings to assess how online gig work compares with the labor force in each country on six aspects of inclusion (gender, age, location, skills, language, and occupation), by examining differences between online gig workers and average workers in the labor force, in the services sector, in the informal sector, or in similar occupations in each country (figure 0.14). Most online gig workers tend to be younger than workers in the services

sector and workers in the informal sector for countries for which data were available. For countries with growing cohorts of youth as well as high youth unemployment rates, online gig work can provide young people with work opportunities beyond what is available in the traditional labor market.

FIGURE 0.14: Age composition of online gig workers compared to informal workers in labor force surveys, by region

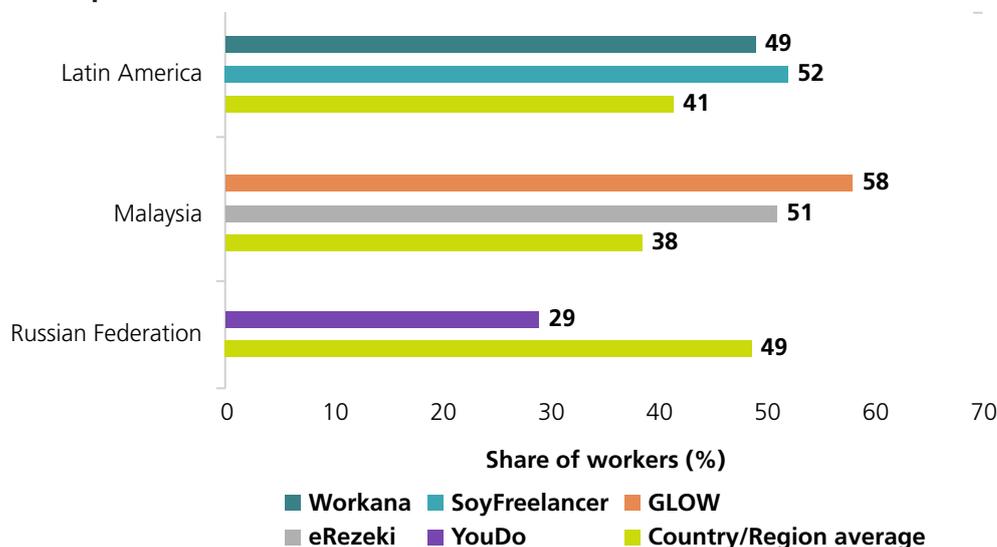


Source: Analysis based on the global survey conducted by the study team and labor force and household surveys (<https://ilostat.ilo.org/data/>).

Note: LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

While men make up the majority of online gig workers, in some regions women are participating in the online gig economy to a greater extent than in the general labor market, the services sector, or the informal sector. The key drivers of women’s participation in this market are the ability to earn additional income and the flexibility that online gig work offers (figure 0.15). Women are more likely than men to do online gig work because they want to earn additional income and because they don’t have other job opportunities, while men appreciate more the ability to learn new digital skills and the chance to be one’s own boss.

FIGURE 0.15: Women’s participation in the labor force and in select online gig work platforms



Source: Analysis based on the platform surveys conducted by the study team.

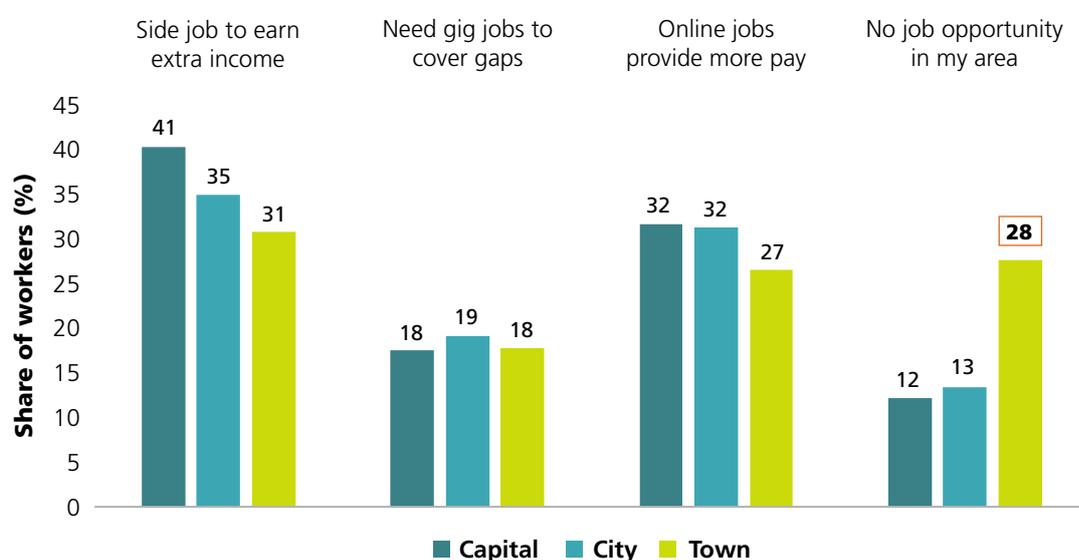
Surprisingly, more than 6 in 10 gig workers live in smaller cities, which points to the role that online gig work could play in addressing regional inequalities in access to jobs, but good digital infrastructure and digital devices are critical. Our online global survey enabled us to record geolocation data for each respondent, which we used to classify gig workers as based in **three types of cities**: (a) capital cities, (b) secondary cities (the top 10 largest cities in a given country, not including the capital city), and (c) tertiary cities (smaller cities and towns beyond the capital city and the top 10 largest cities in a given country). Patterns may differ at the platform level, but generally a good percentage of online gig workers comes from cities beyond the capital city (figure 0.16). On the India-based Truelancer platform, for instance, over 60 percent of the online gig workers surveyed lived in secondary or tertiary cities and villages, while 40 percent lived in capital cities. However, there are strong differences between regions; for example, in Sub-Saharan Africa and in the Middle East and North Africa, a much greater proportion of online gig workers is in capital cities.

FIGURE 0.16: Distribution of online gig workers by city size and region



Source: Analysis based on the global survey conducted by the study team.
 Note: ECA = Europe and Central Asia; EAP = East Asia and Pacific; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa

FIGURE 0.17: Motivation to engage in online gig work across locations

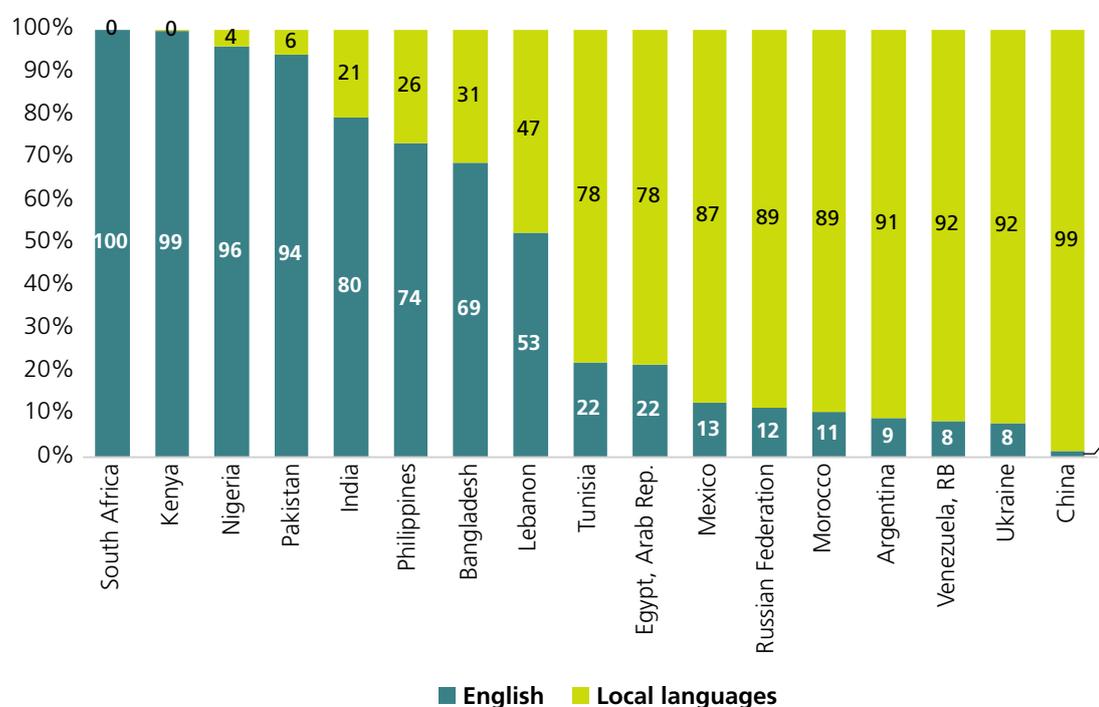


Source: Workana survey.
 Note: Respondents were allowed to select multiple options. Only income- and job-related responses are included in this figure.

In regions where there simply aren't enough good jobs available, gig work can bring new opportunities. Most workers in low-income countries already perform a portfolio of low-skilled jobs in gig-type arrangements in the informal sector, with high levels of insecurity, low wages, and poor working conditions (as discussed previously). For job-scarce contexts, gig opportunities can often (though not always) be better than the alternative. In small countries or fragile and conflict-affected situation (FCS) countries or regions with limited availability of local jobs, online gig jobs can provide a way to access a wider job market and tap into international demand, without the need to physically migrate to job-rich regions. For example, residents in towns and villages are more motivated to engage in online gig work since job opportunities are limited within their neighborhoods (figure 0.17).

Language can be a significant barrier in accessing online gig work opportunities. Of online gig workers, 33 percent confirm that one of the main challenges they face to work on global platforms is English language skills. The global supply of online gig work is dominated by workers of English-speaking countries. Three countries in particular—India, Bangladesh, and Pakistan—account for over 50 percent of the supply of online gig work on the basis of data collected by the Online Labour Index (hereafter, OLI 2020),²² signaling that workers from non-English-speaking countries are likely to face language barriers to enter the online gig work market. Surveys conducted in English not only tend to exclude perceptions of non-English-speaking populations but also might underestimate the overall size of the online gig workforce. The team's global survey was translated into 12 languages to ensure a wider reach. A substantial number of responses (57 percent) were in languages other than English (figure 0.18). Local platforms could help address this barrier by including non-English-speaking populations on digital platforms.

FIGURE 0.18: Distribution of the language of responses by online gig workers by country

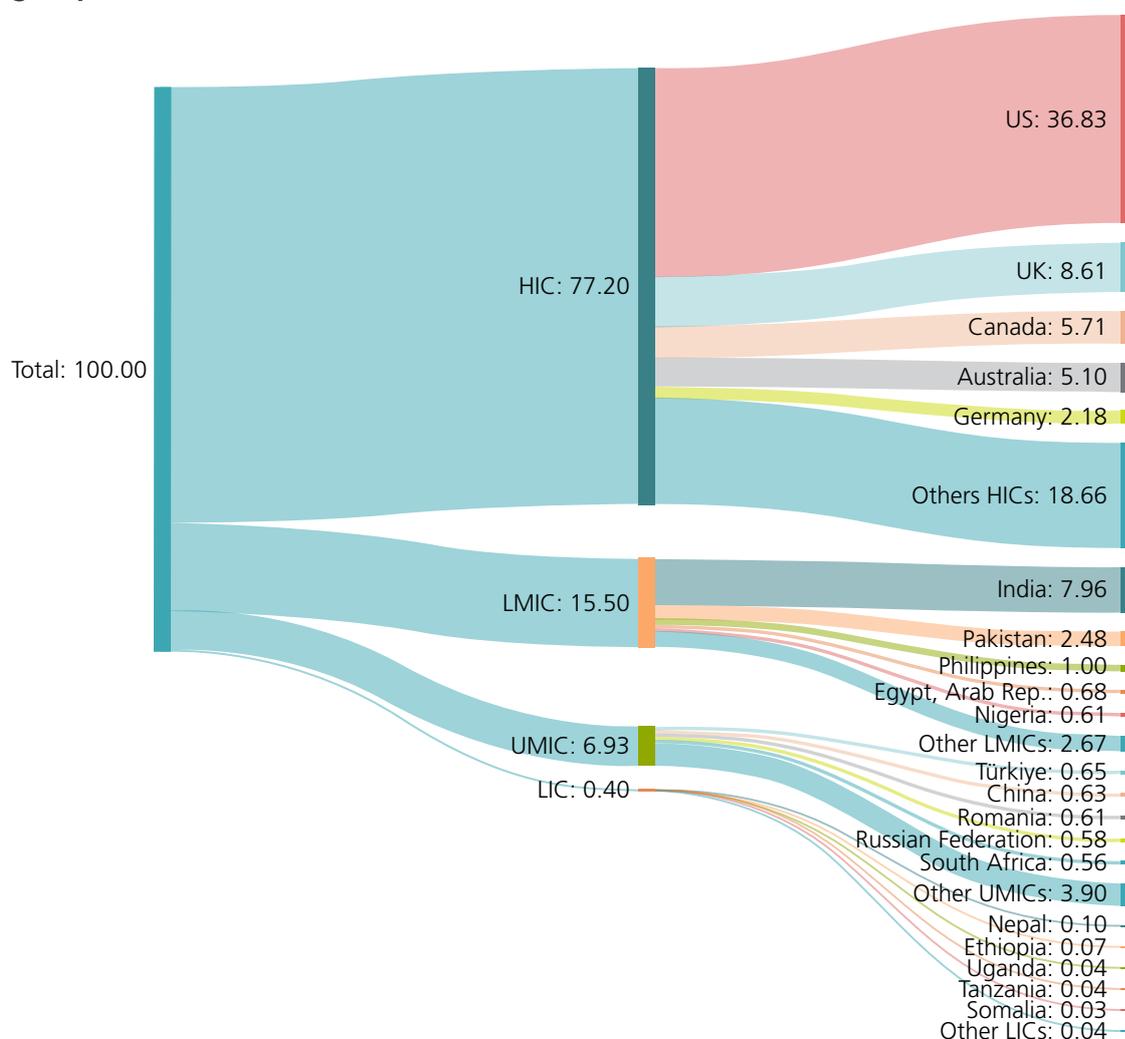


Source: Analysis based on the global survey conducted by the study team.

²² The OLI collects data from the five largest English-language online gig work platforms and six non-English-language platforms (three in Russian and three in Spanish). See <http://onlinelabourobservatory.org/oli-supply/>.

Developed countries dominate the demand for online labor, but lower-middle-income—rather than upper-middle-income—countries are the second most important contributors (figure 0.19). The demand for gig work increased by 41 percent between 2016 and the first quarter of 2023. More than three-quarters of the global demand comes from high-income countries, but the demand from developing countries is rising faster than that in the developed countries (figure 0.20). Growth in the number of jobs posted on one of the largest global platforms by companies in North America was roughly nine times slower than that in Sub-Saharan Africa. Moreover, a global survey of firms conducted through social media and targeted emails using contact details in a large proprietary firm database shows that the demand for online gig workers is expected to continue rising, especially in low- and lower-middle-income countries. MSMEs drive the demand for gig workers. Not only are smaller businesses more likely than big businesses to hire gig workers, but they also outsource a greater share of their work through platforms than large firms. Governments also generate local demand.

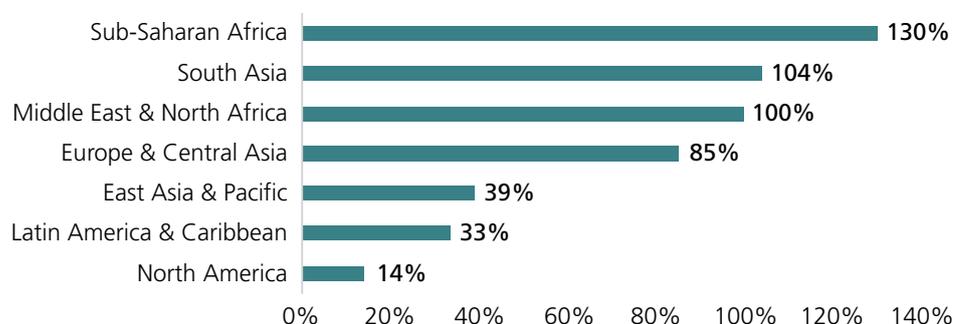
FIGURE 0.19: Demand for online labor, by country and country income groups—2022



Source: World Bank illustration based on Online Labour Index data.

Note: HIC = high-income countries; LIC = low-income countries; LMIC = lower-middle-income countries; UK = United Kingdom; UMIC = upper-middle-income countries; US = United States.

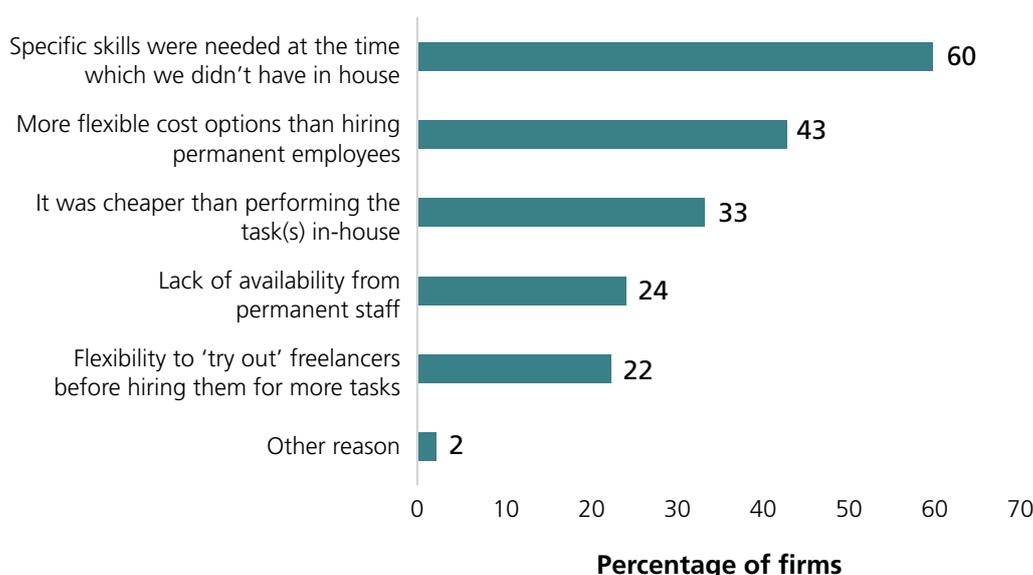
FIGURE 0.20: Growth rate of job postings on one of the largest digital labor platforms for 2016–20, by region



Source: World Bank illustration based on data shared by the Online Labour Index team.

Businesses benefit from a flexible workforce, as it helps them improve efficiency and enhance productivity, which is fundamental for the growth of new jobs in any economy. Digital labor platforms allow businesses to set up tasks and requirements, which are then matched by the platforms to a global pool of workers who can complete the tasks within the specified time and budget. This task distribution process helps businesses, large and small, to easily outsource a diverse range of activities to a geographically dispersed crowd. Our study confirmed findings from other research that firms, not just Fortune 500 multinationals but also MSMEs and start-ups, are increasingly using online gig workers to access a larger talent pool of labor, skills, and expertise, to reduce start-up and transaction costs and overcome conventional hiring barriers (figure 0.21). According to the survey conducted for the purposes of this study (see chapter 5 for details), 44 percent of MSMEs turned to digital labor platforms to access a wide range of skills. Labor platforms allow firms to remain nimble and adjust their workforce in terms of size and composition in response to peaks and dips in demand in an increasingly dynamic market. A vibrant, agile, and growing private sector is the engine for a robust jobs agenda and therefore of great importance from a development perspective.

FIGURE 0.21: Reasons for hiring gig workers

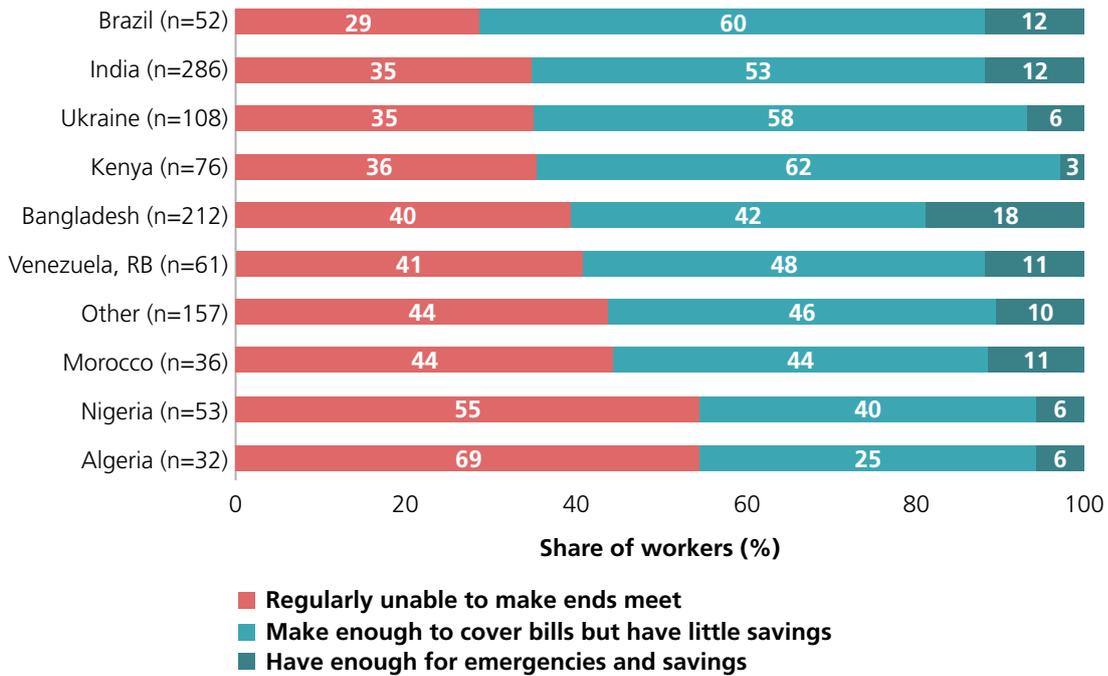


Source: Team survey of firms hiring through digital labor platforms, 2022.

Note: Respondents could choose more than one option, so the values do not add up to 100.

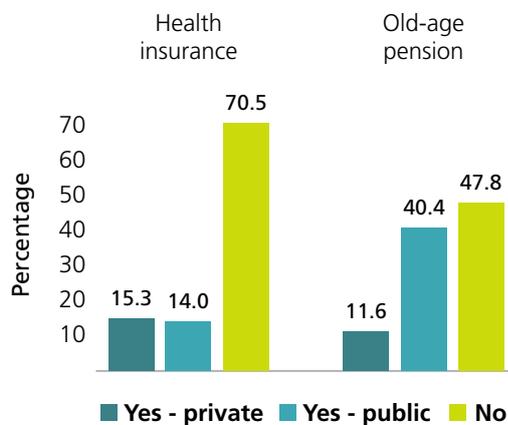
Gig workers, like many other self-employed individuals, typically fall into a “missing middle” when it comes to social insurance—they are sometimes not poor enough to be eligible for social safety net benefits and not well-off enough to be part of social insurance programs mandated for the formal sector. However, in relatively lower-income countries, gig workers are likely to belong to households needing short-term consumption-smoothing support (figure 0.22).

FIGURE 0.22: How would you best classify your financial position?



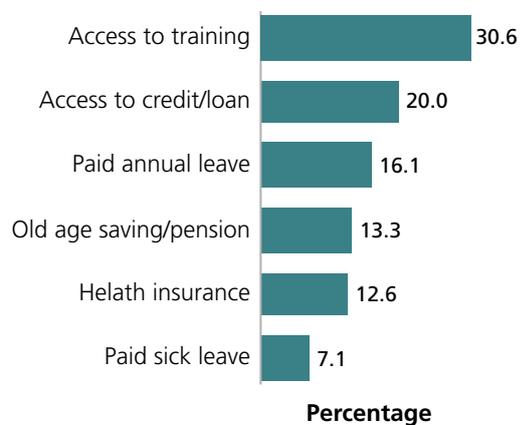
Source: Survey on Microworkers platform.

FIGURE 0.23: Do you subscribe to health insurance and an old-age pension?



Source: Workana survey.

FIGURE 0.24: What is the top benefit you would like gig platforms to provide?

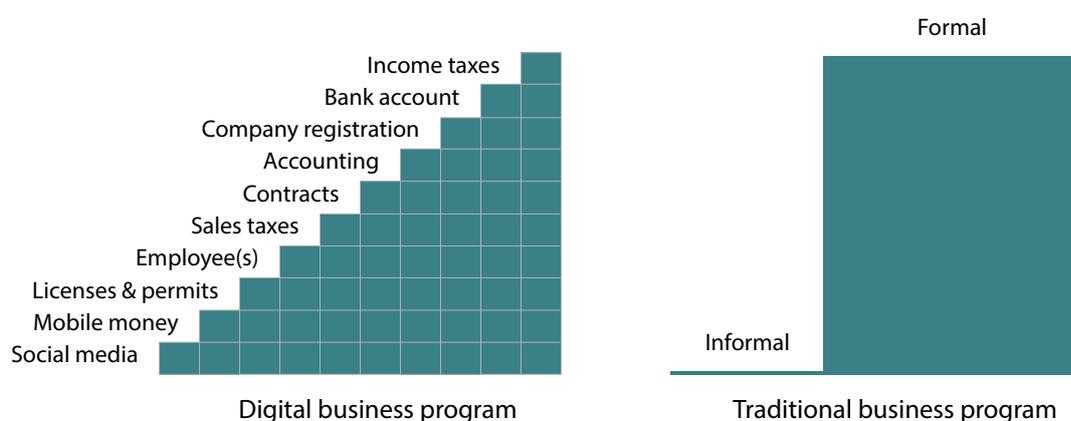


Source: Global survey conducted by the study team.

Although about half of gig workers do not subscribe to a pension or retirement program and are not covered by other benefits that accompany formal employment, gig workers also desire unconventional benefits, such as access to training and credit or loans to buy equipment, a laptop, and internet access (figures 0.23 and 0.24). This means that social programs to cover workers could be more attractive if they also included support for insertion into the labor market.

While the issue of classification of gig workers has attracted considerable debate and court cases in developed countries, in developing countries the issue needs to be assessed in the context of high levels of informality in the labor market. While the estimated gig worker population is small compared to the informal worker population (about 90 percent of the labor force in low-income countries is informal), there are overlaps between these worker arrangements. Both are diverse and fluid—people move in and out of jobs regularly, can hold several market engagements at the same time, and may hold jobs with characteristics of both economic formality and economic informality. Chapter 6 has a detailed account of some of the developments in the classification debate, relevant mostly for developed countries. For most low-income countries, the most practical and effective approach would be to extend coverage to all informal and self-employed workers, including gig workers, without segmenting the labor market.

From a social protection policy perspective, governments can partner with gig platforms to widen coverage of social programs for informal workers. Workers in the informal sector are hard to identify and reach, making them almost invisible to policy makers. Online gig platforms can help increase observability and may provide entry points toward accessible, low-cost incremental steps to collect data and link informal workers to social registries and social protection programs (figure 0.25). This is because digital platforms have identity information and use mobile payments, features which make gig workers easier to identify, reach, and enroll in government programs designed for informal workers (Ng'weno and Porteus 2018). Platforms can serve as intermediaries for social registries, which in turn link eligible individuals to existing social protection programs. The ability of the government to reach vulnerable informal workers and quickly disburse cash support through online payments was critical during the COVID-19 pandemic. This is one reason digital gig platforms could be critical allies for policy makers seeking to expand coverage of social protection or social insurance programs for vulnerable people. There is also an opportunity to leverage the platforms for other, broader policy goals such as digital skills training for low-skilled workers (examples in chapter 7) and digital public works. The novelty of this potential social protection instrument (digital public works) is that it offers short-term employment, in the style of traditional labor-intensive public works programs, while leveraging platforms that gig workers are familiar with. Program beneficiaries are also provided with digital skills training, which they can use to further signal capabilities in the formal labor market. (More details on pilots are in chapters 6 and 7.)

FIGURE 0.25: Digital versus traditional formalization process

Source: Ng'weno and Porteus 2018.

Innovative models of social insurance, especially those working with the private sector, and the platforms themselves can help expand the protection of workers.

There are now several examples of governments partnering with platforms in ways that also create incentives for platforms. For example, the Malaysian government collaborated with Grab, a large location-based digital labor platform, to provide an additional 5 percent matching contribution—provided by Grab—to its Gold- and Platinum-tier drivers who register with i-Saraan, the government's retirement savings program for self-employed workers. The case of Hilfr, a Denmark-based platform, is another example of platforms themselves creating tiered categories among their workers; the Super Hilfr workers who work long enough are awarded the status of employees (with pensions, leave, and so on), while Freelance Hilfr workers remain freelancers. Such programs are also attractive to platforms, because they create incentives to retain and reward their top workers. In addition, there might be an emerging market opportunity for private insurance providers. AXA Mansard Insurance, a leading insurance provider in Nigeria, provides insurance plans to self-employed artisans and freelancers by adapting its models to account for infrequent gig earnings. Other companies, such as Catch in the United States, work with gig platforms to target individuals who do not receive health insurance coverage through employment and offer them a package of services, including support with filing tax returns and so forth. New start-ups like Koa in Kenya work with platforms to enable gig workers to make small, infrequent contributions to savings (often as little as 100 shillings), invest the savings in money market funds, and obtain financial literacy training. Governments, too, can use a regulatory sandbox approach to design better-calibrated schemes. The Inter-American Development Bank's Retirement Savings Laboratory studies how behavioral tools can promote pension savings through nudges to save, including automatic savings mechanisms on digital platforms. For example, in Peru, through the Cabify app, drivers were invited to voluntarily save part of their earnings, leading 18 percent of them to sign up for an automatic savings debit.

New and modern models of collective bargaining are crucial. Collective bargaining has an even more important role to play in a sort of regulatory vacuum that exists for gig workers to ensure that they have a voice and are protected against unfair business practices. But traditional models may not work because workers are geographically dispersed, tend to work informally, and work with multiple clients and platforms, making any form of organization difficult. Besides, collectivization often violates competition law (an aspect being studied in more detail by another team in the World Bank). In this context, more innovative and tech-enabled forms of collective action may be a better fit. One example is application of the very mechanism of ratings used by platforms (to rate workers) to the

platforms themselves. Such third-party or crowd ratings could be an effective way to align platform incentives with those of workers and policy makers. Another example is that of Turkopticon, a web application and browser add-on that allows workers to rate their clients on Amazon Mechanical Turk, a gig work platform. Workers can now look up client records and make an informed decision on the task posted by a certain client. Self-initiated groups on Facebook, Reddit, WeChat, and WhatsApp are already bringing gig workers—including those working on location and online—together from across the world. Some gig workers are also exploring partnerships with existing unions. There has also been some discussion about platform cooperatives as an option (discussed in chapter 6).

Several governments are beginning to use online work to provide income-earning opportunities for low-income populations, youth, women, and people in areas where the availability of good-quality jobs is limited. In order to develop a strategy for an online gig jobs program in a country or local context, important preconditions are essential: practitioners need to possess clear motivation, assess readiness in the local context, include stakeholders, identify a champion government agency for implementation and sustainability, and preferably develop a phased strategy that will enable pilots, learning, and scale. Access to digital infrastructure is key. Policy makers should find innovative ways to partner with platforms and other private sector players to provide support and training for vulnerable populations. However, programs would need to ensure that appropriate safeguards are in place and that beneficiaries are aware of the short-term and volatile nature of such jobs.

Recent developments in artificial intelligence (AI) are also likely to have a profound impact not just on online gig work but also on work more broadly. At the time of writing of this report, there was an upsurge in media discussion on the impact of AI with the release of ChatGPT (box 0.1). While on the one hand these technologies have the potential to increase the productivity of workers, on the other hand, they may also lead to job displacement and reduced earning opportunities. To illustrate, a recent randomized control trial revealed that programmers who were paired with generative AI completed their tasks 55 percent faster than their counterparts who did not use AI support (Peng et al. 2023). However, generative AI could also potentially replace human labor altogether. For instance, a recent study showed that ChatGPT outperformed crowdworkers in text annotation tasks and completed them at a significantly lower cost—20 times less, to be precise (Gilardi, Alizadeh, and Kubli 2023). Moreover, studies also show various effects on workers with different skill levels (Yilmaz, Naumovska, and Aggarwal 2023). Overall, it is likely that generative AI will affect the labor market, bringing both productivity benefits and likely job displacement. These developments need to be studied further.

For policy makers in developing countries, regulating gig work is a complex task. One of the key regulatory challenges for governments, especially in low-income countries that lack enough good-quality jobs, is to balance two sets of competing objectives. Policy makers want to promote flexibility in the labor market to enable job creation and access to jobs, but they also want to protect job quality and worker rights and protections. It is not easy to determine the right balance. Overregulation or poor regulation is risky. Within a newly emerging market, work opportunities could rapidly shift from one jurisdiction to another in the face of regulatory pressure. Furthermore, as a new form of work that is rapidly changing, with little or no available data about it, gig work leaves policy makers in developing countries with limited evidence or knowledge about what strategies would succeed in the context of their countries. While there have been several regulatory and legal initiatives in the United States and Europe, those efforts have limited relevance in the developing-country context and cannot simply be transplanted. This makes it even more important for governments to build the capacity to collect and monitor data. International efforts to systematically gather data through labor force surveys are a welcome step (see chapter 6 and appendix M).

Governments can use the potential of online gig work to build human capital, develop the nation's digital skills, and provide opportunities to supplement household income. Digital public works offer promising opportunities for short-term income generation to low-income populations while also building digital skills and boosting demand for online gig workers. Promoting access to digital infrastructure is a must. Digital devices such as laptops, smartphones, and tablets can open new doors to work. Wider social protection coverage for all types of informal workers is the best way to protect gig workers without segmenting the labor market. Countries should experiment with different pilots and methods to establish effective social protection and insurance for online gig workers.

BOX 0.1: BUT WHAT ABOUT ChatGPT?

The team posed this question to ChatGPT itself. Here is what ChatGPT thinks about its own impact on freelancing.

Question posed by the team to ChatGPT: How will ChatGPT impact online gig jobs?

ChatGPT, as a language model, can potentially have a significant impact on online freelance work in a variety of ways. Here are a few examples:

- 1. Content Creation:** ChatGPT can generate high-quality text content, such as articles, blog posts, and product descriptions, which can be used by online freelancers who provide writing services.
- 2. Virtual Assistance:** The model can also be used to provide virtual assistance services, such as responding to customer inquiries and handling routine tasks, which can free up time for online freelancers to focus on more complex tasks.
- 3. Translation:** ChatGPT can also be used to translate text from one language to another, which can be useful for online freelancers who provide translation services.
- 4. Automation:** ChatGPT can be integrated into various software and used for automating repetitive tasks such as data entry, it can also be used to create chatbots, which can help online freelancers automate their customer service.

Source: ChatGPT, on January 26, 2023.

References

- Agrawal, Ajay, Nicola Lacetera, and Elizabeth Lyons. 2016. "Does Standardized Information in Online Markets Disproportionately Benefit Job Applicants from Less Developed Countries?" *Journal of International Economics* 103: 1–12.
- Berg, J., M. Furrer, E. Harmon, U. Rani, and M. S. Silberman. 2018. *Digital Labour Platforms and the Future of Work: Towards Decent Work in the Online World*. Geneva: International Labour Office.
- Corporaal, Greetje F., and Vili Lehdonvirta. 2017. *Platform Sourcing: How Fortune 500 Firms Are Adopting Online Freelancing Platforms*. Oxford: Oxford Internet Institute.
- De Stefano, Valerio. 2015. "The Rise of the 'Just-in-Time Workforce': On-Demand Work, Crowdfork, and Labour Protection in the 'Gig-Economy.'" *Comparative Labor Law and Policy Journal* 37 (3): 471.
- EC (European Commission), Directorate-General for Employment, Social Affairs and Inclusion. 2021. *Digital Labour Platforms in the EU : Mapping and Business Models, Final Report*. Luxembourg: Publications Office of the European Union. <https://data.europa.eu/doi/10.2767/224624>.
- Eurofound. 2020. *New Forms of Employment: 2020 Update*. New Forms of Employment Series. Luxembourg: Publications Office of the European Union.
- Gilardi, F., M. Alizadeh, and M. Kubli. 2023. "ChatGPT Outperforms Crowd-Workers for Text-Annotation Tasks." *arXiv preprint arXiv:2303.15056*.
- Hoy, C., 2022. "How Does the Progressivity of Taxes and Government Transfers Impact People's Willingness to Pay Tax? Experimental Evidence across Developing Countries." Policy Research Working Papers 10167. World Bank, Washington, DC. <https://openknowledge.worldbank.org/handle/10986/37987>.
- Hussmanns, R. 2004. *Defining and Measuring Informal Employment*. Geneva: International Labour Office.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work*. Geneva: International Labour Office.
- ILO (International Labour Organization). 2016. *Non-standard Employment around The World: Understanding Challenges, Shaping Prospects*. Geneva: International Labour Office.
- International Conference of Labour Statisticians. 2003. *Report of the Conference: Seventeenth International Conference on Labour Statisticians*. Geneva, November 24–December 3, 2003. Geneva: International Labour Office.
- Kässi, Otto, Vili Lehdonvirta, and Fabian Stephany. 2021. "How Many Online Workers Are There in the World?" *Open Research Europe* 1–53.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. *The Global Opportunity in Online Outsourcing*. Washington: World Bank. <http://hdl.handle.net/10986/22284>.
- Mellon, J., Peixoto, T., Sjoberg, F.M. and Gauri, V., 2021. "Trickle Down Tax Morale: A Cross-Country Survey Experiment." Policy Working Paper 9507, World Bank, Washington, DC.

- Nayyar, Gaurav, Mary Hallward-Driemeier, and Elwyn Davies. 2021. "At Your Service? The Promise of Services-Led Development." Washington: World Bank.
- Ng'weno, A., and D. Porteous. 2018. "Let's Be Real: The Informal Sector and the Gig Economy Are the Future, and the Present, of Work in Africa." CGD Note, Center for Global Development, Washington, DC. <https://www.cgdev.org/publication/lets-be-real-informal-sector-and-gig-economy-are-future-and-present-work-africa>.
- Ohnsorge, F., and S. Yu. 2022. *The Long Shadow of Informality: Challenges and Policies*. Washington: World Bank.
- Peng, S., E. Kalliamvakou, P. Cihon, and M. Demirer. 2023. "The Impact of AI on Developer Productivity: Evidence from GitHub Copilot." *arXiv preprint arXiv:2302.06590*.
- Raftree, Linda, Lis Meyers, Branka Minic, and Tanya Hurst. 2017. *The Nexus of Microwork and Impact Sourcing: Implications for Youth Employment*. Washington: Banyan Global.
- Sjoberg, F.M., Mellon, J., Peixoto, T.C., Hemker, J.Z. and Tsai, L.L., 2019. "Voice and Punishment: A Global Survey Experiment on Tax Morale." Policy Research Working Paper 8855. World Bank, Washington, DC.
- Stephany, Fabian, Otto Kässi, Uma Rani, and Vili Lehdonvirta. 2021. "Online Labour Index 2020: New Ways to Measure the World's Remote Freelancing Market." *Big Data & Society*, 8 (2): 20539517211043240.
- Wood, Alex, Vili Lehdonvirta, and Mark Graham. 2018. Workers of the Internet Unite? Online Freelancer Organization among Remote Gig Economy Workers in Six Asian and African Countries." *New Technology, Work and Employment* 33 (2): 95–112. <https://doi.org/10.1111/ntwe.12112>.
- World Bank. 2019. *World Development Report 2019: The Changing Nature of Work*. *World Development Report*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/30435>.
- Yilmaz, E. D., I. Naumovska, and V. A. Aggarwal. 2023. "AI-Driven Labor Substitution: Evidence from Google Translate and ChatGPT." Available at SSRN, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4400516.

CHAPTER 1

How Many Online Gig Platforms Are There?

Using Data Science to Build an Updated Global Database

1.1 INTRODUCTION

This chapter uses a data science–driven approach to develop an updated and more complete database of online gig work platforms. Building on earlier efforts, this study makes a targeted attempt to especially identify local and regional platforms, in addition to the large global ones, to develop a more comprehensive picture of the platform landscape. Certainly, understanding the size and scale of platforms globally is important for policy makers to formulate appropriate policies. This study, however, contributes to the literature by developing a unique methodology that uses website traffic data as a proxy to identify regional and local platforms, which have not been studied much. In addition to the large gig platforms that are well known, there are a plethora of smaller, more locally focused gig platforms on which workers and clients meet. The literature has lacked a comprehensive registry of gig platforms at a global level that also systematically identifies regional and local platforms. One reason such databases do not exist is the challenge of obtaining data for such platforms. Data on transactions, revenue, registered users, and website visitors, which are commercially sensitive and not shared publicly, are available only internally to website owners. At the same time, platform markets tend to be dynamic, with firm entry and exit as well as mergers and acquisitions happening frequently, making updated data difficult to gather.

How have other studies approached this question? Earlier studies have used interviews, surveys, internet research, and private firm databases. Collected as part of its 2021 World Employment and Social Outlook, the International Labour Organization (ILO) created a global database of both online and location-based platforms that includes 283 online gig platforms.²³ This mapping, however, did not estimate the number of workers on these platforms. Kässi, Lehdonvirta, and Stephany (2021) of the Oxford Internet Institute (OII), using web searches, a literature review, and individual platforms' search functionalities, narrowed their mapping to only online platforms and developed a database of 351 online web-based platforms. This approach, however, yields limited information on the number of active workers. The European Commission (EC) (2021) was agnostic as to the type of gig platform and included only platforms in the European Union (EU); it found 520 gig platforms, of which 42 percent (253) are online or combined platforms. ILO (2021) and Kässi, Lehdonvirta, and Stephany (2021) used a proprietary database, Crunchbase, as a main source by filtering for lists of gig platforms.²⁴ Kässi, Lehdonvirta, and Stephany (2021) supplemented Crunchbase-sourced firms

²³ The ILO report estimated 777 gig platforms, 36 percent (283) of which are online web-based and 63 percent (489), location-based work.

²⁴ In addition to other filtering methods that were not described in the respective papers.

with other sources, including a survey of 107 workers in six low- and middle-income countries that had been conducted by Wood et al. (2019).²⁵ EC (2021) sourced firms from existing repositories of platforms,²⁶ web searches for gig platforms, and lists of platforms that have been acquired by a large multinational platform. The common strand of this previous research is the importance of employing mixed methods, given the scarcity of comprehensive and accessible data for private platform firms from a single source. See Table 1.1 for an overview of the methods used.

TABLE 1.1: Overview of efforts to map gig work platforms

Reference	Platform types and number	Methodology to create the mapping	Main characteristics captured
ILO (2021)	Global, any type; identified a total of 283 online and 449 location-based platforms	Crunchbase data ^a to identify platforms, supplemented with other data from Owler.com, SEC filings, and company annual reports	Crunchbase: investments and funding, founding members and team, founding data, and HQ location. Owler.com, SEC filings, annual reports: revenue and other financial data.
Kässi, Lehdonvirta, and Stephany (2021)	Global, online web-based; identified 351 platforms	Crunchbase data; survey; web searches in Spanish, Chinese, and Russian	Number of users, number of active workers, number of active workers who have earned at least US\$1,000 already, type of platform
EC (2021)	Active in European Union, any type; 600 platforms	Existing repositories, ^b web searches, M&A data of main platforms ^c	Extensive, including basic descriptive variables, platform classifications using different typologies, details on the business model, and size indicators

Source: Study team.

Note: EC = European Commission; HQ = headquarters; ILO = International Labour Organization; M&A = merger and acquisition; OLI = Oxford Labour Index; SEC = Securities and Exchange Commission.

a. Crunchbase is a large private company database that is sourced mainly from investment companies and private contributors (the “crowd”).

b. Eurofound list of Digital Labor Platforms, a list of platforms prepared by Fabo et al. (2017) and ILO (2021). See EC (2021).

c. For example, Deliveroo, Delivery Hero, Just Eat Takeaway, and Uber. See EC (2021).

1.2 METHODOLOGY

Building on existing efforts, this study develops a new approach that combines (a) data science methods, (b) website traffic data as a key proxy to measure platform activity, and (c) a model to identify regional/local versus global platforms. The team used two proprietary firm databases that are considered reliable in their field, as well as existing publicly available platform mappings.

Three sources of data were used to create this database.

1. The first was a proprietary database of over 800,000 businesses from **CB Insights**,²⁷ a global business analytics and market intelligence platform focused on emerging technologies and digital business models, which was filtered for gig platforms based on descriptive information about firms’ business models.

²⁵ Kenya, Malaysia, Nigeria, the Philippines, South Africa, and Vietnam.

²⁶ They are Eurofound’s list of digital labor platforms, Fabo et al. (2017) and ILO (2021). See EC (2021).

²⁷ CB Insights website, <https://www.cbinsights.com/what-we-offer/data/>.

2. The second was another proprietary database of around 43,000 businesses in low- and middle-income countries from **PitchBook**, which includes firms that have received venture funding, with a focus on technology ecosystems. Both firm-level databases are considered reliable, as they have in-house analysts and business intelligence pipelines to validate information, unlike crowdsourced data from other providers.²⁸
3. The third source was a **consolidated database** of over 500 online gig platforms that was previously published and openly accessible (EC 2021; Kässi, Lehtonvirta, and Stephany 2021). This list served as baseline data to enable data science methods to filter the other databases for online gig work platforms as discussed further.²⁹

Using information for known gig platforms enabled the development of a list of 30 relevant keywords for gig platforms through data science methods. In a first step, information on the platforms found in the existing database was used to identify top keywords relevant to gig work and freelancing platforms by using search engine optimization and keyword analytics platforms like Semrush, Google Trends, and SimilarWeb³⁰ (see Figure 1.1).³¹ These top keywords with respect to the domain include what users generally search for as well as what major platforms bid on or pay to rank on the search platforms, for example, “platform,” “design,” “developer,” or “talent” (see appendix B for the full list). These were complemented by a corpus— which is a collection of text organized into a structured data set—that was created by using descriptions from a list of known gig platforms.³² Natural language processing and topic modeling techniques,³³ including methods to process, identify, and cluster keywords, were used to retrieve relevant keywords from the corpus. As a result of these two steps, a list of 30 keywords relevant to searching for and describing gig platforms was produced.

Raw business data were filtered for online gig work platforms by using the list of identified keywords. The keywords were grouped into three categories: the first identifies a company as a platform or marketplace, the second ensures that some form of work or job is included as part of the platform description, and the third captures various types of work such as design, transcription, or programming. These word groups represent salient and critical keywords, including different combinations and permutations, for identifying gig platforms in company descriptions. Then the raw CB Insights and PitchBook data were parsed by using these keyword categories to filter for relevant platforms. The databases were combined and then manually fact-checked to remove

²⁸ A survey of eight leading providers of private start-up and venture capital (VC) data found that “VentureSource (which got acquired by CB Insights in July 2020) and PitchBook have the best coverage and quality across the dimensions of general company, team and financing information.” The study compared actual information for 108 start-ups that received 339 financing rounds from 396 globally active VC partnerships between January 1, 1999, and July 1, 2019, with their representation in the start-up databases. See Retterath and Braun (2020), available at <https://ssrn.com/abstract=3706108>.

²⁹ In addition to these two sources, World Bank colleagues and private interviews with counterparts provided inputs to this initial database.

³⁰ Semrush is a software-as-a-service platform that is typically used for keyword research and online ranking analysis, providing data such as traffic, search volume, keywords, and cost per click (for more details, visit <https://www.semrush.com/features/>). Google Trends summarizes search volume and top search queries on Google over time (for more details, visit <https://trends.google.com/trends/>). SimilarWeb is a platform that provides data on web traffic analytics and performance (for more details, visit <https://www.similarweb.com/>).

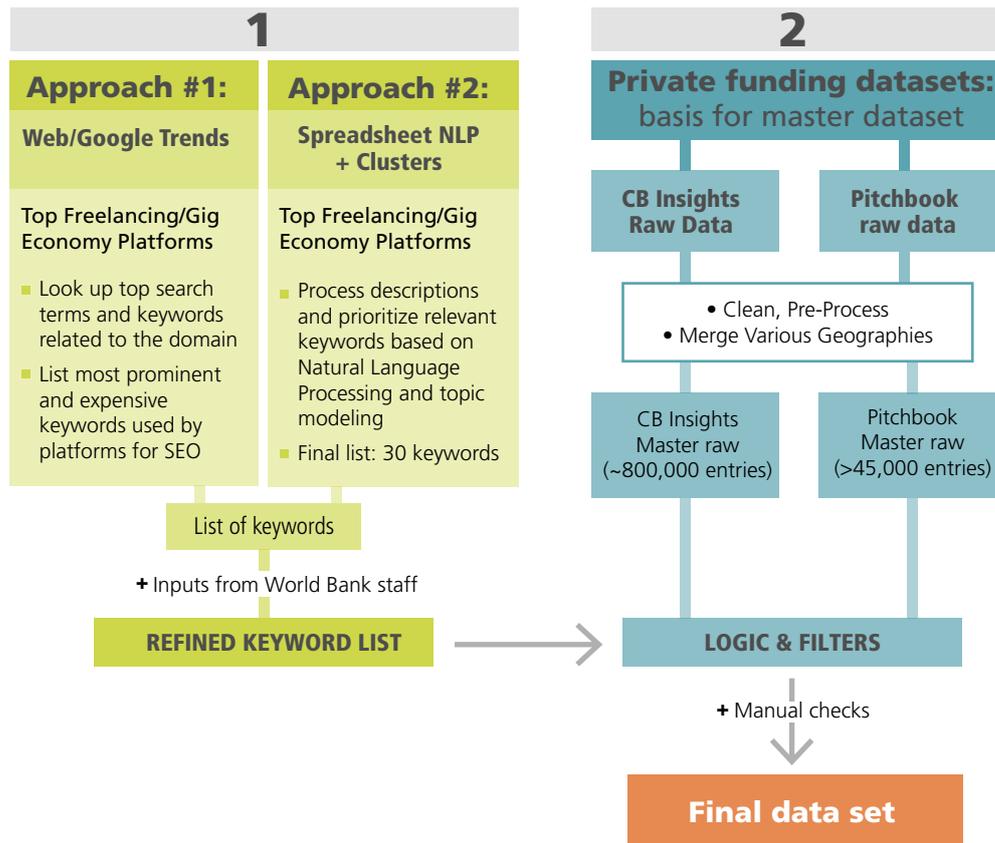
³¹ Semrush and SimilarWeb.

³² To do so, the existing lists of gig platforms were matched and merged with CB Insights and PitchBook databases, which include text descriptions of individual firms.

³³ We used the Natural Language Toolkit (NLTK) and Latent Dirichlet Allocation (LDA) methods in this pipeline. NLTK, written in the Python programming language, provides a suite of different libraries for natural language processing, including capabilities for text classification, tokenization, tagging, parsing, and semantic reasoning. LDA is a natural language processing method that seeks to explain observations through unobserved clusters or groups, each group explaining the underlying similarities of the data.

false-positives and filter out platforms that do not offer online gig work.³⁴ The data sets were then merged,³⁵ integrating duplicates into single entries and creating single columns for key business variables such as total funding, headquarters, and founding dates sourced from PitchBook and CB Insights. Potential contradictions between data sources on headquarters and funding levels were fact-checked and resolved.³⁶

FIGURE 1.1: Methodology for creating a global mapping of online gig work platforms



Source: Elaboration by study team.

Note: NLP = natural language processing; SEO = search engine optimization; WB = World Bank.

Data on website traffic and unique visitors were extracted with Semrush, a platform focused on the search engine marketing industry that creates estimates of web traffic analytics using clickstream³⁷ data and other sources. Web traffic analytics provide estimates of how many people visit specific uniform resource locators (URLs), the number of unique visitors, and the average duration

³⁴ The keywords related to location-based work were excluded; the list obtained through data science-based methods would clearly exclude location-based platforms. The results were manually verified by visiting each firm's website.

³⁵ The data sources were CB Insights data; PitchBook data; the lists created by Kässli, Lehtonvirta, and Stephany (2021) and EC (2021), and our team's inputs.

³⁶ For headquarters, where sources contradicted each other, the official address that is available on a website's impressum or Terms of Service was used. If this was not available, the headquarter country as designated on LinkedIn was used. For contradictions in the data on total funding, since funding information is often not accessible publicly, PitchBook information was chosen.

³⁷ Clickstreams are records of individual users' clicks through their journey on the internet. Clickstream data can include information on page visited, time spent on a specific page, features engaged, and the like. When clickstream data from millions of users are aggregated, information on estimated traffic, time on page, unique visitors, and bounce rate for web platforms can be estimated.

and pages visited, as well as bounce rates.³⁸ Through an application programming interface (API), monthly data were pulled for the whole year 2022 for the entire sample of platforms. In addition, country-level indicators, which provide estimates of the share of traffic and visitors coming from each country to a single URL, were available. The methodology accounted for the presence of websites with multiple unique country code top-level domains (ccTLDs),³⁹ which cannot be captured as belonging to the same overall URL by Semrush (as subfolders and subdomains can). To do so, combinations of all URLs in the mapping with a list of 46 priority ccTLDs were searched on Semrush (see appendix B for details). Those that returned positive traffic, which indicates that the domain is active, were then manually checked to determine whether they belonged to the gig platform in question. A total of 32 platforms had further ccTLDs. Those were merged with the main observation. In addition to Semrush traffic data, global and local Alexa traffic ranks and reach from Bulk SEO Tools were used.⁴⁰ At this stage, the team had a clean database with descriptive information from CB Insights and PitchBook, Semrush, and Bulk SEO Tools, to which further information on registered workers was added.

In the absence of firsthand data, traffic data offer a second-best alternative to understanding platforms, but there are some limitations. Traffic data can help in identifying patterns and trends such as engagement with a website, which indicates the interest and attention of subjects. Traffic data are estimated on the basis of clickstream data and proprietary estimation models, thus relying on high numbers of data points for good accuracy. This means that for less visited websites, the traffic data estimations might be less reliable. Another major limitation, particularly for this exercise, is that supply and demand traffic cannot be separated. Traffic data show a total sum, regardless of whether it stems from a worker, a client, or somebody external to the transaction. To focus on gig worker traffic only, demand would need to be split from supply traffic; however, there are no data or literature on what the ratio between supply and demand would be. In addition, owing to the different business models involved, the ratio likely varies by platform.⁴¹ We use insight from surveys with gig platforms, as will be discussed in the next chapter.

There are also limitations on the completeness of data gathered through web scraping or through private market data. Web searches and web scraping have their constraints. The data obtained from these methods can be only as good as the individual sources they are taken from. This means that, given the large set of sources in an online search, inconsistencies and incompleteness of data are inevitable—for example, with respect to the reporting time frame. Searches may also miss information, such as those provided in languages other than English. Data from private business data sets are also often not complete, as they don't always cover nontraditionally funded or bootstrapped firms. CB Insights and PitchBook are well-known and reliable providers of proprietary data on venture funding and tech ecosystems worldwide (Retterath and Braun 2020). However, these databases heavily focus on firms that have received venture, private equity, loan, or grant funding, and these firms generally seek to maximize profits. Therefore, platforms that are not-for-profit or are owned

³⁸ The bounce rate tells us the percentage of visitors of a website that leave said site without taking an action, such as clicking on a link, filling out a form, or making a purchase. See [https://backlinko.com/hub/seo/bounce-rate#:~:text=Bounce%20Rate%20is%20defined%20as,obviously\)%20didn't%20convert.](https://backlinko.com/hub/seo/bounce-rate#:~:text=Bounce%20Rate%20is%20defined%20as,obviously)%20didn't%20convert.)

³⁹ A ccTLD is a TLD used in the internet domain name server (DNS), which translates domain names into internet protocol (IP) addresses to identify a country, for example ".ch" for Switzerland. The two letters chosen for each country are derived from the ISO 3166 standard. Currently there are 243 ccTLDs. See International Telecommunications Union (ITU) (2008), <https://www.itu.int/ITU-D/cyb/ip/docs/itu-draft-ccTld-guide.pdf>.

⁴⁰ Bulk SEO Tools is a consolidation of free and public search engine optimization tools for webmasters and researchers seeking to better understand or optimize their websites.

⁴¹ For example, a platform with higher-paid traffic likely has a lower percentage of traffic that can be considered supply traffic. Further, where data for the number of workers versus clients are available, they indicate that in most cases there are more workers than clients—but there are also platforms where the opposite is the case. These tend to be small, curated, high-skill platforms.

by a nongovernmental organization (NGO) or those that have been created with personal (friends and family) funds might not be included.

The mapping exercise made a special effort to identify regional/local gig platforms, which are often ignored in studies. Leading platforms such as Upwork, Fiverr, and Freelancer have received a lot of attention in recent studies, and data on their workers and transactions have been used to understand the patterns of the gig economy. While the size of these global gig platforms makes them an important subject of study (Kässi and Lehdonvirta 2018; Stephany et al. 2021), insights from regional/local platforms could be missed. Those platforms might exhibit different characteristics from the global ones. However, it is challenging to identify regional and local platforms in an objective and comprehensive way because of a lack of data and common understanding of what constitutes regional platforms. In addition, those attributes might change over time, given dynamics in traffic and supply and demand trends. This study contributes to the literature by attempting to address this knowledge gap and by proposing a framework with which to understand regional/local platforms.

But how does one determine whether a platform is global or regional/local? There is no previous literature on this subject, and most studies have not explored this question. Our team drew on a study of multinational companies that uses firms' share of revenue streams from different regions to determine whether their markets can be considered regional/local or global (Rugman and Verbeke 2004). Monthly data on the share of traffic by country, averaged over one year,⁴² were used to assess whether a platform could be classified as global or regional/local. Accordingly, a gig work platform was classified as regional if more than 60 percent of monthly average traffic (weighted by internet users)⁴³ originated from a single region. Alternate thresholds of 50 and 75 percent were also considered,⁴⁴ as well as language-based regions.⁴⁵ The 60 percent threshold showed robustness to generate reliable predictions⁴⁶ based on manual cross-checks with information that the team gathered through surveys, interviews, and consultations with technical country teams, as well as from public information (see appendix A for details).

1.3 RESULTS

There are a total of 545 online gig work platforms globally, with headquarters (HQs) in 63 countries and platform workers and clients located in 186 countries (figure 1.2). This number is higher than the 351 and 283 online gig platforms identified by Kässi, Lehdonvirta, and Stephany (2021) and ILO (2021), respectively. The higher figure reflects the additional search methodology added through the filtering methods; the combination of existing, comprehensive databases in Kässi, Lehdonvirta,

⁴² The traffic figures represent monthly estimates, averaged over the period from January to December 2022.

⁴³ We divided total traffic from a country or region by the same region's number of internet users according to the ITU (2021). Accordingly, only countries covered in the ITU data are included in this formula.

⁴⁴ A 75 percent threshold proved to be too strict, as traffic tends to be relatively dispersed globally, and 50 percent was too loose.

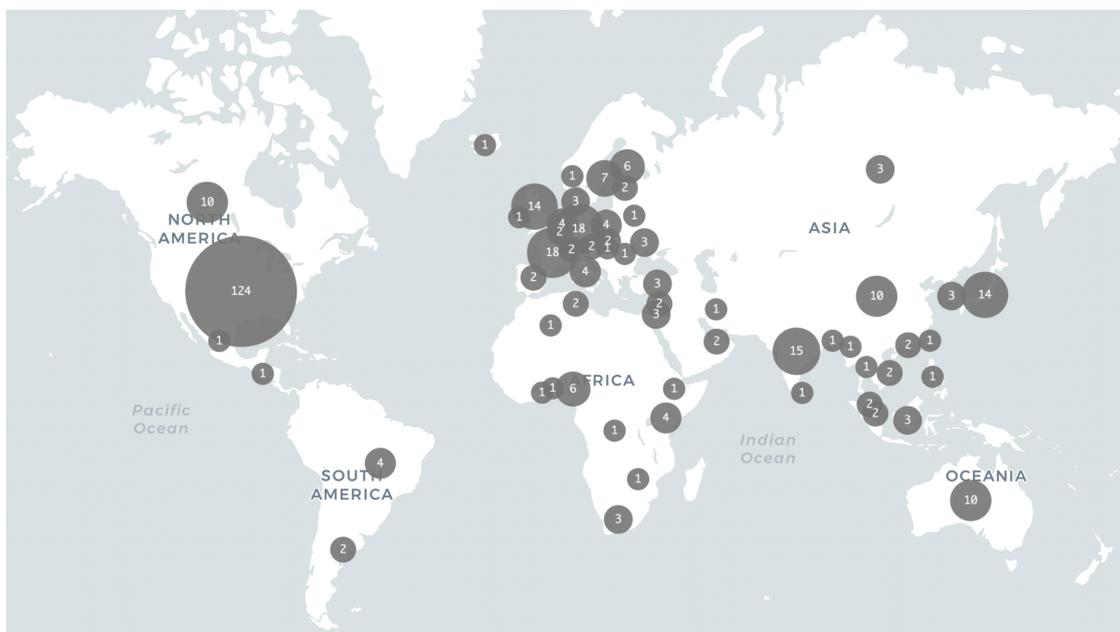
⁴⁵ For geographic regions, the official World Bank regions are used. They are found at <https://www.worldbank.org/en/about/unit> and exclude high-income economies. Language regions are French (Algeria, Belgium, Benin, Burkina Faso, Cameroon, Canada, Chad, Côte d'Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, France, Haiti, Lebanon, Luxembourg, Madagascar, Mali, Morocco, Niger, Senegal, Seychelles, Switzerland, Togo, and Tunisia), Spanish (Spain and all Latin America and Caribbean countries except Brazil), Arabic (all of the Middle East and North Africa except Israel and the Islamic Republic of Iran), and Portuguese (Angola; Brazil; Cabo Verde; Guinea-Bissau; Macau SAR, China; Mozambique; Portugal; São Tomé and Príncipe; and Timor-Leste).

⁴⁶ As it is quite simple, the approach misclassifies a small number of platforms. These misclassifications might stem from a lack of reliable observations to estimate correct traffic figures, but they might also be driven by people connecting via virtual private networks (VPNs) or by diaspora populations. Tracing the reason for these misclassifications in detail would have been beyond the scope of this report.

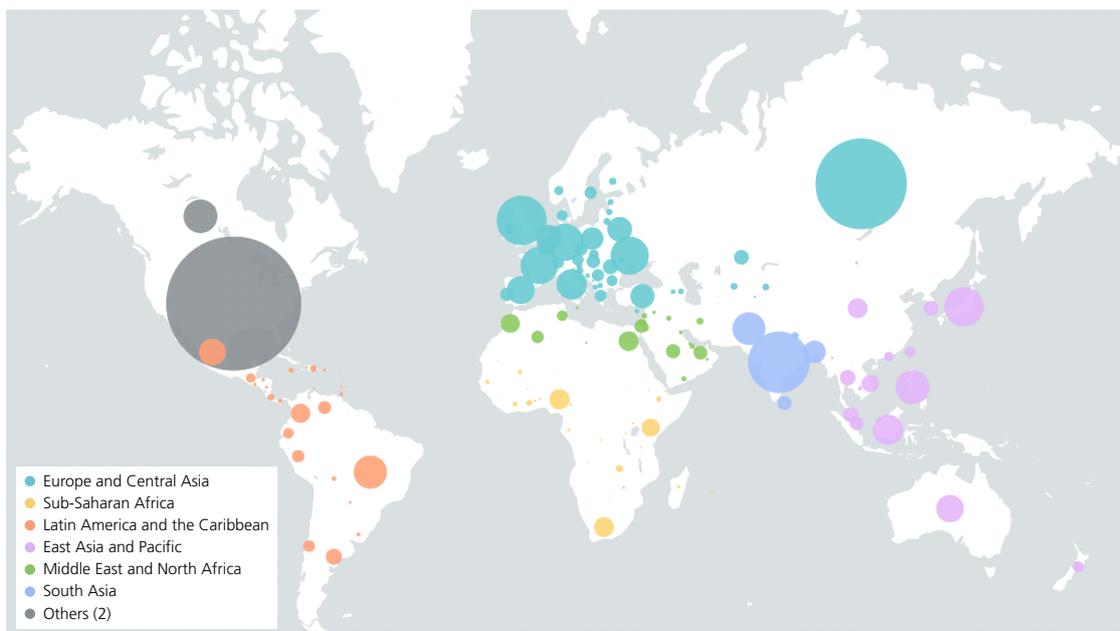
and Stephany (2021) and EC (2021); and, to some degree, trends in the global gig economy, whereby a larger market overall may have led to new platforms forming.

FIGURE 1.2: Global distribution of gig platforms by headquarters and traffic

a. By headquarters



b. By share of traffic

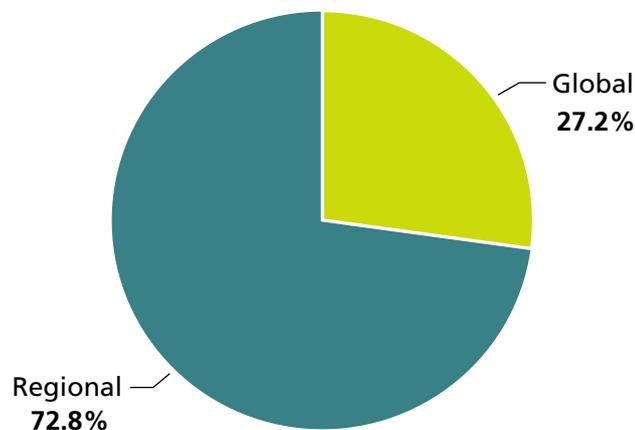


Source: Study team database compiled from CB Insights, PitchBook, and Semrush.
 Note: The global numbers of platforms in the mapping that had headquarters in each country (available for 348 platforms) and the share of overall traffic to gig platforms in 2022 among the sample of 545 gig platforms are shown. Colors are based on region.

Contrary to popular perception, most online gig work platforms are regional/local. Around 73 percent of platforms in the sample can be considered regional/local (Figure 1.3), but they attract only 29 percent of the traffic. Figure 1.2 provides an overview of global patterns of the location of platforms and where the traffic on platforms originates. These figures show network effects at work, as large global platforms consolidate most of the activity. Around 70 percent of regional platforms are operational in North America and in Europe and Central Asia, many of which are focused on European or Russian-speaking countries. Around 10 percent of regional platforms focus on countries in East Asia and the Pacific, 6 percent each on the South Asia region and Sub-Saharan African countries, and only around 3 to 4 percent on Middle East and North African countries and Latin America and Caribbean countries. Regional platforms also take up larger shares of traffic in North America and the Europe and Central Asia region than in other regions (Figure 1.4). These findings highlight that the proportion of regional and local platforms is nontrivial for gig work.

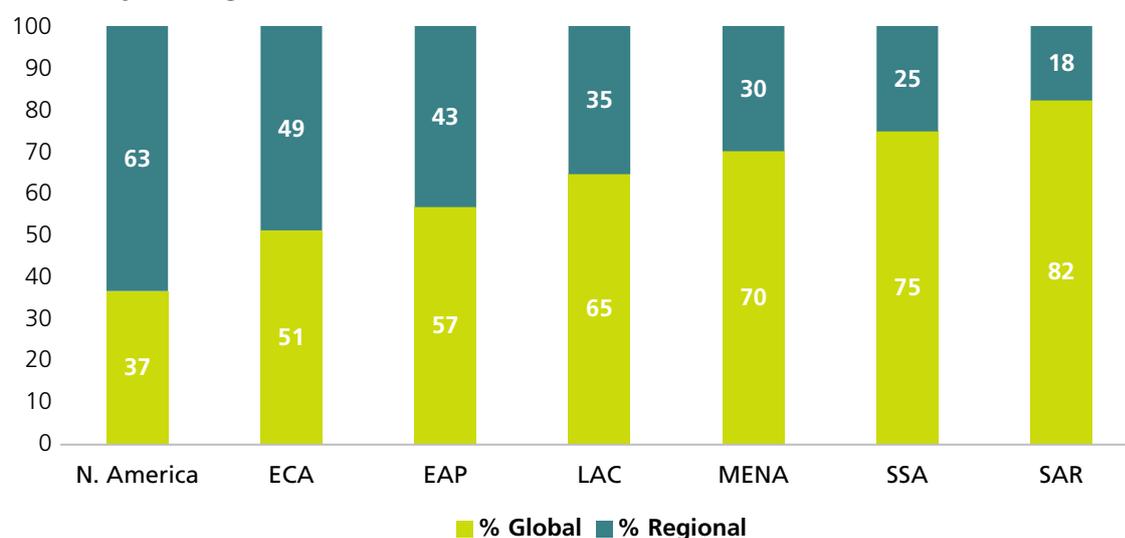
The substantial proportions of traffic to regional platforms in North America and Europe and Central Asia (Figure 1.4) are driven by the demand for these platforms in those more mature markets. (See chapter 5 on demand.) This explains in part the sizeable share of traffic from North America and Europe and Central Asia that makes certain platforms “regional,” in the sense that they focus on mostly one region. The estimation correctly classifies key global and regional platforms, including all large global platforms and known regional platforms such as Gebeya and M4Jam in Sub-Saharan Africa, Soyfreelancer and 99Freelas in Latin America and the Caribbean, Crowdworks Japan and Freelancer Viet in the East Asia and Pacific region, Khamsat and Mostaqi in the Middle East and North Africa, and Rabota and Profi in Europe and Central Asia.

FIGURE 1.3: Share of gig platforms classified as global and local, %



Source: Study team database.

FIGURE 1.4: Traffic shares of global and local platforms by region (monthly average, 2022, %)

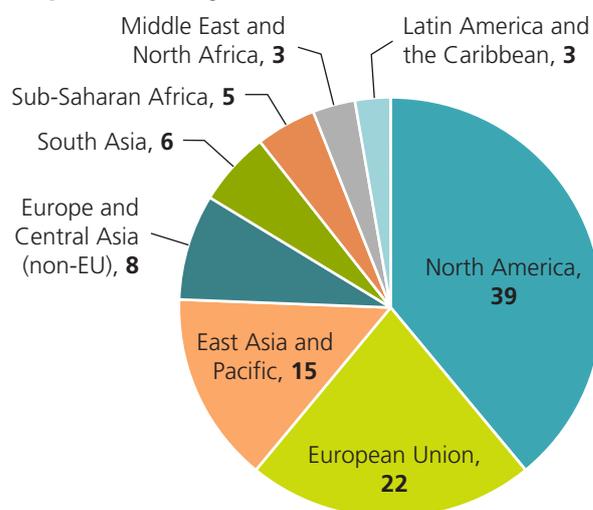


Source: Study team database.

Note: EAP = East Asia and Pacific; ECA= Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; N. America = North America; SAR = Southeast Asia region; SSA = Sub-Saharan Africa.

Most platforms have headquarters in high-income countries. Over 60 percent of platforms in the database have headquarters in EU countries or in the United States; only around 23 percent are headquartered in low- and middle-income countries (Figure 1.5). This is comparatively lower than the overall traffic volume originating from low- and middle-income countries. However, platforms from the United States account for only 36 percent of traffic, followed by France, India, Germany, and Japan, with the platforms in these countries accounting for 4.0 to 5.5 percent of traffic. While most platforms classified as regional have HQs in high-income countries—particularly in the United States (75 in total)—some regional platforms were founded in India and China (12 and 6, respectively), and 3 each were founded in Brazil, Kenya, and South Africa, indicating the emerging digital business ecosystems in these countries.⁴⁷

FIGURE 1.5: Share of platforms by HQ location, %



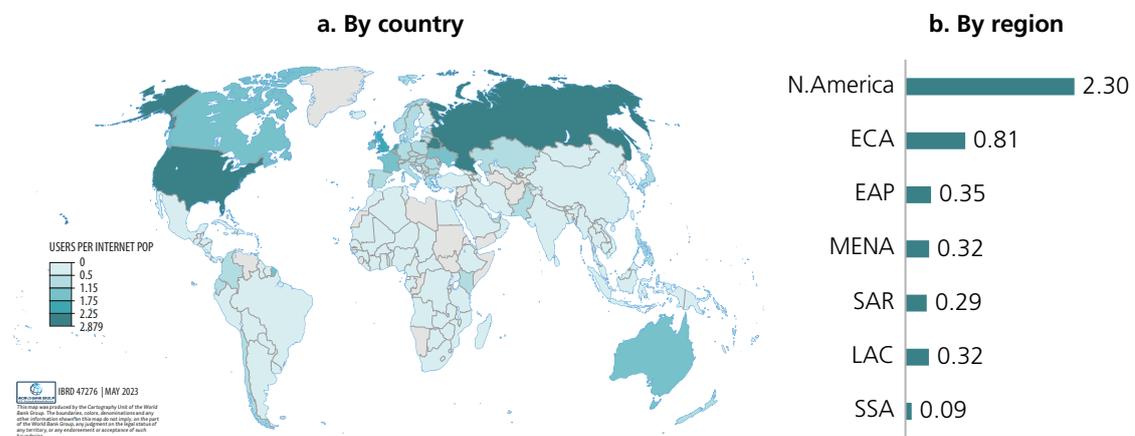
Source: Study team database.

⁴⁷ A separate note on the funding of platforms is provided in appendix O.

The gig economy no longer is only a developed-country phenomenon but is becoming increasingly important in emerging markets. Almost a third (30 percent) of the traffic to gig platforms stems from visitors in the United States, followed by the Russian Federation (14 percent) and India (6 percent).⁴⁸ Around a fifth of visitors (18 percent) are from low- and lower-middle-income countries (driven by India, Indonesia, Nigeria, Pakistan, the Philippines, and Ukraine) and 22 percent come from upper-middle-income countries (Belarus, Brazil, Mexico, Russia, and Türkiye). Together, low- and middle-income countries account for 40 percent of traffic to gig platforms. This underscores both the relevance of gig platforms in emerging economies and the importance of emerging economies for gig platforms.

Access to the internet is not the only constraint in accessing online gig platforms. When we weight data on web traffic with the internet using the population of one country, we find that gig work platforms have more visitors relative to internet users in advanced economies (including not only Australia, Canada, the Netherlands, Russia, Singapore, the United Kingdom, and the United States, but also Ukraine and Belarus, which has the highest relative number of visitors) (Figure 1.6, panel a). Overall, the numbers of users are higher in North America and Europe and Central Asia—in high-income countries generally—and they are lower in all other regions. This is true particularly in Sub-Saharan Africa, which has less than 4 percent of the number of users of online gig platforms as in North America, considering the population that uses the internet (Figure 1.6, panel b), a finding which shows that access to the internet is not the only constraint to accessing online gig jobs. Other constraints might be lack of payment options, lack of skills to perform tasks or navigate the platforms, or even lack of information about gig work.

FIGURE 1.6: Average number of unique visitors to gig work platforms in 2022 per internet user



Sources: Study team database using Semrush data, ITU 2021, and World Bank, World Development Indicators 2021.

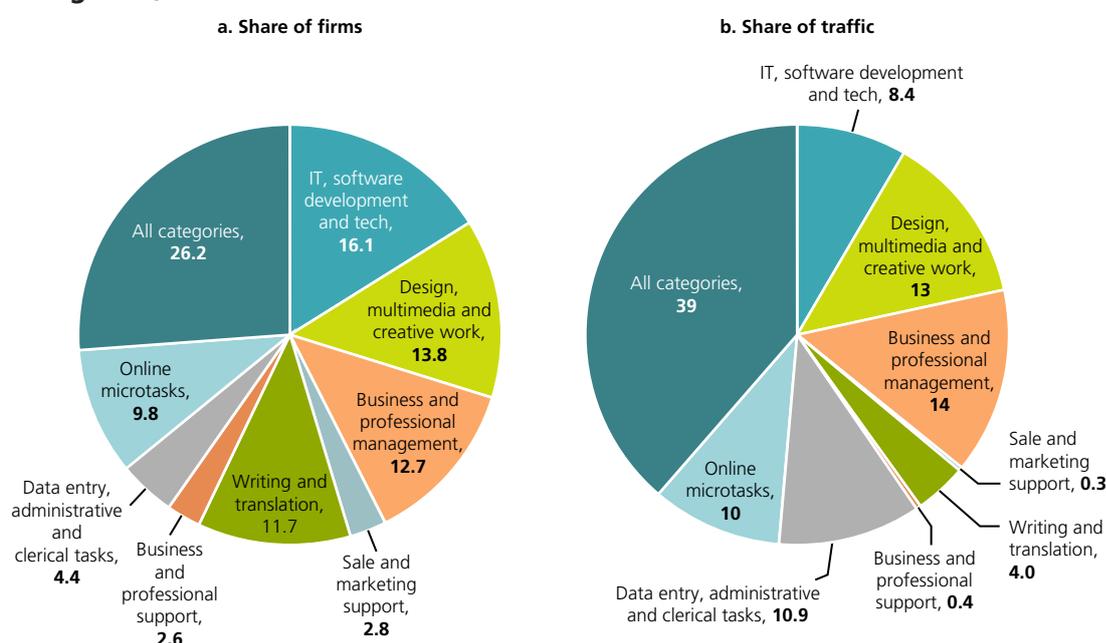
Note: EAP = East Asia and Pacific; ECA= Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; N. America = North America; SAR = Southeast Asia region; SSA = Sub-Saharan Africa.

Platforms that offer a wider variety of tasks draw much higher traffic. While most gig platforms focus on specific types of tasks such as information technology (IT) and software development or design and multimedia, more traffic is generated by platforms without task specialization. There are eight

⁴⁸ Technically, information about geographical traffic sources allows us to draw inferences from IP addresses that people use to access gig platforms and their geographical locations. When surfing on gig platforms, people may use VPNs to obscure their locations or to access certain sites that are restricted in their home countries. This is a caveat to keep in mind when interpreting these figures. However, as there are no known restrictions in place for gig platforms, we assume that most people have little reason to use a VPN when they are visiting these sites and that, therefore, VPNs would have an overall small effect on the trends we are describing.

broad categories of gig work (see the discussion in chapter 4). More than a quarter of gig platforms offer a wide variety of tasks. IT, software development, technology, design, multimedia, creative work, and business and professional management are popular, with 12 to 16 percent of platforms specializing in these categories (figure 1.7, panel a).⁴⁹ This is mostly consistent with findings by ILO (2021). On the other end of the spectrum are business and professional support, sales and marketing support, data entry, and administrative and clerical tasks, with less than 5 percent of platforms specializing in them. However, when activity on these platforms is accounted for, platforms that offer all task categories attract a larger share of traffic—around 40 percent (figure 1.7, panel b). This might reflect network effects at work generated by large platforms that offer all categories of work, also discussed in chapter 3.

FIGURE 1.7: Proportions of global and regional/local platforms that offer task categories, %

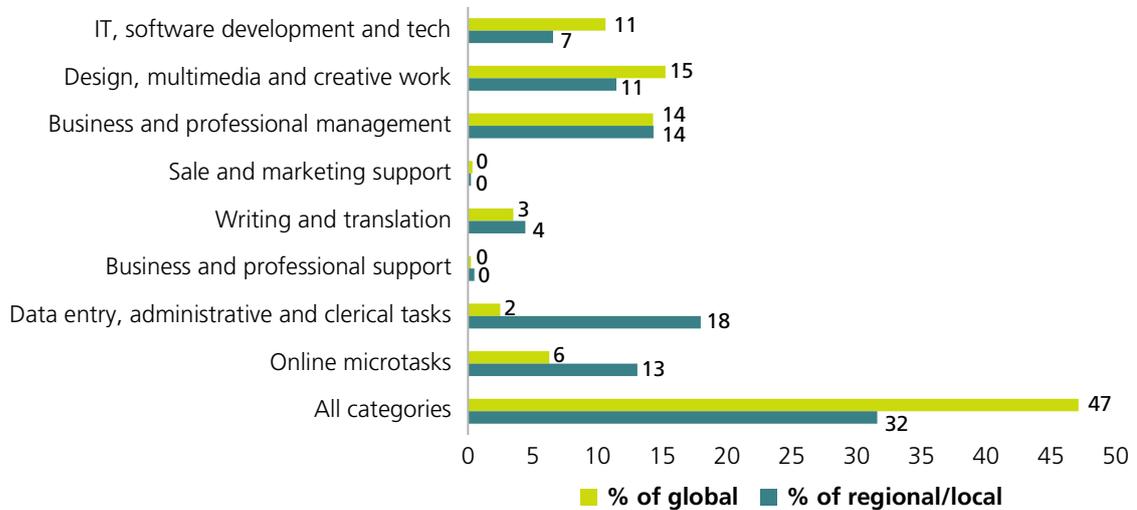


Source: Study team database.

Note: IT = information technology.

Regional/local platforms draw more traffic on low-skill tasks. This finding is in line with the observation that many regional platforms focus on smaller market niches (see chapter 3). Traffic to global platforms is more likely to focus on high-skill, specialized platforms such as IT, design, and professional management. By contrast, regional platforms are more likely to attract traffic on data entry and administrative tasks and online microtasks, which are low skill (see Figure 1.8). This finding might indicate that high-skill markets are more global, with workers who speak English fluently and more freedom to deliver, irrespective of time zones. Data entry, administrative tasks, and microtasks are more likely to be performed by workers without a graduate degree and foreign language skills (see chapter 4).

⁴⁹ We include platforms that offer multiple categories but are not agnostic to the type of work in this number.

FIGURE 1.8: Share of traffic to global and regional/local platforms with respect to tasks offered

Source: Study team database.

Note: The percentage of traffic to firms offering all categories or specific categories of tasks is shown. Order is based on skill complexity (using the classification in chapter 4 of this report).

1.4 CONCLUSION

This study constructs an updated global database of 545 online gig platforms, creating a new data science–driven methodology that uses web traffic data to explore patterns in platform distribution. The study also delves into an understudied area: the relevance of regional/local platforms. We find that although online gig work is an emerging phenomenon in developing countries, gig work intensity is still greater in high-income countries, even when access to the internet is accounted for. Moreover, the number of regional platforms is nontrivial and should therefore be studied to get a more complete picture of this increasingly significant new form of online work. Regional/local platforms will be discussed in more detail in the following chapters. The analysis presented in this chapter has its limitations. The dynamic nature of platform business means that data gathered at any time are rapidly outdated. Therefore, this analysis can be understood as a snapshot of a point in time.

References

- EC (European Commission), Directorate-General for Employment, Social Affairs and Inclusion. 2021. *Digital Labour Platforms in the EU : Mapping and Business Models, Final Report*. Luxembourg: Publications Office of the European Union. <https://data.europa.eu/doi/10.2767/224624>.
- Fabo, Brian, Miroslav Beblavý, Zachary Kilhoffer, and Karolien Lenaerts. 2017. "An Overview of European Platforms: Scope and Business Models." Joint Research Centre, Publications Office of the European Union, Luxembourg. doi:10.2760/762447.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook: The Role of Digital Labour Platforms in Transforming the World of Work*. Geneva: ILO.
- ITU (International Telecommunications Union). 2021. ITU Household ICT Indicators dataset.
- ITU (International Telecommunications Union). 2008. "Policy, Business, Technical and Operational Considerations for the Management of a Country Code Top Level Domain (ccTLD)." <https://www.itu.int/ITU-D/cyb/ip/docs/itu-draft-cctld-guide.pdf>.
- Kässi, Otto, and Vili Lehdonvirta. 2018. "Online Labour Index: Measuring the Online Gig Economy for Policy and Research." *Technological Forecasting and Social Change* 137.
- Kässi, Otto, Vili Lehdonvirta, and Fabian Stephany. 2021. "How Many Online Workers Are There in the World? A Data-Driven Assessment." Open Research Europe, 1–53.
- Retterath, Andre, and Reiner Braun. 2020. "Benchmarking Venture Capital Databases." <https://ssrn.com/abstract=3706108>.
- Rugman, Alan M., and Alain Verbeke. 2004. "A Perspective on Regional and Global Strategies of Multinational Enterprises." *Journal of International Business Studies* 35: 3–18. <https://doi.org/10.1057/palgrave.jibs.8400073>.
- Stephany, Fabian, Otto Kässi, Uma Rani, and Vili Lehdonvirta. 2021. "Online Labour Index 2020: New Ways to Measure the World's Remote Freelancing Market." *Big Data & Society* 8 (2): 20539517211043240.
- Urzi Brancati, M.C., A. Pesole, and E. Fernández-Macías. 2020. "New Evidence on Platform Workers in Europe: Results from the Second COLLEEM Survey." Joint Research Centre Paper JRC118570, Publications Office of the European Union, Luxembourg.
- Wood, Alex J., Mark Graham, Vili Lehdonvirta, and Isis Hjorth. 2019. "Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy." *Work, Employment and Society* 33 (1): 56–75.

CHAPTER 2

How Many Gig Workers Are There?

Using Two Methods to Estimate the Online Gig Workforce

2.1 INTRODUCTION

There are no systematic ways to estimate how many people work in the gig economy, despite its place as a new, growing segment of the workforce that has implications for labor market and social protection policies, as well as for regulations governing data privacy, competition, and taxation. Gig workers are seldom measured in labor force and household surveys, in which they may be classified together with day laborers, independent contractors, or self-employed workers. (See chapter 6 for a discussion of labor force surveys.) Tax returns for gig and nongig workers may be similar, as is the case in the United States (Abraham et al. 2018); hence, they do not provide a reliable source of data. In addition, since both gig workers perform tasks from flexible locations and client firms may be located outside the worker's jurisdiction, traditional methods of national data collection and national tax records do not work. Platforms too rarely disclose much detailed data because they are commercially sensitive information.

This chapter uses two methods to estimate the number of gig workers globally.

- 1. The first method uses data science and builds on the mapping database** discussed in chapter 1. It involves collection of data on the number of registered users on each platform through web scraping and manual searches and, where no information on the number of registered workers is available for a platform, uses data on website traffic and unique visitors and other indicators such as the Alexa rank (collected in the database) to estimate the total number of *registered workers* globally. Then this number of registered workers (observed and predicted) and traffic data are used to estimate the share of *active workers* on each platform.⁵⁰
- 2. The second method employs an experimental methodology that uses the random domain intercept technology (RDIT) patented by RIWI⁵¹** to conduct a global survey in 17 low- and middle-income countries, from which it extrapolates the share of gig workers among the working population globally. The RDIT methodology assumes a random distribution of the survey to the internet population in the targeted countries that is accessible on a variety of devices (desktop, mobile, tablet). The survey was conducted in 12 languages in addition to English to reach non-English-speaking populations. Complete responses were collected from 7,015

⁵⁰ Traffic data have the benefit of being widely available, introducing consistency in interpretation across platforms and regions. This type of data also offers insight into how many people use a platform and how intensely they do so, through information on unique monthly users and average time spent on a website.

⁵¹ For information on RIWI, see <https://riwi.com/>.

respondents, including 956 responses from online gig workers; the rest were from respondents who had never done any gig work. The 17 countries include Argentina, Bangladesh, China, the Arab Republic of Egypt, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, the Philippines, Pakistan, República Bolivariana de Venezuela, the Russian Federation, South Africa, Tunisia, and Ukraine) (see appendix D for survey methodology).

2.2 HOW HAVE OTHER STUDIES APPROACHED THIS QUESTION?

This study builds on previous work to estimate the number of gig workers (see Table 2.1 for a summary). Because of differences in scope and methodology, it is difficult to compare the estimates of the studies in the table. While early estimates (Codagnone, Abadie, and Biagi 2016; Kuek et al. 2015) were relatively modest (50 million registered workers), more-recent estimates (Kässi, Lehdonvirta, and Stephany 2021) are much higher (163 million), even though one of the former estimates included both online and location-based gig workers. These later estimates could be higher because of both rapid growth in the gig economy and improvements in methodology. Regarding the latter, larger data sets have been developed, as each study built on the work of the earlier ones, leading to an overall improvement in methods and estimates. Studies using survey-based methods arrive at various estimates because of differences in geographic coverage and the type of gig work estimated (online or location based versus active or registered workers).

TABLE 2.1: Estimates of market size

Reference	Sample	Methodology used	Estimates
Kässi, Lehdonvirta, and Stephany (2021)	Database mapping of 351 online web-based platforms	Machine learning model that includes as predictive features the Alexa rank, estimates for monthly users from siterankdata.com, and Google Trends information	163 million registered users, of which on average only 8.6 percent (14 million) are active
Kuek et al. (2015)	5 large platforms: Upwork, Freelancer, and Zhubajie/Witmart (online freelancing); Amazon Mechanical Turk and Crowdfunder (today FigureEight) (microwork)	Estimation of market size in terms of revenue, using gross revenue figures of top 3 freelance and top 2 microwork platforms, and predicting growth rate/trend with average growth rates of past years	Overall market size of US\$2 billion in 2013, of which US\$1.9 billion is freelance and US\$0.1 billion is microwork; 48 million registered workers, 10 percent of whom are active
Codagnone, Abadie, and Biagi (2016)	39 gig platforms in the US and the UK and other European countries (all types)	Desk research (web searches) on registered gig workers on these platforms plus assumptions	In the US and UK, 1 to 2 percent share of gig workers in the labor force; 52.6 million registered workers ^a globally
Heeks (2017)	Based on sample used by Codagnone, Abadie, and Biagi (2016)	Literature review, combining results from previous studies to calculate market size and workers in the Global South	US\$5 billion, involving around 70 million workers globally, of which 60 million are in the Global South

Source: Study team summary.

Note: UK = United Kingdom; US = United States.

a. On the platforms in the sample. See Codagnone, Abadie, and Biagi (2016).

Many studies have used a small sample consisting of the few large gig platforms for which information is available to estimate the size of the overall online gig economy (Kuek et al. 2015; Pesole and Rani, forthcoming). This approach was spearheaded by Kuek et al. (2015), who estimated the overall market revenue and number of workers on the assumption that the top three gig platforms covered 50 percent of the entire market. Researchers at the Oxford Internet Institute (OII) used the same approach and created the Online Labor Index (OLI), which initially tracked data from the five largest English-speaking platforms (Freelancer.com, Guru.com, Amazon Mechanical Turk [Mturk.com], Peopleperhour.com, and Upwork.com) and was recently expanded to include a

few Spanish- and Russian-language platforms in subsequent rounds,⁵² but overall representation of regional platforms in the OLI remains limited (Stephany et al. 2021).

Some studies use data on revenue and financial transactions to estimate the gig economy market size. Kuek et al. (2015) estimated the total market size to be US\$2 billion in revenue,⁵³ with 48 million workers globally in 2013, based on gross revenue figures and worker data from the five leading gig platforms.⁵⁴ The study then used the prior two years' average market growth rate to predict an overall market size of US\$4.8 billion by 2016. Similarly, Codagnone, Abadie, and Biagi (2016) collected data on registered contractors from a larger sample of 39 large gig platforms from simple web searches. From these numbers, they estimated that in the United States and the United Kingdom, the proportion of gig workers in the labor force was 1 to 2 percent, with a total of 52.6 million registered workers on the sample of platforms that were reviewed. Heeks (2017) expanded those results to include workers in developing nations. Considering survey ratios from other studies and a study of gig platforms in China, Heeks estimated that around 60 million people were involved in gig work in developing nations, of whom 10 percent (Kuek et al. 2015)—6.1 million—would be considered active and up to 3 million of whom would have online labor as their primary income. More recently, Kässi, Lehdonvirta, and Stephany (2021) employed a data-driven approach based on database mapping to estimate 89 million unique registered workers⁵⁵ and 14 million active workers.

Governments and private organizations have conducted surveys to estimate the size of the gig workforce, focusing mostly on developed countries. For example, the United States (Current Population Survey) included the contingent work supplement to the monthly labor force survey. Canada, Denmark, Finland, Sweden, and Switzerland (for an overview, see chapter 6 on social insurance in this report and ILO 2021), too, made efforts to measure gig work through labor force surveys. The EC conducted two COLLEEM surveys, with the later survey across 16 countries finding that 1.4 percent of the working-age population performed gig work as their main form of employment. Other surveys, such as a study of 11,000 workers in 11 countries that focused on low-skill and low-income respondents, found that the share of workers who receive their main income from gig work was much larger in emerging economies (3 to 12 percent in Brazil, China, India, and Indonesia) than in mature markets (1 to 4 percent in Germany, Spain, Sweden, the United Kingdom, and the United States) (BCG Henderson Institute 2019). Another study surveyed 6,000 adults in the United States in 2021 and found that about 36 percent of the US workforce (59 million) performed freelance work⁵⁶ in 2020–21 and that freelancers contribute up to US\$1.3 trillion to the US economy annually (Ozimek 2021). Pew Research Center surveyed 10,348 adults in 2021 to understand Americans' experiences and attitudes about earning money from online gig platforms and found that 16 percent of Americans have earned money from an online gig platform at some point (Anderson et. al., 2021).

⁵² The three Spanish-speaking platforms are freelancer.es, twago.es, and workana.es. Three from the Russian-speaking domain are freelance.ru, freelancehunt.ru, and weblancer.ru. See Stephany et al. (2021).

⁵³ While revenue offers valuable insight into individual platforms' business performance, it is not reported very often, making it difficult to use this metric on a broad set of platforms, particularly those that have not been listed on public markets. In addition, gig platforms' business models and associated revenue models differ widely—for example, the working relationship between a platform and the gig workers, pricing and revenue structures, and vetting mechanisms vary across platforms. Those differences cannot be accounted for clearly when interpreting the level of activity on platforms from reported revenue streams.

⁵⁴ With the assumption that the market leaders at the time (Upwork, Freelancer, and Zhubajie/Witmart) held 50 percent of the online freelancing and that Amazon Mechanical Turk and Crowdfunder (today FigureEight) held 80 percent of the market for microwork. See Kuek et al. (2015).

⁵⁵ Calculated from 163 million estimated registered-user accounts divided by 1.83 to account for multihoming. See Kässi, Lehdonvirta, and Stephany (2021).

⁵⁶ In this study, freelancers are defined as "Individuals who have engaged in supplemental, temporary, project- or contract-based work, within the past 12 months (calculated within the US Workers Overall sample)." See Ozimek (2021).

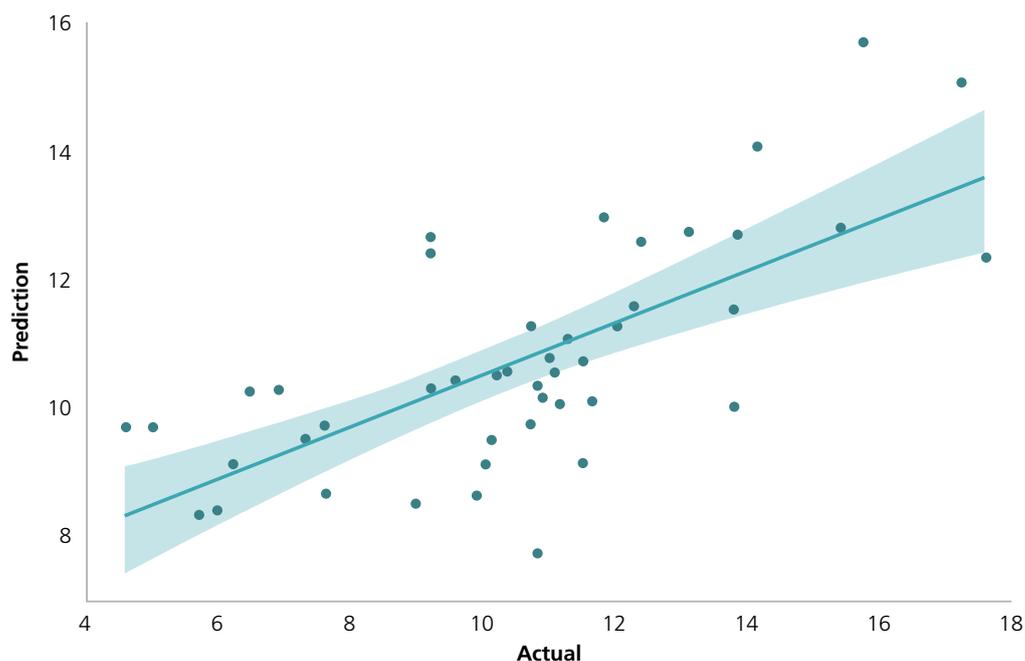
This study contributes to the literature by proposing two alternative methods to estimate the size of the gig labor force and by making additional effort to identify and measure regional/local and non-English-language platforms.

2.3 METHOD 1: WEB SCRAPING AND DATA SCIENCE

The first step was to collect web-scraped data for registered workers with a Python script or retrieved from the platforms' websites, press releases, or third-party reports. Information about the number of registered workers was available online for around 60 percent of the platforms.

The second step was to develop a predictive model for the remaining 40 percent of platforms for which information was not available, by using XGBoost, a tree-based machine learning model (Chen and Guestrin 2016). The model uses parameters such as website traffic (total traffic and number of unique visitors) and Alexa rank as independent predictive features or variables to predict the number of registered workers (dependent variable). These parameters related to website traffic highlight how many people visit a website, how much time they spend on it, and how many pages they visit on average. Traffic and visitors and unique visitors' values were logarithmically transformed, since the data are extremely skewed with few high outliers. This approach to reduce skewness is consistent with that of prior literature (such as Ang, Chia, and Saghafian 2021 and Lütkepohl and Xu 2010). An 80-20 train-test split was used on the 327 observed platforms, and various models including linear and polynomial regressions, random forest, extra trees, and XGBoost (Chen and Guestrin 2016) were experimented with in Python. The hyperparameters of the tree-based regressors were optimized by both grid search and Bayesian optimization. The XGBoost model was found to perform best on the test set, with the lowest mean square error and highest R^2 fit between the actual and predicted values. Figure 2.1 illustrates the plot of the actual versus predicted values for the test set. This fit appears to work well in other studies as well (Kässi, Lehdonvirta, and Stephany 2021, for example).

FIGURE 2.1: Model fit (XGBoost) for the prediction of registered workers on the test set



Source: Elaboration by the study team.

Note: The figure presents the plot for the model predicted values for number of registered workers (log scale) versus the actual data (log scale) for the test set. As observed, apart from outliers, the model performed reasonably well.

The next step was to adjust the estimates for multihoming and multiworking. Multihoming refers to freelancers or gig workers being registered, affiliated, or actively working on more than one online gig work platform. The team surveys conducted for this study (see chapter 4) found that workers are registered on an average of 1.834 platforms.⁵⁷ This means that registered-worker estimates need to be divided by 1.834 to account for multihoming to yield *unique* registered workers. This number is consistent with other studies.⁵⁸ At the same time, multiple workers may be working under a single freelancing account instead (multiworking),⁵⁹ as suggested by interviews with gig workers conducted by the team as well as by other studies in Africa (Melia 2020; Wood et al. 2019b). Reasons to engage in multiworking include lower barriers to entry, for example where subcontractors are not yet able to perform tasks using their own accounts (Melia 2020), and the trust and reputation of more-established accounts (Wood et al. 2019b). To date, there are no systematic studies or surveys of the multiworking phenomenon (Kässi, Lehdonvirta, and Stephany 2021).

This study is among the few that have estimated this phenomenon at a global level. Results suggest that an average of 1.19 workers is performing work from one account.⁶⁰ Therefore, an adjustment factor of 1.19 was added to the estimations of unique registered workers.

So how many online registered gig workers are there?

We estimate that there are 154 million unique registered gig workers worldwide. The total number of registered workers that were found through data collection and predictions using the XGBoost model was divided by 1.83 to account for multihoming, yielding 154 million unique registered gig workers on online gig platforms worldwide. While this is a reasonable estimate and not far from other estimates, the results may still be underestimating the number of gig workers. That is because traffic data were not available for all platforms. Also, some large platforms were excluded because it was not possible to trace traffic on relevant subfolders, further suggesting that these *estimates may be on the lower side*.

And how many of the registered gig workers are active?

Considering the sporadic nature of gig work, the number of registered gig workers may not accurately reflect the size of this group. Gig workers often vary widely in terms of how much time they spend doing gigs and what fraction of their overall income is generated by gig work. A worker may be doing gig work on a full-time or part-time basis, might perform tasks only sporadically (on weekends or some days in a month), or only under certain circumstances (such as loss of a job). The team's global survey in 17 countries found that one in three gig workers does online work as their main occupation, while for two-thirds it is a secondary occupation or is performed only sporadically

⁵⁷ This figure is the weighted average of the responses to the following question: "Which platforms do you work on? Please list all that apply" from the RIWI and Soyfreelancer surveys. Responses were weighted to account for different sample sizes.

⁵⁸ Surveys from the ILO (2021) and Wood et al. (2019a) estimate that on average, workers are active on 1.83 platforms.

⁵⁹ We adopt the term used in Kässi, Lehdonvirta, and Stephany (2021): multiworking. In other literature, this phenomenon has been called "subcontracting" or "re-outsourcing." See Melia (2020) and Wood et al. (2019b).

⁶⁰ Across five surveys with a total of 6,113 responses, workers were asked whether they (a) work on the tasks alone on their own account, (b) hire other people and assign tasks to other gig workers, or (c) sometimes work alone, sometimes hire other people. The responses were coded with 1 for "I work alone always" and 3 for the response "I hire other people and assign tasks to other gig workers" (this is the median of responses in the survey conducted in the Khyber Pakhtunkhwa region in Pakistan survey on how many people a person delegates tasks to); for "sometimes I work alone; sometimes I hire other people," weights are varied between 2 (50 percent alone, 50 percent other people), 2.5 (25 percent alone, 75 percent other people), and 1.5 (75 percent alone, 25 percent other people). The results indicate that between 1.13 and 1.24 would be the factor for multiworking, depending on the weights. Assuming that the 50-50 split for answer (c) is most likely, the resulting factor for multiworking is 1.19.

(see chapter 4). Furthermore, not all users who register end up pursuing gig work. They might have done gig work in the past or might have signed up out of curiosity. This implies that workers registered on gig platforms may not be actively working on them. Therefore, it is important to also estimate the number of *active* workers.

Platform websites do not list how many of their registered workers are active. This is partly because platforms compete with one another for users and funding and because they use various definitions of “active” workers. For example, some platforms may consider workers active if they are submitting bids or proposals (in other words, engaging with the platform), but others may consider workers active only if they are currently working on live projects and generating income or revenue. Existing estimations of active workers have relied largely on small samples and rules of thumb. For example, Kässä, Lehdonvirta, and Stephany (2021) predict that 8.6 percent of registered workers have worked at least once, Kuek et al. (2015) estimate that 10 percent of registered workers could be considered active (with a sample of $n = 5$), and Pesole and Rani (forthcoming) find that, in a sample of given platforms, about one-third of registered workers have completed at least one project successfully, while only 10 percent or fewer have completed 10 projects or earned more than US\$1,000 on the platforms.

In the absence of reliable data on activity levels, we use a proxy indicator for monthly unique website visitors. This study uses a definition of “active” that combines hours worked and percentage of overall income earned through online gig work monthly (see table 4.2 for details). But in the absence of sample-wide data on user behavior, this definition cannot be used for the present approach. Since the traffic data are at the firm level (not the individual level), we use activity on platforms with traffic data, specifically with the time spent on the website by users, as a proxy. The model estimates the share of active workers, defined as the share of registered workers that are likely to be actively using the platform.

The model uses the average number of unique website visitors per month multiplied by the bounce rate to remove one-off or accidental visits.⁶¹ This number is then multiplied by the estimated ratio of workers to clients, to account for workers only, and is subsequently divided by the number of registered users, accounting for multihoming and multiworking. A key input for the formula is the ratio between workers and clients on platforms, which enables an estimate of traffic data generated by workers. However, these data do not exist at the platform level and likely vary across platform types, sizes, and geographies. With the global demand stemming predominantly from high-income countries, there tends to be a larger proportion of clients relative to workers in high-income countries than in low- and middle-income countries. At the same time, there are differences between platform business models as well: smaller platforms and those focusing on high-skill tasks often employ an agency model that has higher barriers to signing up but also greater likelihood of winning a job offer. This suggests that a larger share of registered workers might be active, particularly compared to larger platforms that have low barriers to signing up. Surveys and interviews with 10 platforms conducted for this report⁶² show an average ratio between workers and clients

⁶¹ The bounce rate tells us the percentage of visitors to a website that leave said site without taking an action, such as clicking on a link, filling out a form, or making a purchase. See [https://backlinko.com/hub/seo/bounce-rate#:~:text=Bounce%20Rate%20is%20defined%20as,obviously\)%20didn't%20convert](https://backlinko.com/hub/seo/bounce-rate#:~:text=Bounce%20Rate%20is%20defined%20as,obviously)%20didn't%20convert).

⁶² Al7arefa, Asuqu Elite, BeMyEye, Jolancer, Onesha, SoyFreelancer, Upwork, Workana, Wowzi, Truelancer.

of 75.5 to 24.5.⁶³ While this ratio will not be true for all platforms, it reflects a diverse set of large and small and global and regional platforms.

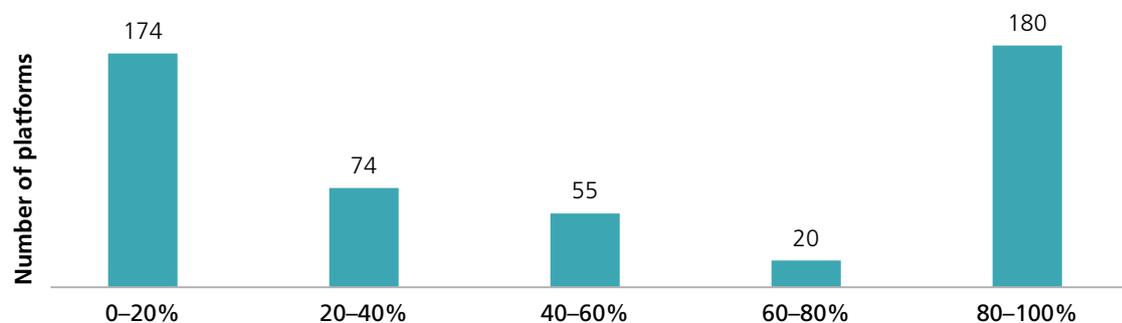
The model is as follows:

$$\text{Estimated share of active workers}^{64} \text{ for each platform } (\text{Percentage}_{\text{active}}) = \left[\frac{V_u * (1 - br) * r}{1.19 * \frac{(W_r)}{1.834}} \right]$$

where V_u is the average number of unique visitors per month; br is the average monthly platform bounce rate; W_r is the number of registered workers (either observed or predicted) for each individual platform; 1.19 is the adjustment factor for multiworking, based on internal surveys conducted by the World Bank; 1.834 is the adjustment factor for multihoming, based on internal surveys conducted by the World Bank; and r is the ratio of workers to client (=0.755).

We find that there are approximately 52 million active gig workers globally. The distribution for share of active workers was found to be generally right (positive) skewed but with a significant share of platforms having high percentages of active workers (see figure 2.2). This indicates that in most cases, only a small fraction (0 to 10 percent) of workers actively engage on the platform, but there is a sizeable percentage (35 percent) of platforms with a large share of active workers (over 81 percent). Large proportions are driven by high traffic figures in relation to the number of registered workers. In some cases, this might be due to a different business model in which platforms curate and keep a pool of vetted workers who are rotated and used across projects. In other cases, there might be overestimation of traffic or underestimation of registered-worker figures.

FIGURE 2.2: Histogram—Percentage of registered workers that are active



Source: Elaboration by the study team.

Note: The share (percentage) of active workers among registered users on a gig platform in the sample of platforms for which traffic data was available ($n = 503$) is shown. The total numbers of platforms are indicated above the bar graph.

The average proportion of active workers out of registered workers is 37 percent, with a median of 26 percent. This is higher than findings in prior studies that found active-worker shares of 8.6 percent (Kässi, Lehdonvirta, and Stephany 2021), 10 percent (Kuek et al. 2015), and 33 percent

⁶³ This figure was further tested by evaluating common search terms leading to the four top platforms. Using traffic data from the four top platforms, about 100 keywords in terms of traffic that landed on those websites were classified according to whether they likely indicate a buyer/client or a seller/worker. For this purpose, a keyword that includes a verb (for example, translate something) or the term “services” (such as copywriting services) was classified as indicating a buyer/client looking for such a service, while anything that included the term “jobs” (for example, freelance design jobs) was classified as indicating a seller/worker looking for job openings. There are several categories—for example website designer, translation, and others—that could belong to either sellers or buyers and are therefore not marked. We find that the ratio of workers to clients is roughly 70:30, which is close to the ratio we used in our model.

⁶⁴ Some platforms have unusually high numbers of unique visitors observed. Because the share of active workers cannot exceed 100 percent of registered workers, we also apply a 100 percent upper limit to the percentage.

(one-project threshold) or 10 percent (10-project threshold) (Pesole and Rani, forthcoming). On average, global platforms have a slightly higher percentage of active workers than regional platforms (37 percent versus 36 percent).

This estimation model has several limitations. The model relies heavily on traffic data for the estimations. However, other factors besides traffic, which are impossible to capture in this model, likely influence the proportion of active workers significantly. These include the split of demand and supply among website traffic, which was incorporated into the model on the basis of data from a sample of six platforms. Furthermore, the extent to which work requires spending time on the platform and the type of work (especially microwork versus tasks that require more time to complete) are difficult to estimate. Because these data points are not possible to obtain without unique insights into proprietary data owned by the platforms, collaboration with platform providers would be necessary to expand this model in the future.

2.4 METHOD 2: ESTIMATION USING AN RDIT GLOBAL SURVEY

Given the challenges in developing reliable estimates of gig workers, the team also used another experimental approach: an online global survey collected randomly from the internet using populations in selected countries. The survey uses the RDIT, patented by RIWI,⁶⁵ rolled out in 17 low- and middle-income countries to extrapolate the share of gig workers among the working population. The RDIT methodology assumes a random distribution of the survey to the internet population in the targeted countries, accessible on a variety of devices (desktop, mobile, tablet). The survey was conducted in 12 languages in addition to English to reach non-English-speaking populations. Complete surveys were collected from 7,015 respondents, of which 956 responses were from online gig workers and the rest were from respondents who had never done any gig work. The 17 countries were Argentina, Bangladesh, China, Arab Republic of Egypt, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, Pakistan, the Philippines, República Bolivariana de Venezuela, the Russia Federation, South Africa, Tunisia, and Ukraine (see appendix D for survey methodology).

Calculating the global number of online gig workers

We followed a series of steps to calculate the global number of online gig workers *excluding* high-income countries.

- The first step was to **select the 17 countries** while taking into account their market share in the global online gig work industry, geographic representation, and language usage.
- After **piloting the survey** in three countries, we launched it between June and August 2022.
- The collected data were cleaned, and **quality checks** were carried out to remove unreliable responses based on time taken to finish the survey.
- Then **a raking algorithm** based on age, gender, and education was used to assign weights for each response. The weights were constructed in such a way that their sum adds up to the internet-using population of each country during 2021, which is the latest year for which we could

⁶⁵ RIWI implements online surveys using random domain intercept technology. RIWI allows internet users to opt in to anonymous surveys on any web-enabled device. While using the web or apps, internet users may randomly come across an RIWI survey via dormant domains (websites that are no longer in use), incorrect URLs, and links within apps and websites. Instead of encountering a “page does not exist” notification or an advertisement, a RIWI survey or message test is rendered full site on the page. Web users then decide whether they would like to anonymously participate in the research and do so without incentivization. See <https://riwi.com>.

get internet penetration data for the sampled countries from World Bank's World Development Indicators (WDI).

- Next, we **calculated the proportion of online gig workers at the country level** by applying the weights constructed from the raking procedure.
- After that, we **multiplied the result by the internet-using population** of the country to arrive at the total number of online gig workers in the sampled countries. To arrive at a regional-level estimate, we used Semrush data to calculate each sampled country's share of internet traffic to online gig platforms. For instance, Kenya, Nigeria, and South Africa account for 80.6 percent of the internet traffic flow to online gig platforms from Sub-Saharan African countries. Using our global survey-based estimation, we determined that the number of online gig workers in these three countries is 17.5 million (the share of online gig workers from the survey multiplied by their internet-using population).
- We then **used this information to estimate the number of online gig workers for the remaining countries**, which account for 19.35 percent of the traffic flow, giving us roughly 21.7 million gig workers in Sub-Saharan Africa.
- We **replicated the process for the rest of the regions and added the results to arrive at the global number of online gig workers**.⁶⁶ This calculation provides us with a more reasonable estimate of the online gig worker population in each region.

To obtain the global number of online gig workers, **we totaled the regional estimates, excluding North America from the calculation** because no country from the region was sampled. We then **incorporated estimates from previous studies on online gig workers based in North America to arrive at the final global estimate**. (See appendix C for details.)

The primary question used to identify online gig workers reads as follows.

“Does this describe ANY work you did in the last 12 Months? Yes/NO”

“Some people find short, ONLINE tasks or jobs through a website or an app. These tasks (also called gigs) are done entirely online and digital platforms coordinate payment for the work done”

Defining “active” gig workers

To assess activity levels, we divided gig workers into three groups—main, secondary, and marginal gig workers—based on the study by Urzì Brancati, Pesole, and Fernández-Macías (2020) in the EU. This classification uses the number of hours worked on online gigs and the percentage of personal income earned from the online gig economy to determine whether a gig worker is main, secondary, or marginal (table 2.2).

⁶⁶ Because China was underrepresented in the Semrush data, we used the traffic share for the Philippines to estimate the figure for the East Asia and Pacific region, excluding China. We then added the number of online gig workers in China estimated from our global survey.

TABLE 2.2: Classification of gig workers based on earnings and working hours

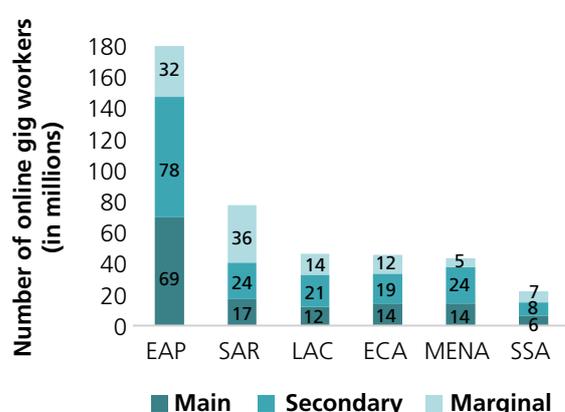
	Less than 10 hours a week	Between 10 and 20 hours a week	More than 20 hours a week
Less than 25 percent of personal income	Marginal	Secondary	Secondary
25 to 50 percent of personal income	Secondary	Secondary	Main
More than 50 percent of personal income	Secondary	Main	Main

Source: Adapted from Urzi Brancati, Pesole, and Fernández-Macias 2020.

So how many online gig workers are there? How many are “active?”

We estimate that there are 132.5 million main, 173.7 million secondary, and 106.2 million marginal gig workers. The total number of online gig workers, excluding North America, is 412.5 million. Adding in estimates of the online gig worker populations from other studies suggests that the number of online gig workers globally could be around 435 million.⁶⁷ In other words, we estimate that the share of online gig workers in the global labor force ranges from **4.4 to 12.5 percent**.⁶⁸

The East Asia and Pacific region accounts for 51 percent of online gig workers, followed by the South Asia region and the Sub-Saharan region (see Figure 2.3). Secondary and marginal online gig workers account for 42 and 26 percent of the online gig workers, respectively.

FIGURE 2.3: Estimated number of online gig workers based on the global online gig work survey

Source: Elaboration by the study team.

Note: Non-high-income countries in these regions are not included. EAP = East Asia and Pacific; ECA= Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = Southeast Asia region; SSA = Sub-Saharan Africa.

These estimates are substantially higher than previous estimates. The difference could be due to the following reasons. First, the team’s global gig work survey was conducted in multiple languages, including Bangla, Mandarin, Arabic, Hindi, Swahili, Spanish, Hausa, Tagalog, Urdu, Russian, and English, to try to reach people from non-English-speaking populations. This approach led to a higher response rate in non-English-speaking countries, picking up respondents who would

⁶⁷ For example, Codagnone, Abadie, and Biagi (2016) estimated 52 million gig workers in the United States and the United Kingdom and other European countries. Among these, 44 million are registered users on online gig platforms. Assuming that the United States accounts for 50 percent of these gives an estimate of 22 million online gig workers. Adding those to the 412.5 million online gives an estimate of 435 million online gig workers globally.

⁶⁸ WDI data show that the global number of laborers was 3.46 billion in 2021.

have been missed in English-only surveys. Second, our survey was more recent and captured the current trend toward increasing gig work due to COVID-19. Third, the survey made a special effort to reach online gig workers on regional/local platforms who often get overlooked in studies that use platform data or survey data for only the large global platforms. As such, our study could reflect more comprehensive coverage of the online gig work market and may have identified gig workers who are often missed.

However, these estimates also have their limitations. Despite the assumption that the RDIT leads to a random selection of respondents, a recent study by Soundararajan et al. (2022) found that this may not always be the case. They discovered that the method overrepresents male, younger, and more educated members of the country's population. However, it should be noted that their study relied on an online survey to draw conclusions about the broader labor force, including offline workers. In contrast, our study focused solely on internet users, using an online survey to collect data and making it a better fit for our purpose. Also, not everyone who starts filling in the questionnaire completes it, as there is no incentive to do so. We found that individuals who identified as online gig workers and high school graduates were most likely to drop out before finishing the survey. Furthermore, although the raking procedure relies on good-quality nationally representative survey data on internet usage for seven countries,⁶⁹ for the remainder of the countries we had to rely on regional averages, an approach which may affect the quality of our results. The raking procedure by itself may not eliminate all biases, either.⁷⁰ Last, in the absence of accurate data for all countries, the estimation is built on the assumption that the relationship between traffic flow to online gig platforms and the number of online gig workers is proportional across all countries.

We conducted a robustness check for a few countries to understand whether and how these estimates could be biased. The Vietnam 2021 Labor Force Survey (LFS) asks if respondents use the internet to carry out their work on a regular basis, which is very helpful in estimating the number of online gig workers. We limited the analysis to self-employed individuals who use the internet and work in occupations and industries that are very similar to online gig work.⁷¹ This gives us the share of online gig workers in occupation-industry cells. We applied these figures to the Philippines, which is another East Asia and Pacific country, assuming a share of online gig workers in occupation-industry cells similar to that in Vietnam. For the main gig workers, our estimates are 6 percent lower than the LFS-based estimation for the Philippines and close to 20 percent higher than that for Vietnam. If we focus on the main, secondary, and tertiary gig workers, our estimates are more than four times higher than what the LFS-based results suggest.

2.5 CONCLUSION

This chapter describes the use of two models to estimate the size of the gig workforce. While not directly comparable, the two estimations show a possible range of the size of the gig economy. Our first approach used data science methods and estimated that there are a **total 154 million unique registered** and **60 million active gig workers**. Our second estimation model used a global survey and estimated that there are **435 million gig workers**.

The two methods complement each other and should be read in tandem. The first method (using web traffic data) traces the number of workers from a relatively comprehensive list of platforms,

⁶⁹ For details of the data sources, see appendix C.

⁷⁰ Soundararajan et al. (2022) used propensity score reweighting to address bias, but the resulting sample was not representative and yielded estimates that were at odds with nationally representative surveys.

⁷¹ See the mapping in appendix I.

thereby allowing a reasonable inference of the total market size. While this is a good base, the first method is an underestimate, since the total figure is missing data for the Chinese market.⁷² Traffic from mainland China is likely not captured fully in the present data, because of difficulties in accessing information on traffic on Chinese websites. For example, traffic predictions in our sample are higher for Hong Kong SAR, China, than they are for mainland China, which is unlikely to be true. This would imply that the total figures of registered and active workers on Chinese websites are underestimated. Also, the ratio for the split between workers and clients used to estimate active workers is based on assumptions and a very small sample of data, which is hard to confirm. Therefore, our first method gives us a *lower bound*.

The second approach is based on a global survey of workers and relies on information on the share of online gig workers in the sampled countries, which had larger proportions of gig workers than other countries within their region. These estimates are used to calculate the number of online gig workers in the regions they are drawn from, which could introduce an *upward bias*.

Although the two approaches used to calculate the figures yield different results, both methods confirm that online gig workers constitute a non-negligible portion of the overall labor force. According to the data science–based approach, the number of unique registered online gig workers is 154 million globally, which can be considered a lower bound for the reasons previously discussed. Meanwhile, the survey-based approach suggests that there are 132.5 million main gig workers, but when we include those who engage in gig work as secondary or marginal workers, the estimate could be as high as 435 million, providing an upper bound estimate.

In other words, we estimate that there are between 154 million and 435 million gig workers globally, which means that the share of online gig workers in the global labor force ranges between 4.4 and 12.5 percent.

⁷² The team's survey-based estimate after excluding China was 283 million, which is closer to the data science estimate, especially for main gig workers (74 million) versus the data science range (58 million to 91 million), making the two estimates comparable. However, another reason for the higher survey-based estimate is that it was conducted in several languages and was hence more successful in identifying gig workers who do not speak English and gig workers who work on regional/local platforms who may have been missed by the data science method.

References

- Abraham, Katharine G., John C. Haltiwanger, Kristin Sandusky, and James R. Spletzer. 2018. "Measuring the Gig Economy: Current Knowledge and Open Issues." NBER Working Paper 24950, National Bureau of Economic Research, Cambridge, MA.
- Anderson, M., McClain, C., Faverio, M., & Gelles-Watnick, R. 2021. "The state of gig work in 2021." https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2021/12/PI_2021.12.08_Gig-Work_FINAL.pdf.
- Ang, Yu Qian, Andrew Chia, and Soroush Saghafian. 2021. "Using Machine Learning to Demystify Startups' Funding, Post-Money Valuation, and Success." In *Innovative Technology at the Interface of Finance and Operations*, edited by V. Babich, J. R. Birge, and G. Hilary. Springer Series in Supply Chain Management, vol 11. Edinburgh, Scotland: Springer, Cham. https://doi.org/10.1007/978-3-030-75729-8_10.
- BCG Henderson Institute. 2019. "The New Freelancers: Tapping Talent in the Gig Economy."
- Chen, Tianqi, and Carlos Guestrin. 2016. "XGBoost: A Scalable Tree Boosting System." In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 785–94. New York: ACM. <https://doi.org/10.1145/2939672.2939785>.
- Codagnone, Cristiano, Fabienne Abadie, and Federico Biagi. 2016. *The Future of Work in the 'Sharing Economy': Market Efficiency and Equitable Opportunities or Unfair Precarisation?* Joint Research Centre, Institute for Prospective Technological Studies, Publications Office of the European Union, Luxembourg. <https://data.europa.eu/doi/10.2791/431485>.
- Heeks, Richard. 2017. "Decent Work and the Digital Gig Economy: A Developing Country Perspective on Employment Impacts and Standards in Online Outsourcing, Crowdwork, Etc." Development Informatics Working Paper 71, University of Manchester, UK. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3431033.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook: The Role of Digital Labour Platforms in Transforming the World of Work*. Geneva: ILO.
- Kässi, Otto, Vili Lehdonvirta, and Fabian Stephany. 2021. "How Many Online Workers Are There in the World?" Open Research Europe, 1–53.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. "The Global Opportunity Online Outsourcing." World Bank, Washington, DC. <http://hdl.handle.net/10986/22284>.
- Lütkepohl, Helmut, and Fang Xu. 2010. "The Role of the Log Transformation in Forecasting Economic Variables." *Empirical Economics* 42: 619–38. <https://doi.org/10.1007/s00181-010-0440-1>.
- Melia, Elvis. 2020. "African Jobs in the Digital Era: Export Options with a Focus on Online Labour." Discussion Paper 3/2020, German Development Institute, Bonn.
- Ozimek, Adam. 2021. "Freelance Forward Economist Report 2021." Upwork. <https://www.upwork.com/research/freelance-forward-2021>.
- Pesole, A., and U. Rani. Forthcoming. "How many online gig workers?: Estimates based on selected online web-based and location-based platforms." European Commission Working Paper, European Commission, Brussels.

-
- Soundararajan, V., S. Soubeiga, D. Newhouse, A. Palacios-Lopez, U. J. Pape, and M. Weber. 2022. "How Well Do Internet-Based Surveys Track Labor Market Indicators in Middle-Income Countries?" Policy Research Working Paper 10359, World Bank, Washington, DC.
- Stephany, Fabian, Otto Kässi, Uma Rani, and Vili Lehdonvirta. 2021. "Online Labour Index 2020: New Ways to Measure the World's Remote Freelancing Market." *Big Data & Society* 8 (2): 20539517211043240.
- Urzi Brancati, M.C., A. Pesole, and E. Fernández-Macías. 2020. "New Evidence on Platform Workers in Europe: Results from the Second COLLEEM Survey." Joint Research Centre Paper JRC 118570, Publications Office of the European Union, Luxembourg.
- Wood, Alex J., Mark Graham, Vili Lehdonvirta, and Isis Hjorth. 2019a. "Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy." *Work Employment and Society* 33 (1): 56–75.
- Wood Alex J., Mark Graham, Vili Lehdonvirta, and Isis Hjorth. 2019b. "Networked but Commodified: The (Dis)Embeddedness of Digital Labour in the Gig Economy." *Sociology* 53 (5): 931–50.

CHAPTER 3

The Emergence of Local and Regional Platforms

3.1 INTRODUCTION

The role of regional/local platforms that cater to specific regional markets is almost entirely missing in the literature. Research so far (Stephany et al. 2021) has drawn mainly on the experience of global online gig work platforms such as Upwork, Fiverr, Freelancer, or Amazon Mechanical Turk, neglecting platforms that operate at the regional and local levels and gig workers in non-English-speaking countries. For instance, the Online Labour Index, launched in 2016 and one of the most comprehensive mappings of the global online gig economy, initially tracked only five major English-language online gig work platforms, although it recently added five platforms in Spanish and Russian. Regional/local platforms connect employers and workers from one or a few countries within a region. Examples of regional platforms include Workana and SoyFreelancer in Latin America and the Caribbean, Ureed in the Middle East and North Africa, and Flexiport in India. By contrast, global platforms connect workers and employers from multiple countries across different regions (see chapter 1 for classification of platforms as global or regional/local). While global platforms maximize network effects by engaging large numbers of diverse clients and online gig workers, they may pose higher entry barriers for certain types of workers and even some firms.

This chapter analyzes differences between regional/local platforms and global platforms along several parameters, including size, client profile, language used, payment method, communication across time zones, incentives for using the two types of platforms for both workers and employers, and potential for collaboration with governments. The chapter concludes by discussing the challenges and limitations of regional/local platforms. The chapter draws on a literature review and detailed interviews with 24 regional/local platforms⁷³ and 4 global platforms that cover a range of regions and business models and were among the top platforms based on traffic data in the six regions.⁷⁴ The semistructured interviews were conducted with the founders, CEOs, or senior management of the platforms between summer 2021 and autumn 2022 and lasted a couple of hours each. The interviews were followed up with continued engagement, including requests for additional data. The full list of platforms interviewed and a sample of the semistructured questionnaire are in appendix F.

⁷³ One interview covered two platforms. This was the case for the Khamsat and Mostaqil platforms, which are operated by the same company, Hsoub.

⁷⁴ Several attempts were made to contact Chinese platforms (58.com, Yipinweike.com, and Zhubajie) in cooperation with the World Bank country office, but the local World Bank team was not able to establish contact.

3.2 WHAT ARE LOCAL AND REGIONAL PLATFORMS?

Regional/local platforms connect employers and workers from one or a few countries within a region, while global platforms span several regions. Figure 3.1 presents a stylized classification of the platforms interviewed for this study based on the location of most of the clients and online gig workers.⁷⁵ Some platforms, like Workana, are present in multiple regions, but since most of their activity is concentrated in one of the regions, they are classified as regional.

FIGURE 3.1: Classification of interviewed global and regional/local platforms

Demand side /clients	Global, clients in diverse countries	B.O.T.	Findworka, Jolancer, M4JAM, Meaningful gigs, Native Teams, SheWorks!, Truelancer, Workana	Appen, Freelancer, Upwork, Voices.com
	Clients from a few countries in a region		BeMyEye, Bookings Africa, Elharefa, Khamsat, Mostaq, Ureed, YouDo, SoyFreelancer, Wowzi	
	Clients from a single country	Apna, Asuqu, eRezeki, Flexiport, Karya, Onesha		
		Workers from a single country	Workers from a few countries in a region	Global, workers in diverse countries
Supply side/online gig workers				

Source: Study team compilation based on platform interviews and data.

However, this classification is constantly shifting, because platforms are dynamic businesses responding and adapting to market trends and opportunities. While some global platforms actively look for more local or niche markets to expand their user base, some smaller local platforms also try to expand and grow into global platforms. Global platforms often try to include strengths of regional platforms by setting up local offices in select regions. Platforms such as Freelancer and Fiverr are good examples; they provide Spanish-language versions to better tap into the Spanish-speaking world. Regional platforms, once they establish themselves, also seek to expand their global coverage by identifying newer markets and clients. Workana is an example of a large regional platform that expanded outside its original market. Founded in Argentina in 2012, Workana focused on the Spanish-speaking world for the first seven years of its existence but expanded to Southeast Asia in 2019.⁷⁶ The Southeast Asia component of Workana is based in Malaysia, where Workana opened

⁷⁵ Figure 3.1 provides a more detailed classification of a selection of online gig work platforms than the analysis laid out in chapter 1. The category “workers/clients from a single country” comprises platforms whose workers/clients are mostly from a single country; the category “workers/clients from a few countries in a region” comprises platforms whose workers/clients come from diverse countries but are confined to the same region; the category “global” includes platforms whose workers/clients come from a variety of countries and from multiple regions.

⁷⁶ See the Workana news release, “Workana Expands Its Footprint in Malaysia to Connect and Empower Tech-Driven and Creative Freelancers,” April 10, 2019, <https://blog.workana.com/en/press-releases-asia/workana-expands-its-footprint-in-malaysia-2/>.

a local office. The expansion to Malaysia and Southeast Asia was driven largely by the proximity to Singapore as a digital and commercial hub and the potential of the gig economy in that region. Within the two regions (Latin America and the Caribbean and East Asia and Pacific), Workana adopted different strategies tailored to the regional contexts. When Workana operates in Latin America, the platform functions in Spanish and Portuguese. In Malaysia, however, Workana operates in English like the larger global platforms, because of the more diverse ethnic composition of the East Asia and Pacific region.⁷⁷

3.3 HOW DO LOCAL PLATFORMS COMPARE WITH GLOBAL PLATFORMS? SOME STYLIZED FACTS

Regional platforms differ from global platforms in key aspects, including size, language used, currency of payments, transaction value, payment mechanism, communication across time zones, and employer type. Table 3.1 summarizes the key differences between global and regional/local platforms, which are discussed in this section.

TABLE 3.1: Key differences between global and regional/local platforms

	Global Platforms	Regional/Local Platforms
Size and network effects	Significant number of workers and employers from countries from around the world	Vary in size, with a base of workers and employers located in a specific region or country
Employers	Variety of employers, from MSMEs and start-ups to big corporations	Predominantly MSMEs and start-ups (especially in the case of the smaller platforms)
Language	Predominantly English	English or local languages, depending on the region/country
Task type	Broad ranges of tasks	Tending toward more limited, specialized ranges of tasks such as IT- or digital marketing-related tasks
Currency	Predominantly US\$	US\$ and/or local currency
Transaction value	Likelihood of higher pay due to a broader range of employers and work opportunities	Often lower pay because the market is limited regionally/locally
Payment mechanism	Different payment mechanisms (for example, bank transfer, PayPal, Payoneer); online gig workers from countries where certain payment methods are not accessible may be indirectly excluded	Payment mechanisms adapted to the solutions available locally
(A)synchronous communication	Potentially significant differences in the time zones of workers and employers	Closer time zones between clients and workers

Source: Study team elaboration.

Note: IT = information technology; MSMEs = micro, small, and medium enterprises.

While they vary in size, regional/local platforms are on average smaller than global platforms. The size of the user base on regional/local platforms is less than half of the user base on global platforms on average. Regional/local platforms average 444,500 registered users, of which 242,300 are unique registered users,⁷⁸ compared with an average of 1.2 million registered users and

⁷⁷ The team subsequently learned that Workana recently decided to go back to its original regional focus in Latin America and the Caribbean.

⁷⁸ Workers can be registered on multiple platforms (multihoming). As described in chapter 2, the registered-worker estimates are divided by 1.834 to account for multihoming and yield unique registered workers. The multihoming factor of 1.834 was derived from survey data collected for this study.

515,300 unique registered users on global platforms. The largest regional/local platforms interviewed for this study include Workana (a Latin American platform with over 2.6 million freelancers⁷⁹) and Truelancer (a freelancing platform in India with over 1 million registered users⁸⁰). Smaller platforms include Flexiport in India with over 62,000 registered users⁸¹ and Ureed in the Middle East and North Africa with over 80,000 registered users. In contrast, global platforms have significantly higher numbers of users (for instance, Freelancer.com has over 65 million workers and employers;⁸² Upwork is estimated to have over 17 million freelancers and 5 million employers and clients⁸³).

Because of their limited size, regional/local platforms have challenges in tapping into the network effects necessary to sustain their business based on the platform model alone.

As a result, local platforms often develop alternative features to respond to the needs of clients and workers. Such features and strategies are discussed in more detail in section 3.5.

In 2015, 50 percent of the global online freelancing market was concentrated on only three platforms: Upwork, Freelancer, and Zhubajie (Kuek et al. 2015). While Upwork and Freelancer are global platforms, Zhubajie is an interesting example of a regional platform of a significant size (estimated at 16 million registered service providers and clients) (Zhou 2020) since it operates and caters to a large market in China. From this perspective, Zhubajie is an exception to the general pattern of regional and local platforms being smaller than global platforms. The microwork market was even more concentrated; 80 percent of the market was held by Amazon Mechanical Turk and CrowdFlower (Kuek et al. 2015).

On average, the portions of registered workers who are active are similar for global and regional/local platforms. For both global and regional/local platforms, around one in three workers are active.⁸⁴

Regional/local platforms tend to cater to micro, small, and medium enterprises (MSMEs), start-ups, and self-employed single-owner businesses as well as, to a much lesser extent, big companies (see also chapter 5). This is particularly true in the case of the smaller regional platforms (for instance, Flexiport). Such platforms tend to play a key role in the local start-up ecosystem. They connect small companies with freelancers who can provide support for specific tasks or for a limited period. In turn, these small companies can better utilize their limited financial resources by gaining access quickly to the support and talent they require. Regional/local platforms sometimes attract large companies, especially where the firms have set up local offices and need a workforce that is local, speaks the local language(s), and is familiar with the local market.

In general, regional/local platforms tailor their operations to the local context and thus rely on the language spoken in that country, whereas most global platforms use English as the main language.

The websites of global platforms are often in English (namely, the language used to provide instructions on signing up, as well as the descriptions of tasks). Workers on global platforms generally operate in English (as is the case for Upwork, Fiverr, and Freelancer.com, for instance), which is reflected in the large share of gig workers from India, Pakistan, and the Philippines, where many people speak English. Interviews with regional platforms revealed that most of them were

⁷⁹ See Workana, <https://www.workana.com/about>.

⁸⁰ See Truelancer, <https://www.truelancer.com>.

⁸¹ See Flexiport, <https://www.theflexiport.com>.

⁸² According to the data provided on the platform as of March 2023: <https://www.freelancer.com/about>.

⁸³ The numbers are based on estimates provided by third parties: <https://altony.co/work/upwork-up-we-go>.

⁸⁴ The analysis developed in chapter 2 shows that 36 percent of workers on regional/local platforms are active and 37 percent of workers on global platforms are active.

designed to meet gaps in the work opportunities for gig workers who do not speak English. For example, Khamsat and Mostaqi in the Middle East and North Africa were created to serve regional Arabic-speaking workers who are often left out of the global gig economy. Another example is Workana in Latin America and the Caribbean, which provides online work opportunities in Spanish and Portuguese. The availability of work in the local language on regional platforms helps overcome language barriers but also may facilitate access to online work for less highly educated workers (see the discussion on language as a driver for inclusion in chapter 4).

Local platforms tend to be more specialized in terms of tasks listed. For instance, Findworka, a Nigeria-based online gig work platform, chose to specialize in information technology (IT)-related gig work by specially sourcing workers with IT skills and providing training to build skills in this field among local gig workers. SheWorks!, a Latin America and the Caribbean platform, tends to focus on tasks in digital marketing and on writing and translation. Global platforms, on the other hand, generally feature tasks across a wide range of categories (business and professional services such as human resources, accounting, consulting, and marketing; creative and multimedia; software development and programming; administrative and clerical tasks such as data entry and data labeling; and writing and translation). See also chapter 1 for a discussion on the distribution of tasks on global and regional/local platforms.

Some local platforms provide alternative payment mechanisms to help address local constraints on making online payments. Limited access to viable means to make and receive online payments internationally prohibits some workers from accessing global platforms. For example, PayPal is not available in all countries, and Jolancer in Nigeria (where prior to 2014 PayPal was not available) tried to overcome this constraint by providing bank transfers as a payment option for Nigerian workers.⁸⁵ Jolancer also allows clients to make payments⁸⁶ using the Nigerian online payment solution Flutterwave,⁸⁷ a financial technology company catering to the needs of the regional market. Because of governmental regulations, all prices on YouDo, a Russian platform, are listed in rubles and all payments are made in rubles as well. In some cases where currency conversion is difficult, online gig workers prefer payments in local currency, which local platforms offer. By contrast, workers are more likely to be paid in US dollars on global platforms. On Fiverr, while prices may be shown in different currencies, the payment currency is US dollars.⁸⁸ On Upwork, prices are shown only in US dollars, but billing may be done in the local currency for certain countries.⁸⁹ Payment options in local currencies offered by several regional platforms thus help overcome a key constraint for many gig workers.

The ticket size on local platforms tends to be smaller than that on global platforms, although there are several exceptions. In general, clients from high-income countries offer higher pay per task, which can make global platforms more attractive to workers than regional/local platforms. This is especially relevant since online freelancers in developing countries earn on average 60 percent less per hour than online freelancers in developed countries (controlling for types of tasks and basic characteristics [ILO 2021]). In addition, some platforms are introducing minimum rates per hour for work done on the platform (see also chapter 6). For instance, one of the key policies of Workana is to remove ads for jobs that pay less than the legal minimum wage in the country of the online

⁸⁵ Jolancer, “How Jolancer Works” (accessed February 22, 2023), <https://jolancer.com/how-jolancer-works/>.

⁸⁶ Jolancer, “How to Credit Your Jolancer Account eWallet” (accessed February 22, 2023), <https://jolancer.com/how-to-credit-your-jolancer-account-ewallet/>.

⁸⁷ Flutterwave website (accessed 19 February 2023), <https://flutterwave.com/us/>.

⁸⁸ Fiverr, Help Center, “Can I Change My View to Any Currency Type That I Want on the Mobile App?” (accessed 6 May 2022), <https://www.fiverr.com/support/articles/360011608138-Can-I-change-my-view-to-any-currency-type-that-I-want-on-the-mobile-app>.

⁸⁹ Upwork, Support, “Pay in Local Currency” (accessed 6 May 2022), <https://support.upwork.com/hc/en-us/articles/211068028-Pay-in-Local-Currency>.

freelancer doing the job. Upwork also does not support hourly contract rates under US\$3/hour and requires a minimum pay of US\$5 per project.⁹⁰ The rate, while lower than the minimum wages in most developed countries, can be attractive to workers from countries with low wages.

Time zone differences can be another factor for clients or workers choosing regional platforms. Global platforms are more likely to have workers and clients working asynchronously⁹¹ or for one party to operate outside normal working hours. Several interviews with platforms revealed that time difference is an important factor for some clients when hiring gig workers. For example, on SheWorks!, online freelancers in Latin America and the Caribbean work most often with clients who are local or based in the United States since they appreciate small time zone differences. Workana decided to open an office in Malaysia to be closer to clients in East Asia and the Pacific and to limit time zone differences, thus increasing their responsiveness to customers.

3.4 WHAT ROLE DO LOCAL PLATFORMS PLAY ON THE SUPPLY AND DEMAND SIDES?

On the supply side, regional/local platforms may have lower entry barriers than global platforms for some workers to participate in the online gig economy. For example, regional/local platforms tend to adapt to local constraints such as online payment regulations (as discussed earlier) or limited digital infrastructure or access to devices in the design of their platform. See chapter 7 on operations for a description of Project Karya in rural India, which adapted its interface design for low literacy levels and populations with limited internet access. Some local platforms (for example, Elharefa, a platform in the Arab Republic of Egypt) develop coworking spaces to help onboard people with limited connectivity at home or those who need hands-on support. Time zone proximity also benefits workers, such as women who prefer to work during regular working hours. First-time gig workers or youth doing their first job prefer platforms where they can meet with platform staff in person and resolve issues that they may encounter more directly than in the impersonal online context of global platforms. Since they are part of the same ecosystem, local platforms understand training needs and can provide more-targeted training programs. Regional/local platforms have lower entry barriers, especially for populations not fluent in English, in addition to gender (see box 3.1) and youth inclusion. The higher proportion of tasks in the local language is especially appealing for countries where English is not the main spoken language. Another barrier to entry on global platforms that was highlighted during our focus group discussions in Kenya was the perception that employers from high-income countries often prefer workers located in high-income countries. Gig workers in developing countries often attempt to hide their true location by masking their IP address or creating fake profiles to appear as workers from countries such as the United States or the United Kingdom (Fairwork 2021). Local platforms therefore seem easier to access for workers in developing countries with limited exposure to digital platforms (Figure 3.2).

⁹⁰ Upwork, “Minimum Hourly and Fixed-Price Rates on Upwork” (accessed 15 August 2022), <https://support.upwork.com/hc/en-us/articles/211062988-Minimum-hourly-and-fixed-price-rates-on-Upwork>.

⁹¹ Asynchronous communication refers to a work relationship in which the parties are not in direct, real-time contact and communication is delayed because of time zone differences.

FIGURE 3.2: Regional/local platforms and the local ecosystem



Source: Study team elaboration.

Note: MSMEs = micro, small, and medium enterprises.

BOX 3.1: REGIONAL/LOCAL PLATFORMS THAT ENGAGE WOMEN IN ONLINE GIG WORK

Over 85 percent of workers at SheWorks!, an online gig work platform in Latin America and the Caribbean, are women. SheWorks! actively promotes flexible work schedules among its clients to ensure that workers can find the right balance between their online work and other commitments (such as caring for children or other family members). On SoyFreelancer, also in Latin America and the Caribbean, more than 50 percent of workers are women. This number is higher than the share of women in the labor force in the region more broadly (41.42 percent).^a SoyFreelancer encourages clients to break up their tasks into small, more manageable chunks when posting them. This practice can provide the flexibility that women may be looking for in online work, allowing them to manage their work time more easily. Similarly, a larger share of women are working on Flexiport in India (36 percent of the workers on the platform) than in the total labor force (20 percent). More details are given in chapter 4.

a. Country/regional averages for the share of women in the total workforce were retrieved from World Bank, World Development Indicators.

On the demand side, regional/local platforms seem to play an important role for local private sector development, especially for MSMEs and start-ups, but also for larger firms needing local talent. The intermediation services provided by regional/local platforms can help local businesses obtain talent for concrete, specific tasks or short-term needs. In particular, start-ups or self-employed people trying to establish a new business do not have the resources to hire talent and need the flexibility to hire for shorter, concrete tasks (for instance, designing a logo). Tasks such as marketing require knowledge of the local context, and gig workers can be a valuable source of cost-effective talent for resource-constrained MSMEs and start-ups. Wowzi, a Kenya-based influencer marketing platform, offers options for companies to create locally relevant social media campaigns. Interviews with Ureed and SheWorks! highlighted the importance of knowing the cultural context for certain tasks. Gomez-Herrera, Martens, and Mueller-Langer (2017) also point to cultural distance as a factor shaping the way gig work is traded, having studied transactions completed on the United Kingdom-based platform Peopleperhour.com between 2014 and 2016. Tasks related to writing, business support, marketing, and public relations were found to be the least frequently traded tasks. Clients from a particular region may also prefer to speak with freelancers about their needs in their local language. For example, the clients on SoyFreelancer, mostly Spanish-speaking entrepreneurs and individuals, prefer to use a Spanish-oriented platform for a more targeted search for talent. Regional platforms often identify this market niche for firms needing “context-specific” solutions as a business opportunity. Ureed and Workana Malaysia emphasized that being able to have in-person meetings with clients and being located near clients are important for fostering trust in the platform-employer and employer-worker relationships. Some clients that want longer-term gig workers may prefer to have the option to work with freelancers in person later, when needed, which is easier to arrange for regional/local platforms than for global ones. Discussions with Ureed confirmed that companies sometimes prefer that freelancers work with them in person, especially for longer-term projects that require coordination and familiarity with the corporate culture of the client. More details are given in chapter 5.

For governments, regional/local platforms could be more accessible as partners on broader policy objectives. Regional/local platforms can support governments’ efforts to include youth and low-skilled people. Box 3.2 highlights an example in the Middle East and North Africa region. Particularly on social protection and insurance, governments may work with platforms to expand social registries or to enhance coverage of insurance or pension programs for informal workers. Chapter 6 discusses this at length. In Singapore, for instance, the platform Grab collaborated with the government to support the provision of health insurance. Regional/local platforms may be better placed to work with governments on tax reforms (see the case of a tax experiment in the Russian Federation in box 3.3). Governments are also starting to rely on platforms to source workers, although this is still limited. A survey of the government workforce in the United States in 2018 shows that state and local governments have started to use gig workers, to a limited extent, to address staffing issues, particularly for office and administrative support functions, accounting, and IT (Center for State and Local Government Excellence 2018). The trend may be growing in other parts of the world. Governments may consider outsourcing sensitive tasks to people or platforms from their countries because of security clearance requirements (as mentioned in interviews with Ureed and the National Aeronautics and Space Administration [NASA]). In addition, using a gig work platform based in the country may also ensure compliance with existing regulations.

BOX 3.2: TRAINING WOMEN TO TAP THE OPPORTUNITIES OF ONLINE GIG WORK

In October 2020, Ureed in cooperation with the International Finance Corporation (IFC) launched the training program “Mastering the World of Online Freelancing” to increase the participation of women in online gig work in Jordan and Lebanon (IFC 2021). Ureed is a platform active in the Middle East and North Africa region that operates in English and Arabic. The program was developed after the needs of women freelancers on Ureed were assessed and included content for both new and existing freelancers. Women who enrolled received a fee waiver for one year from Ureed (that is, the women would get 100 percent of the payment from the client). In addition, Ureed gave clients a discount if they hired from the pool of women and changed their matching algorithm to prioritize women in their searches. A total of 324 women enrolled in the program, and 82 completed one or more trainings (24 percent completion rate). Some lessons from the program include the importance of incorporating coaching and additional support for women with limited work history and limited digital skills. The demand side also needs to be incentivized to hire women freelancers.

BOX 3.3: GOVERNMENT AND PLATFORM COOPERATION ON TAXATION CHALLENGES IN THE ONLINE GIG ECONOMY: THE CASE OF THE RUSSIAN FEDERATION

YouDo, a regional platform in the Russian Federation, worked in collaboration with the government on a tax program aiming to bring workers from the informal labor market into the formal economy. The tax regime is designed to recognize gig workers as self-employed and does not include those who hire other workers.^a This initiative was first tested in several regions in Russia and then expanded at the national level. The tax regime requires that a small percentage of the transaction cost be paid to the government as tax revenue (the applicable tax rate is 4 percent for individuals and 6 percent for those registered as legal entities; individuals do not have to register officially as individual entrepreneurs in order to benefit from the tax regime). The collaboration between the government and the online platform was useful to get transaction data that made it easier to track the progress of the tax regime. YouDo and other platforms share transaction data with the government, which helps with the straightforward calculation of the tax based on transaction costs.

a. Federal Tax Service of the Russian Federation, “Special Tax Regimen for Self-Employed Citizens” [in Russian], <https://npd.nalog.ru/>.

3.5 LOCAL PLATFORMS: CHALLENGES AND LIMITATIONS

Our interviews revealed that many (but not all) regional/local platforms struggle to establish themselves as viable businesses. High fees charged to the workers can drive the supply away, which in turn would disincentivize clients from using the platform; the result is similar if clients consider their fees too high and drop out. As such, a viable pricing option for platforms seeking to achieve a critical mass of users can be to lower prices on one side, for instance the supply side, to encourage more users to join the platform and thus grow the attractiveness of the platform on the demand side (Engels and Sherwood 2019). While regional platforms vary in their approaches, they tend to target either the demand or the supply side with reduced fees in order to boost the attractiveness of the platform (see appendix P for further details on the pricing schemes of online gig work platforms).

Not surprisingly, the lack of network effects constrains the growth of local platforms. Scale and network effects are important for several reasons. From the perspective of the buyer, a platform with a larger pool of workers means greater chances of finding the right type of worker for a particular task. From the perspective of the worker, a larger set of tasks posted on the platform and a wider range of employers can mean more opportunities for work. Tapping into network effects is particularly challenging when starting up a new business or regional platform (Graham et al. 2017). As a result, regional platforms tend to struggle with funding, facing difficulties in engaging buyers as well as workers. Smaller regional/local platforms may struggle with getting adequate visibility. Some platforms report that most of the work goes to whomever markets the best in browser searches. The giant global platforms appear first in most search engines, while smaller local platforms may face difficulties in making potential users aware of their existence. Local platforms adapt their business models to gain a footing. The large numbers of merger and acquisition activities, with bigger corporations and competitors buying such platforms, show the high level of competition and volatility in the platform business (ILO 2021). (See appendix O on mergers and acquisitions.)

Lack of scale prevents platforms from leveraging the large amounts of data larger platforms typically use to enhance their product. One example is the way in which workers and clients are matched (for instance, algorithmic matching or the visibility of workers and tasks in search results). Regional platforms that struggle to grow also are unable to factor data-driven applications into their product and their pricing schemes (for example, the features offered by Upwork to online gig workers to increase their visibility on the platform as part of the subscription plan for workers).

Local platforms cannot fully capitalize on the existing global geographical imbalance between the demand and supply of gig work. Workers on online platforms tend to come from developing countries (particularly from Bangladesh, India, and Pakistan), while employers tend to come from high-income countries (such as the United Kingdom and United States). See chapter 5 for trends in demand. Only global platforms can match these workers and employers in entirely different regions. Global platforms are attractive to employers in high-income countries because they can find workers willing to accept lower wages. Workers from low- and middle-income countries are more likely to find that the low wage or rate offered on the platform is still better than their alternative employment options.

Most local platforms interviewed by the team were set up by entrepreneurs with a background in technology but with limited financial or business experience. Most founders were motivated by a niche market opportunity for providing local solutions, in markets where global

platforms had not yet entered. In the beginning, the founders usually rely on their own funding or on funding from friends or family to establish the start-up platform business. Often, founders struggle to grow their platform and generate the necessary revenue from a pure platform revenue model, requiring them to change strategy and pursue alternative monetization methods.

In the face of challenges to developing a commercially viable business, several regional platforms have pivoted to adapt their business models. Several platforms have chosen to specialize in helping clients by managing a small but vetted talent pool. This approach ranges from an add-on service along with regular platform operations for large-enterprise clients to full-fledged third-party staffing services. Other platforms have developed features that incentivize online gig workers to increase their participation on the platform. For instance, in some cases, they charge additional fees to freelancers to access novel features and restricted projects. Box 3.4 presents several examples.

BOX 3.4: NEW BUSINESS MODELS FOR REGIONAL/LOCAL PLATFORMS IN SEARCH OF PROFITABILITY AND SUSTAINABILITY

Enterprise business model

Some regional/local platforms are developing an “enterprise model” to increase the sustainability of their businesses by partnering with large multinational clients or governments. The platform provides select clients access to a special team of freelancers who provide flexible labor. Workana relies on such a model^a to offer services tailored to client needs. Workana first seeks to understand the needs of the client organization and then proposes several candidate workers and facilitates the matching process. After the matching, Workana is not involved in the management of the relationship between the worker and the client. It is worth noting that enterprise models are also offered by global platforms such as Upwork.^b

Third-party contract staffing

Third-party contract staffing is another alternative business implemented by some regional/local platforms to attract more clients. Flexiport, an Indian platform founded in 2014, faced critical issues with the viability of its business in the first years of activity. The company decided to pivot its business model when it realized that many clients on the platform required additional support with managing freelancers from an administrative point of view. Flexiport started offering an offline extension of the platform focused on third-party contract staffing.^c In its business model, third-party staffing refers to support offered to clients for compliance, payrolls, and statutory requirements (benefits, medical insurance). The staffing company takes the worker onto its own payroll. Flexiport now derives its main source of income from the third-party staffing component of the business.

(Continued)

BOX 3.4: [Continued]

Especially in a cross-border context, third-party staffing services can be appealing for both clients and online gig workers. Native Teams^d is a platform offering employers record, payroll, payments, and freelancer support services explicitly to bridge the challenges of cross-border work, making it easier for clients to hire online freelancers and for freelancers to manage their work and their legal and fiscal status as freelancers.

Transitioning from platform to recruiting and placement

Some regional/local platforms pivoted their business model away from a freelancing platform that allows clients and freelancers to find each other into a headhunting or training organization. An example is Findworka, a Nigerian platform founded in 2016, which transitioned from a freelancing platform to a recruiting and placement platform in 2018 in an effort to increase profitability and sustainability. Findworka maintains a pool of vetted workers through which the firm finds the right person(s) for the jobs or tasks needed by its clients.

Elite freelancer model

Some regional/local platforms have created “elite freelancer” programs to put the spotlight on their top workers. Elite freelancers are given several benefits, such as having more visibility on the platform and being considered for specific work opportunities. On Soyfreelancer, elite freelancers are charged a smaller commission by the platform, they can communicate with clients more freely than regular freelancers, and they have priority over other freelancers when clients look for workers. In return, elite freelancers have to pay SoyFreelancer a monthly fee (US\$4.99 per month). Only a small percentage (2 percent) of freelancers on SoyFreelancer are elites. Another example is Asuqu, based in Nigeria. The platform created the “Asuqu elites” category of freelancers who had completed at least some minimum number of tasks on the platform successfully. The resulting pool of freelancers is used by Asuqu to match with clients who want longer-term engagements.

a. Workana, <https://business.workana.com/en>.

b. Upwork, “Membership Plans: Upwork Enterprise,” <https://support.upwork.com/hc/en-us/articles/226526507-Upwork-Enterprise>.

c. The option is advertised as “Flexi Plus” in the pricing plan for businesses on Flexiport, <https://www.theflexiport.com/employers/>.

d. See Native Teams, <https://nativeteams.com>.

3.6 CONCLUSION

While regional/local platforms may not have received as much attention as global platforms, they seem to play an important role not just for the local labor market but also for the local private sector ecosystem in many developing countries. First, regional platforms have several advantages over global platforms that may make them better suited for some types of work (for instance, work requiring understanding of cultural context) and can make them more attractive to both workers and clients than global platforms. Second, they often have features (such as use of local languages) that may help groups previously excluded from global platforms to participate in the gig economy, potentially making them an important means for inclusion in the digital economy. Third, regional/local platforms play an important role for local private sector development as talent resources for local MSMEs and start-ups in developing countries, which often lack the capacity to hire expensive talent. Finally, because regional/local platforms are concentrated in one country or a few select countries or regions, such platforms may be more inclined to collaborate on development policy goals like training or social insurance measures initiated by the national government. Nevertheless, many regional platforms struggle to reap the benefits of network effects or to derive a sustainable revenue from platform activities and are likely to seek alternative business models to be able to grow.

References

- Center for State and Local Government Excellence. 2018. "State and Local Government Workforce: 2018 Data and 10 Year Trends." Washington, DC. <https://slge.org/resources/state-and-local-government-workforce-2018-data-and-10-year-trends>.
- Engels, Steven, and Monika Sherwood. 2019. "What If We All Worked Gigs in the Cloud? The Economic Relevance of Digital Labour Platforms." European Economy Discussion Paper 099. Publications Office of the European Union, Luxembourg. https://economy-finance.ec.europa.eu/system/files/2019-06/dp099_en.pdf.
- Fairwork. 2021. "Work in the Planetary Labour Market. Fairwork Cloudwork Ratings 2021." Oxford Internet Institute, University of Oxford, UK. <https://fair.work/en/fw/publications/work-in-the-planetary-labour-market-fairwork-cloudwork-ratings-2021/>.
- Gomez-Herrera, Estrella, Bertin Martens, and Frank Mueller-Langer. 2017. "Trade, Competition and Welfare in Global Online Labour Markets: 'A Gig Economy' Case Study." JRC Digital Economy Working Paper 2017–05. Joint Research Centre, European Commission, Seville, Spain. https://joint-research-centre.ec.europa.eu/publications/trade-competition-and-welfare-global-online-labour-markets-gig-economy-case-study_en.
- Graham, Mark, Vili Lehdonvirta, Alex Wood, Helena Barnard, Isis Hjorth, and David Peter Simon. 2017. "The Risks and Rewards of Online Gig Work at the Global Margins." Oxford Internet Institute, University of Oxford, UK. <https://www.oii.ox.ac.uk/publications/gigwork.pdf>.
- IFC (International Finance Corporation). 2021. "Barriers and Opportunities to Refugee Women Engaging in the Digital Economy in Jordan and Lebanon." IFC, Washington, DC. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/barriers+and+opportunities+to+refugee+women+engaging+in+the+digital+economy+in+jordan+and+lebanon.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work*. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_771749.pdf.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. "The Global Opportunity Online Outsourcing." World Bank, Washington, DC. <http://hdl.handle.net/10986/22284>.
- Stephany, Fabian, Otto Kässi, Uma Rani, and Vili Lehdonvirta. 2021. "Online Labour Index 2020: New Ways to Measure the World's Remote Freelancing Market." *Big Data and Society* 8 (2). <https://doi.org/10.1177/20539517211043240>.
- Zhou, Irene. 2020. "Digital Labour Platforms and Labour Protection in China." ILO Working Paper 11. International Labour Organization, Geneva. <https://www.ilo.org/legacy/english/intserv/working-papers/wp011/index.html#ID0E4C>.

CHAPTER 4

How Inclusive Is the Online Gig Economy?

4.1 INTRODUCTION

By providing flexibility in location and time, reduced friction in matching customers and clients, and low entry barriers, online gig work provides opportunities for individuals who face constraints in accessing the local offline labor market. Women prefer flexible work arrangements to balance household responsibilities. Youth work on online gig platforms to try different occupations and learn skills for future career development. People with disabilities and those in rural areas who face mobility barriers and have limited locally available job opportunities could get access to a broader job market through online platforms. Additionally, people use gig work to earn supplemental income.

This chapter discusses how online gig workers compare with other workers in six aspects of inclusion (age, gender, skills, location, language, and employment and income patterns), using available data from the latest labor force and household surveys from the I2D2 database.⁹² This chapter examines the following:

1. Differences between online gig workers on local and global platforms,
2. Differences between online gig workers and
 - Workers in the services sector,
 - Informal workers, and
 - Workers with similar occupations, who were identified by matching the typical task categories found on online gig work platforms (including business and professional services, information technology (IT) and software development, and microtasks) to similar occupational codes (the mapping of occupational codes is provided in appendix G and has some limitations).

4.2 METHODOLOGY

The analysis is based on data from several survey instruments:

- **Global RDIT survey in 17 countries.** The primary data source for this analysis is a global RDIT web survey conducted by the team in 17 countries in six regions, using random domain intercept technology (RDIT; see appendix D).

⁹² The International Income Distribution Database (I2D2) developed by the World Bank is a collection of harmonized household and labor force surveys (LFSs).

- **Ten platform-based surveys**, including nine online freelancing and one microwork platform survey conducted between April and December 2022 (Table 4.1). All nine online freelance platforms were regional/local in nature. The surveys were conducted in collaboration with the nine freelancing platforms, relying on a variety of distribution channels, including emails sent by the platforms to gig workers and promotion of the survey on the platforms. The survey conducted in the microwork platform was posted as a task, and online gig workers were invited to complete the survey just as they would complete any other task. The number of responses across the surveyed platforms varied from fewer than 50 (in four platform surveys) to more than 700 (in four platform surveys, with the highest number for one survey being 3,600). The analysis used the platform surveys with high response rates (see appendix E for a detailed description of the platform surveys).
- **Five country-level deep dive surveys** conducted in collaboration with World Bank country teams from Social Protection and Jobs (SPJ), Social Sustainability and Inclusion (SSI), and Digital Development (DD). The country deep dives were done in Bangladesh, Indonesia, Kosovo, Malaysia, and Pakistan. The team received platform data from Malaysia-based platform eRezeki (2016–20) and the GLOW PENJANA program⁹³ (2020–21), provided by the Malaysia Digital Economy Corporation (MDEC) and analyzed with support of World Bank colleagues in Malaysia. In Indonesia, the study team collaborated with the SPJ team, who conducted a large survey of over 4,000 informal workers; the SPJ team also supported the effort with data analysis. In Pakistan, we worked with the SSI country team, which had implemented an operation in Khyber Pakhtunkhwa (KP) and was keen to roll out an end-of-operation survey. We worked with the team to conduct the survey. In Kosovo, we worked with the DD team to trace beneficiaries of a DD pilot on gig work. In Bangladesh, we worked with client counterparts in the Ministry of Information and Communications Technology (ICT) to roll out a small-scale survey of gig workers. See appendix E for further details.
- **Aggregate data from platforms** provided by four online gig work platforms and projects.
- **Interviews with 28 platforms**, including 24 regional/local platforms and 4 global platforms. Semistructured interviews were conducted with the founder, CEO, or senior management of each platform between summer 2021 and autumn 2022 (see also chapter 3 and appendix F for a detailed overview).
- **Focus group discussions with select gig workers.** Focus group discussions were conducted with Kenyan online freelancers using the Onesha platform in December 2022 and with Pakistan-based online freelancers using a variety of gig work platforms in August 2022.

Limitations. The analysis in this chapter has some data limitations. First, the comparison of online gig workers to workers with similar occupations is restricted to eight countries for which the labor force surveys (LFSS) and household surveys contained enough information on occupational codes for an accurate analysis. The eight countries are Argentina, Bangladesh, India, Mexico, Pakistan, the Philippines, South Africa, and Tunisia (see appendix D). Second, the comparison between online gig workers and informal sector workers is restricted to four regions on the basis of data availability: Africa, Latin America and Caribbean, Middle East and North Africa, and South Asia (see also appendix D, which provides further details on the methodology for analyzing the global RDIT survey data and limitations).

⁹³ The GLOW PENJANA program was developed by MDEC as a spin-off to the eRezeki platform to support individuals affected by the COVID-19 pandemic. The program provides training to aspiring online gig workers.

TABLE 4.1: Platforms featured in the study (includes survey data and data provided by the platform)

Platform	Region	Type of data
Elharefa	MENA	Survey (n = 41) and platform data
eRezeki platform and GLOW PENJANA program	EAP. These are initiatives of the Malaysian government agency MDEC to support online gig work.	Platform data
Flexiport	SA	Survey (n = 11) and platform data
Jolancer	AFR	Survey (n = 19) and platform data
Microworkers	Global microwork platform	Survey data (n = 1,073)
Onesha	AFR	Survey (n = 82) and platform data
SheWorks!	LAC	Survey (n = 36) and platform data
SoyFreelancer	LAC	Survey data (n = 325)
Truelancer	SA	Survey (n = 746) and platform data
Workana	LAC (with a regional office in EAP as well)	Survey (n = 3,697) and platform data collected in collaboration with the Inter-American Development Bank
Wowzi	AFR	Survey (n = 960) and platform data
YouDo	ECA	Platform data

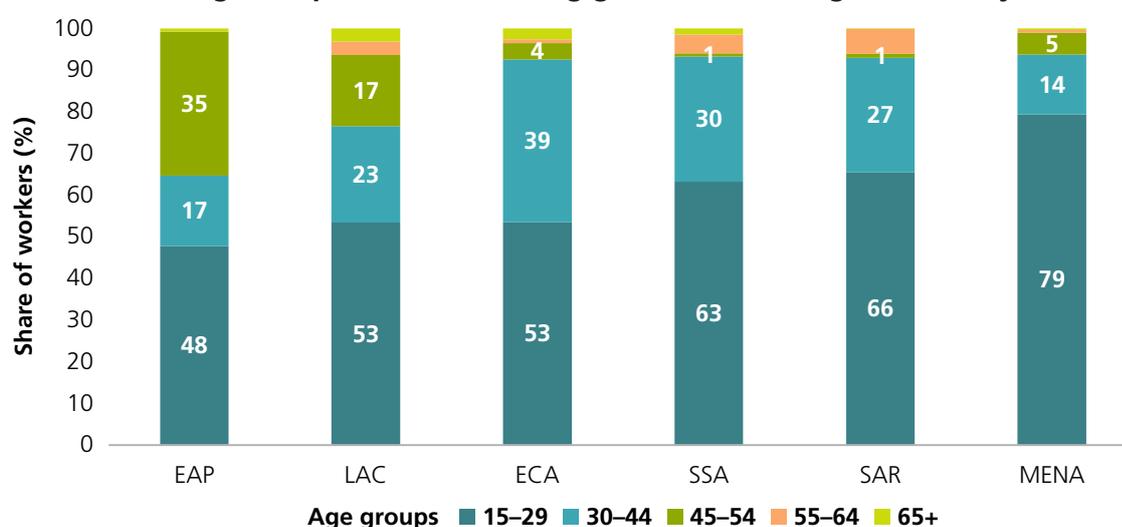
Source: Study team compilation.

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SA = Southeast Asia; MDEC = Malaysian Digital Economy Corporation.

4.3 AGE

Online gig work platforms tend to attract youth. Most online gig workers tend to be youth under the age of 30, mostly students or young professionals at the beginning of their careers. More than half of online gig workers are under 30, and the results hold true across most regions except for East Asia and Pacific, where the share of youth is slightly smaller (48 percent; figure 4.1). In this respect, there is no significant difference between global platforms and regional/local platforms.

FIGURE 4.1: Age composition of online gig workers in the global survey

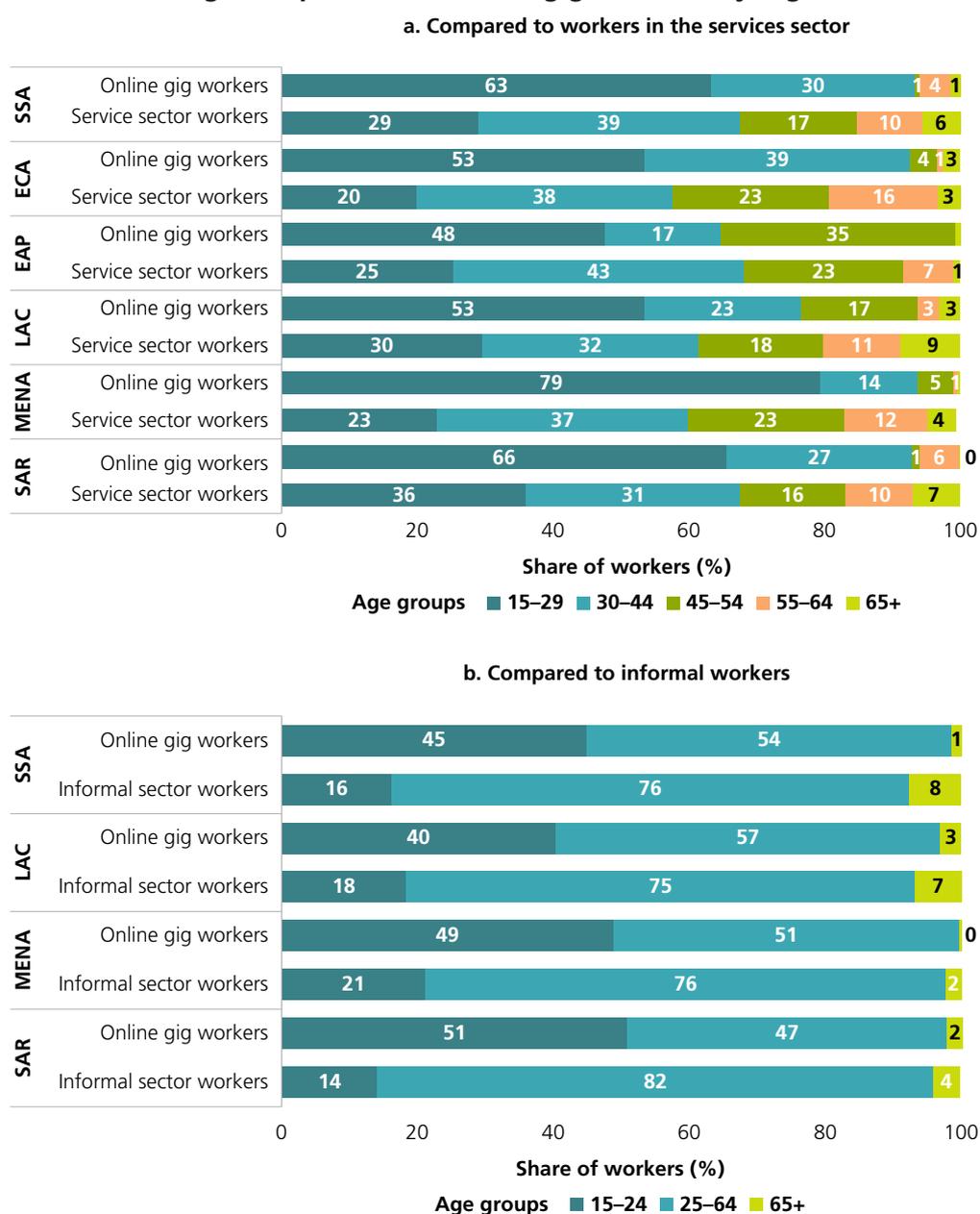


Source: Global RDIT survey conducted by the study team.

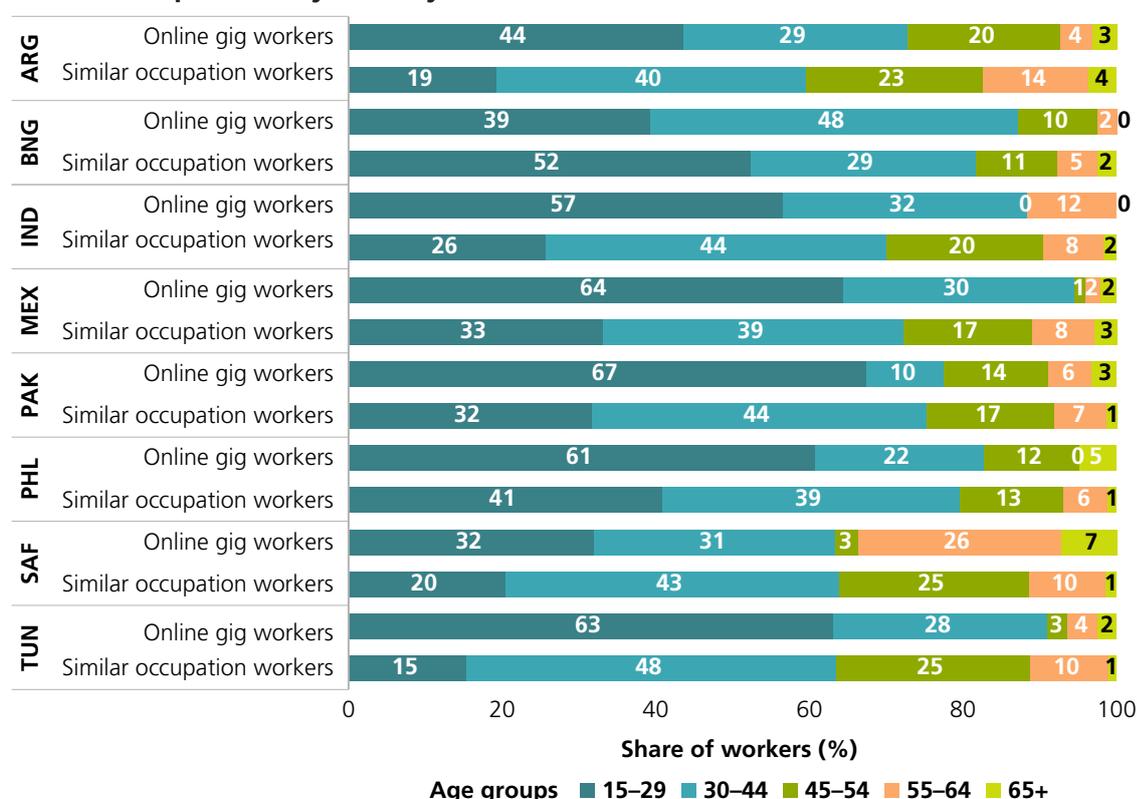
Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

Online gig workers are younger than workers in the services sector, workers with similar occupations in the labor market, and workers in the informal sector. Across regions, the portion of youth among online gig workers is significantly greater than that in the services sector and in the informal sector (Figure 4.2). Results from eight countries show a similar pattern of a significant share of online gig workers younger than workers with similar occupations in the labor market, and in some cases the difference is sizeable (Figure 4.3). For instance, over 63 percent of online gig workers in Mexico, Pakistan, and Tunisia are under 30, a much larger proportion than in the labor force (between 15 and 33 percent).

FIGURE 4.2: Age composition of online gig workers, by region



Source: Study team analysis of Global RDIT survey and labor force and household surveys.
 Note: The values for online gig workers by region differ between the two figures because the comparator countries vary in data availability. The online gig worker estimates include the same countries in each region as those for which the team had labor force surveys. For a list of countries and labor force surveys used, please refer to appendix D, specifically tables D.4 and D.5. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

FIGURE 4.3: Age composition of online gig workers compared to workers in similar occupations, by country


Source: Study team analysis of global RDIT survey and labor force and household surveys. Please see table D.6 in appendix D for the list of countries and labor force surveys used.

Note: ARG = Argentina; BNG = Bangladesh; IND = India; MEX = Mexico; PAK = Pakistan; PHL = the Philippines; SAF = South Africa; TUN = Tunisia.

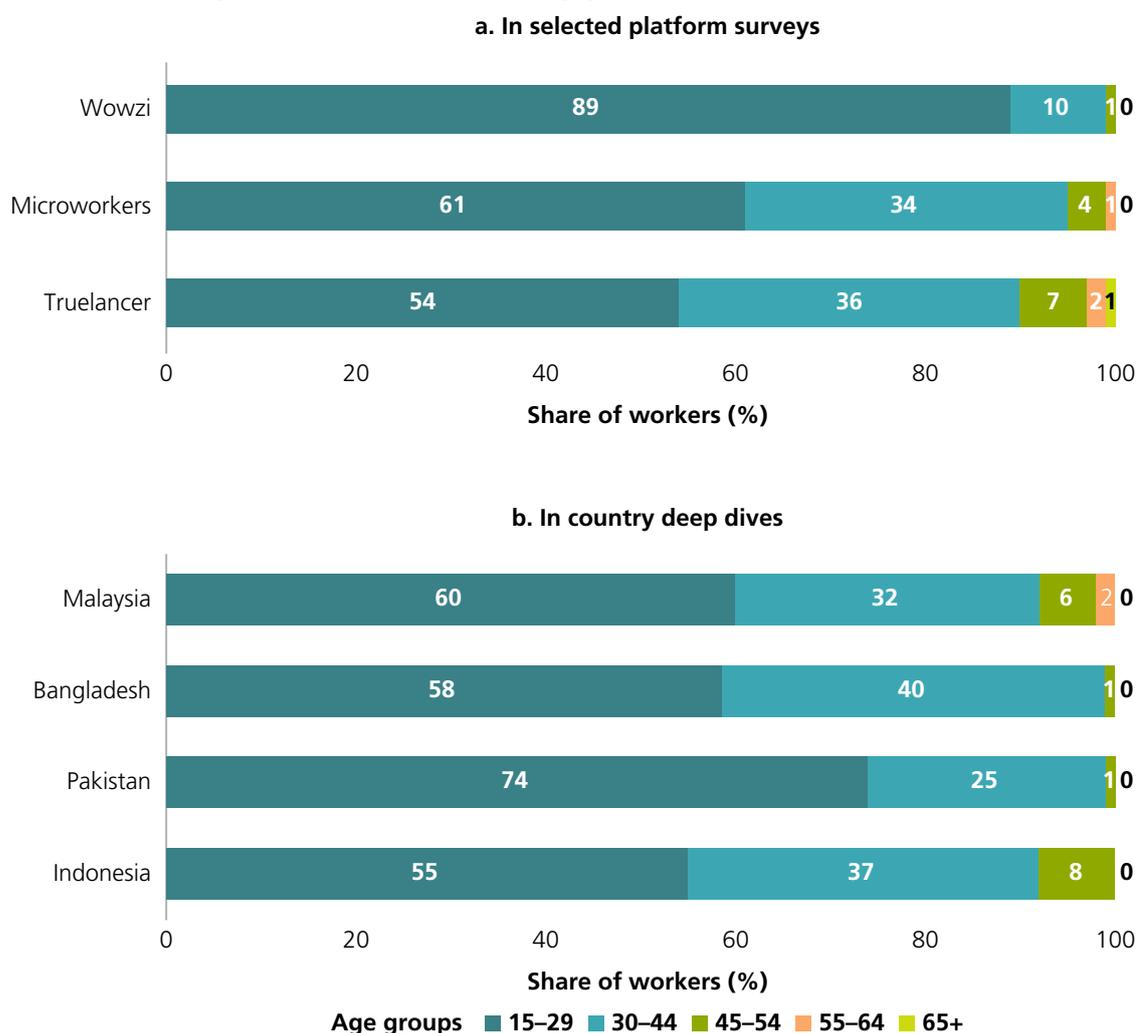
Data from platform-based surveys also confirm the greater proportion of youth. For instance, over half of the respondents on Truelancer, an online freelancing platform based in India, were youth, with an even higher proportion (61 percent) for the global microtask platform Microworkers (see Figure 4.4, panel a). Microwork is seen as a good source of supplementary income for young people (Cedefop 2021). Wowzi, a Kenya-based platform specializing exclusively in “influencer” marketing tasks, had almost 90 percent youth freelancers (or influencers)⁹⁴ because of its focus on new social media skills. The Latin American platforms Workana and SoyFreelancer also showed significant shares of young workers: 50 and 40 percent, respectively.⁹⁵

The study team’s country deep dives confirm the dominance of youth on gig platforms (Figure 4.4, panel b). More than half of the survey respondents in Bangladesh were 20- to 30-year-olds, while in Pakistan, both the average and the median ages of respondents to the team’s survey were 26 years. In Indonesia, over 50 percent of the online gig workers are below 30 years old, compared to 24 percent of the informal-sector workers. Existing studies on global trends in gig work suggest a similar age pattern, with online platform workers tending to be below the age of 35.⁹⁶

⁹⁴ The share is based on the number of freelancers using Wowzi who provided information about their age to the platform. The proportion is confirmed by data collected through a survey conducted by the World Bank on the Wowzi platform.

⁹⁵ The data presented are based on an internal survey conducted by Workana Latin America among its user base and confirmed through the survey conducted by the World Bank and Inter-American Development Bank for this study.

⁹⁶ Several studies confirm this profile, for instance ILO (2021a, 2021b), Goldfarb (2019), and in the European Union, Pesole et al. (2018), Urzi Brancati, Pesole, and Fernández-Macías (2020), and Cedefop (2021).

FIGURE 4.4: Age distribution of online gig workers

Source: Analysis of platform surveys and country deep dives conducted by the study team.

Note: Data for Malaysia indicate registered users on the eRezeki platform in 2020.

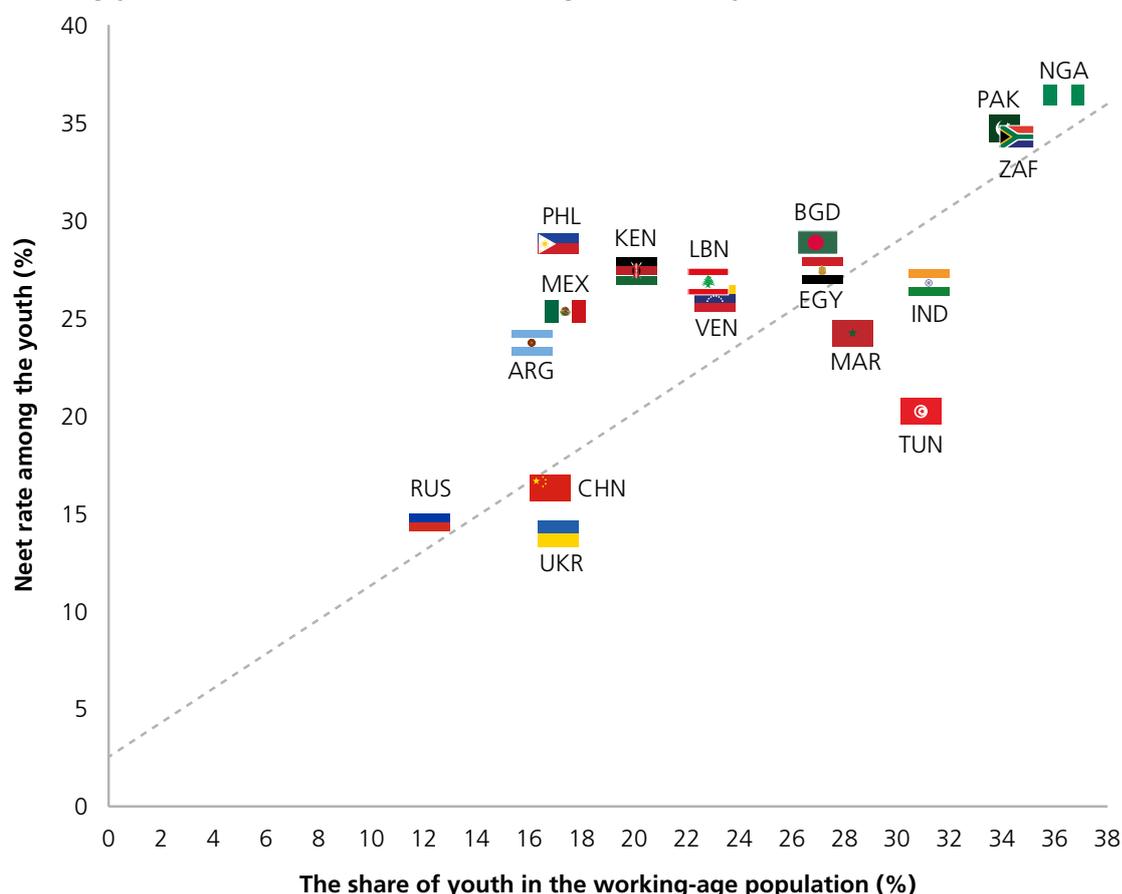
Digital gig work attracts young people for several reasons. The study survey found three key reasons that online gig work platforms appeal to youth: the chance to learn new digital skills, especially for someone at the beginning of their career; the flexibility of online work; and the ability to earn additional income. Most youth gig workers have another job or are students, findings that are similar to those of other studies (ILO 2021b). In countries with high youth unemployment rates, gig work could provide a path to integrate youth into the labor market.⁹⁷

Opportunities in the online gig economy can play an important role in countries struggling with high levels of youth unemployment or underemployment. For countries with growing cohorts of youth, online gig work can provide young people with work opportunities beyond what is available in the traditional labor market (UNDESA 2022). Countries struggling with high youth unemployment rates or high rates of youth not in employment, education, or training (NEET),

⁹⁷ See ILO news release, "Global Youth Unemployment is on the Rise Again," August 24, 2016, https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_513728/lang-en/index.htm.

like Nigeria (36 percent) and Pakistan (34 percent),⁹⁸ could provide targeted support to youth to access online gig jobs (figure 4.5; see also chapter 7).

FIGURE 4.5: Proportion of youth in the working-age population and NEET rate among youth in the 17 countries in the global survey



Sources: ILOSTAT and UNDESA. ILOSTAT data are from 2021 and 2022; UNDESA data are from 2022.

Note: ARG = Argentina; BGD = Bangladesh; CHN = China; EGY = Arab Republic of Egypt; IND = India; KEN = Kenya; LBN = Lebanon; MAR = Morocco; MEX = Mexico; NGA = Nigeria; PAK = Pakistan; PHL = the Philippines; RUS = Russian Federation; TUN = Tunisia; UKR = Ukraine; VEN = República Bolivariana de Venezuela; ZAF = South Africa. NEET = not in employment, education, or training.

4.4 GENDER

Globally, women participate in online gig work to a greater extent than in the general labor market. The survey found that 42 percent of online gig workers are women, a larger proportion than in the global labor force (39.7 percent as of 2021).⁹⁹ By region, the share of women in online gig work varies between 19 percent in the South Asia region and 56 percent in the Middle East and North Africa (figure 4.6, panel a). In some cases, the portion of women in online gig work is significantly greater than that for the services sector (in East Asia and Pacific and the Middle East

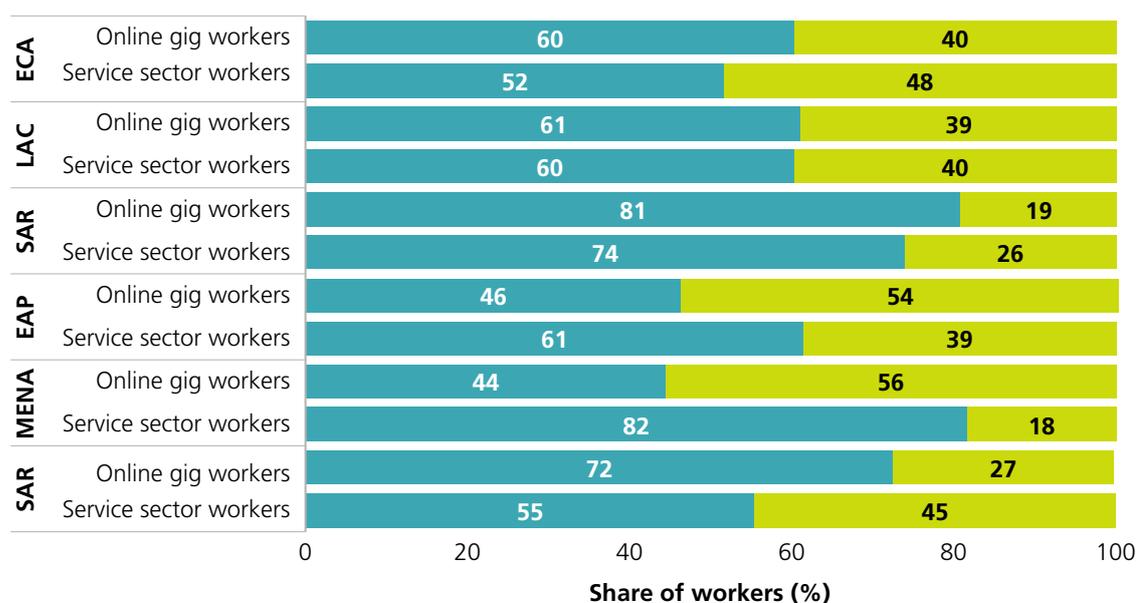
⁹⁸ ILO, "ILO Modelled Estimates (ILOEST database)," 2022, <https://ilostat.ilo.org/resources/concepts-and-definitions/ilo-modelled-estimates/>.

⁹⁹ World Bank, WDI database. Estimates are based on data obtained from the ILO and the United Nations Population Division, <https://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS>.

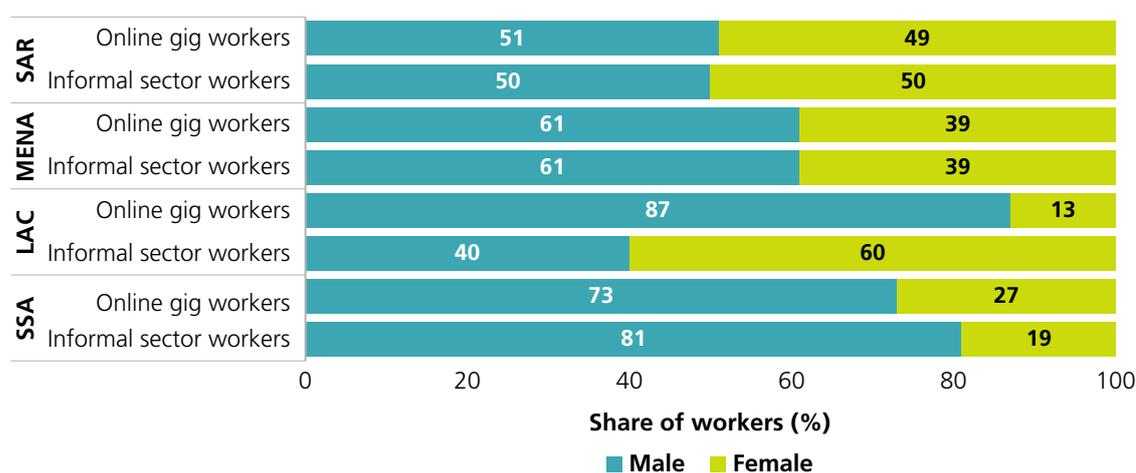
and North Africa; figure 4.6, panel a) and the informal sector (in the Middle East and North Africa; figure 4.6, panel b). The share of women among gig workers is greater on global platforms than on regional platforms (45 versus 27 percent).

FIGURE 4.6: Share of female online gig workers, by region

a. Compared to female workers in the services sector



b. Compared to female workers in the informal sector

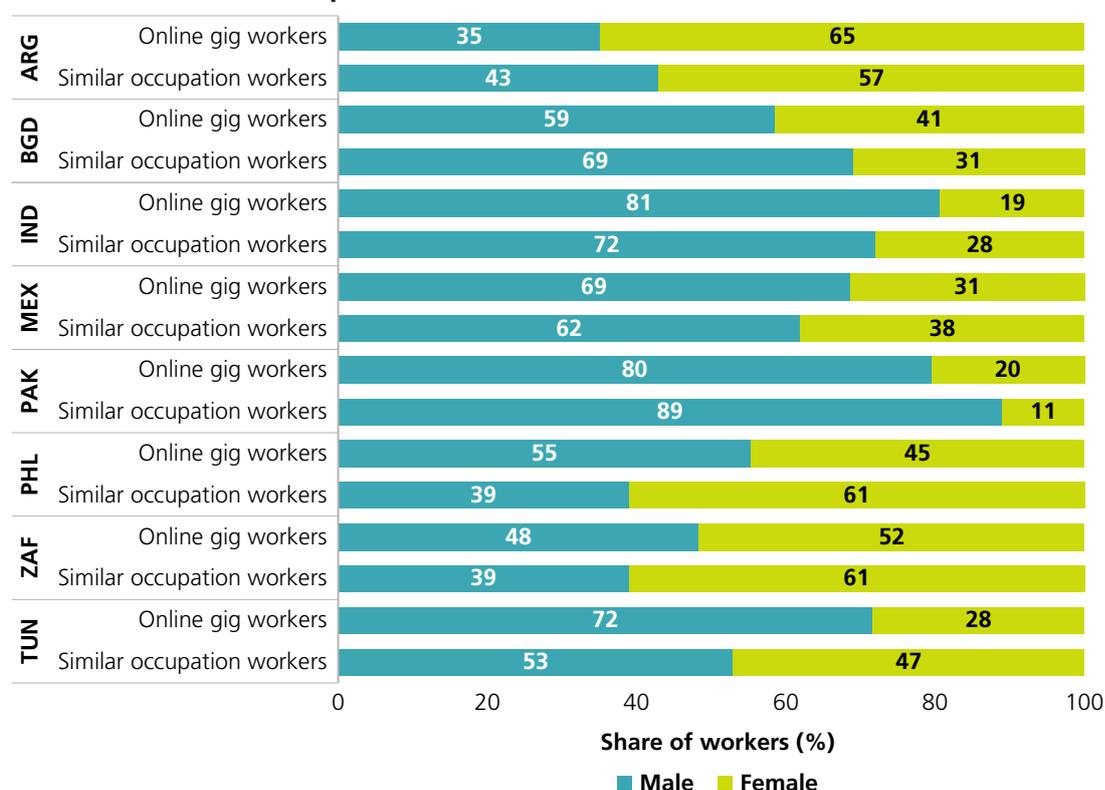


Source: Study team analysis of global RDIT survey and labor force and household surveys. See tables D.4. and D.5 in appendix D.

Note: The values for online gig workers by region differ between the two figures because the comparator countries vary in data availability. The online gig worker estimates refer to the same countries in each region as those in the labor force surveys (LFSs). For a list of countries and LFSs used, please refer to appendix C, specifically tables C.4 and C.5. ECA = Europe and Central Asia; EAP = East Asia and Pacific; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

The potential of online gig work to support female labor force participation has not been fully tapped. Results from eight countries in the team’s global survey¹⁰⁰ show that while women are starting to participate to a greater extent in the online gig economy than in the general workforce in similar occupations, they remain underrepresented in several countries (figure 4.7). In Argentina, Bangladesh, and Pakistan, women account for greater shares of online gig workers than in the broad labor force. In Argentina, in fact, women account for almost two in three online gig workers (57 percent). At the same time, in countries including India, the Philippines, South Africa, and Tunisia, the share of women in the online gig economy is much more limited than the share of women in similar occupations in the workforce at large. Other studies have found overall similar results¹⁰¹ and have pointed to a smaller proportion of women (2 in 10) in online gig work in developing countries (ILO 2021b). In India, fewer than 2 in 10 platform workers were women (ILO 2021a). Among the G20 countries, Italy has the largest portion of women online gig workers (58 percent) (ILO 2021a).

FIGURE 4.7: Proportions of female online gig workers compared to female workers in similar occupations in selected countries



Source: Study team analysis of global RDIT survey and labor force and household surveys. See table D.6 in appendix D for the list of countries and labor force surveys used.

Note: ARG = Argentina; BGD = Bangladesh; IND = India; MEX = Mexico; PAK = Pakistan; PHL = the Philippines; ZAF, South Africa; TUN = Tunisia.

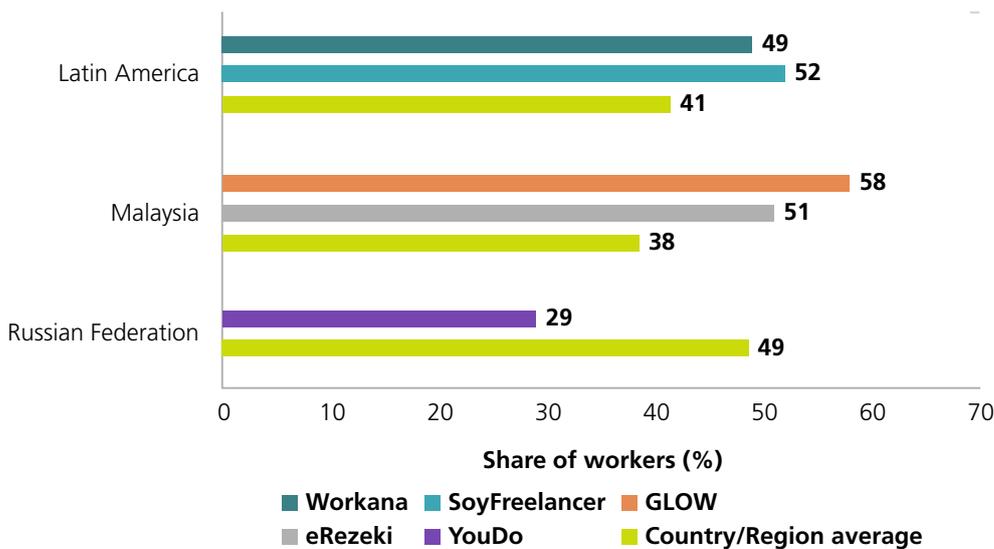
Some countries and gig platforms are doing better in including women. The country deep dive in Indonesia shows a greater share of women in online gig work than in the informal sector (50 versus 31 percent). In Malaysia and Latin America, online gig work enables more women to engage in paid work than the general labor market does (Figure 4.8). In Malaysia, the eRezeki and

¹⁰⁰ The comparison was developed for those countries for which the labor force and household surveys contained enough information on occupational codes for an accurate analysis.

¹⁰¹ ILO (2021b) found that 4 in 10 online gig workers are women.

GLOW PENJANA programs (online gig work programs supported by the Malaysian government) show a percentage of women users (over 50 percent) higher than the general labor force participation of women (38 percent). A higher percentage of women is also reported for SoyFreelancer (52 percent) and Workana (49 percent). On YouDo, a Russian online gig work platform, however, the vast majority of registered users (71 percent) are male. Compared to the share of women in the offline Russian labor force (48.6 percent), women engage to a lesser extent on YouDo.

FIGURE 4.8: Women’s participation in the labor force and in online gig work platforms



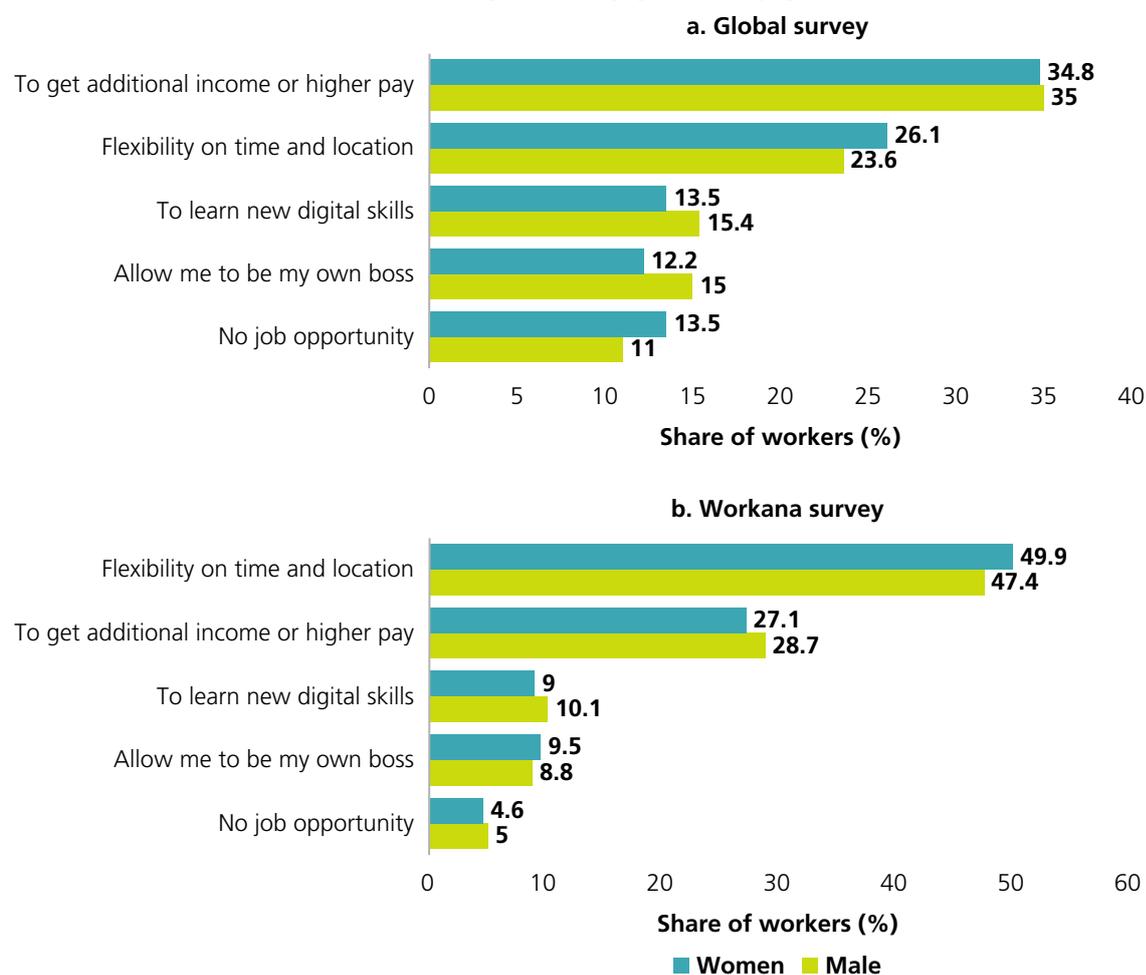
Sources: Country/regional averages were retrieved from WDI. The percentages of women gig workers by platform are based on platform and survey data collected for this study.

Note: The country/region average shows the share of women in the total workforce in 2021.

The key drivers of women’s participation in this market are the ability to earn additional income and the flexibility online work offers. The team’s global survey shows that women most value those two attributes of online gig work. Women are more likely than men to do online gig work because they want to earn additional income and because they don’t have other job opportunities, while men appreciate more the ability to learn new digital skills and the chance to be one’s own boss (figure 4.9, panel a). Data at the platform level provide further evidence. For women working on Workana, flexibility in location and time was a more important motivating factor (figure 4.9, panel b). Flexible working hours can help women balance their caregiving responsibilities with the need to earn a living (Anwar and Graham 2020). In Africa, household survey data from nine countries¹⁰² from 2017 and 2018 show that women are driven mainly by the need to control their schedule (over 60 percent), whereas this reason carries less weight for men. Conversely, the most important reason for men to join gig work platforms is to gain work experience for future job opportunities (over 65 percent of men compared to approximately 30 percent of women). However, flexibility comes with a caveat. When flexibility leads to fragmented work schedules, it may have a negative impact on the speed with which tasks are completed and on earnings; women tend to be particularly affected (Adams-Prassl 2020).

¹⁰² The nine countries are Ghana, Kenya, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Tanzania, and Uganda. The survey was conducted by Research ICT Africa, an ICT policy think tank. The data cover not only online web-based platform workers, but also location-based platform workers (Chen, forthcoming).

FIGURE 4.9: Main reason for doing online gig work by gender



Source: Study team analysis of global RDIT survey and the Workana survey conducted by the study team.

Note: The gender difference in the Workana survey is statistically significant at 5 percent for flexibility on time and getting additional income. In the global gig worker survey, males were more likely than their female counterparts to report that their motivation for engaging in online gig work is driven by the desire to be their own boss, have location flexibility, and learn new digital skills. These differences are statistically significant at 5 percent, with weights applied. On the other hand, females are more likely than males to report that the lack of job opportunities is a driving factor for their engaging in online gig work.

A more proactive and intentional approach to enroll women can make digital work more gender inclusive. One example of active support for the participation of women in online gig work is the Latin American platform SheWorks!. While the platform is not exclusively for women, most of the online gig workers using it are women because of the platform’s emphasis on flexible working hours and the marketing strategy reflected in the platform’s name. Networks and successful women freelancers sharing their experience with other women can be a catalyst for promoting the opportunities of online gig work among women (see Box 4.1 for an example from Pakistan).

BOX 4.1: JOURNEYS OF SUCCESSFUL WOMEN ONLINE FREELANCERS IN PAKISTAN

Two successful women online freelancers in Pakistan—Laraib Afzal and Anum Bakhtiar—started their online careers after studying software engineering and being faced with limited work opportunities in the field of information technology (IT). They joined the most popular online gig work platform in Pakistan, Fiverr, with very limited experience in online freelancing but with the desire to learn and to access more jobs in their preferred fields.

Becoming an online freelancer involved a significant amount of self-learning and learning by doing. Laraib developed her graphic design skills by watching YouTube videos, and both women learned to improve their freelancer profiles by analyzing other profiles and deriving best practices. While the start of their journeys was difficult and at times disheartening, with no or very few low-value orders received, by persevering in the process and continually learning, both Laraib and Anum managed to build successful profiles. In addition to their technical skills, soft skills have played a major role in securing their success, particularly skills in communication, managing clients, and having confidence in interactions with clients. In growing their business, management skills also became quite important, especially for overcoming challenges related to fluctuating income and the need to build a diverse portfolio of clients.

Anum is now running her own business in the world of online freelancing, specializing in graphic design and developer jobs. She currently works with several other women, training them in graphic design and in how to succeed in receiving jobs through Fiverr. Online freelancing is no longer the main career for Laraib, but she sees it as a valuable activity next to her full-time job, as it allows her to keep improving her skills and developing new ones. She is also seeking to further develop her experience as an online freelancer and establish an agency account in order to work with other online freelancers and share her acquired knowledge of the field.

4.5 SKILLS AND EDUCATION

Workers with a variety of skill levels are participating in the online gig economy, especially those with high-school-level education. Over 70 percent of online gig workers do not have a tertiary education degree (Figure 4.10). The participation of workers with basic and intermediate education shows that there are opportunities and there is growing awareness of online gig work across varied educational backgrounds. The fact that the team's global survey was conducted in multiple languages, not just in English, could explain the difference between our survey findings and the literature.¹⁰³ Knowledge of English in countries where English is not an official language may be correlated with a higher level of education.

¹⁰³ The ILO estimated in 2021 that over 60 percent of gig workers attained at least one university degree (ILO 2021b).

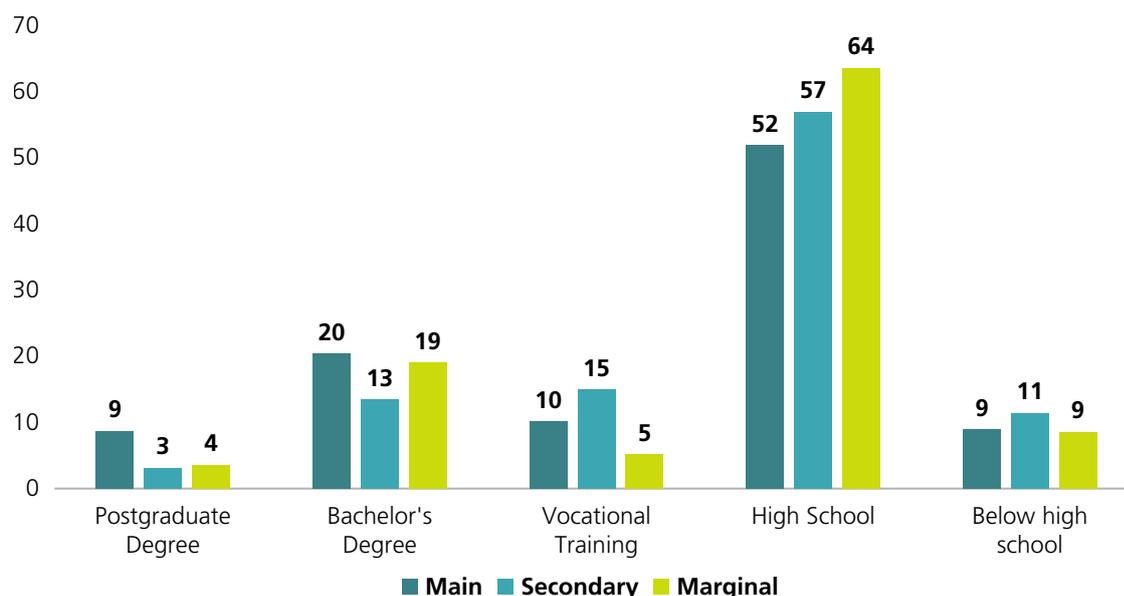
It is also important to assess whether skill levels affect the intensity with which people do gig work. Given the task-based nature of gig work, those doing gig work as a primary job may be different from those who do gig work sporadically. To understand work intensity, the gig workers were classified as main, secondary, or marginal workers depending on the extent to which gig work contributed to their overall income and the number of hours they worked on gig tasks (see Table 4.2). Workers with tertiary education are more likely to do online gig work as a main occupation than those with less education (Figure 4.10).

TABLE 4.2: Intensity of online gig work based on income earned as a share of personal income and hours worked

	Less than 10 hours a week	Between 10 and 20 hours a week	More than 20 hours a week
Less than 25 percent of personal income	Marginal	Secondary	Secondary
25 to 50 percent of personal income	Secondary	Secondary	Main
More than 50 percent of personal income	Secondary	Main	Main

Source: Adapted from Urzi Brancati, Pesole, and Fernández-Macías 2020.

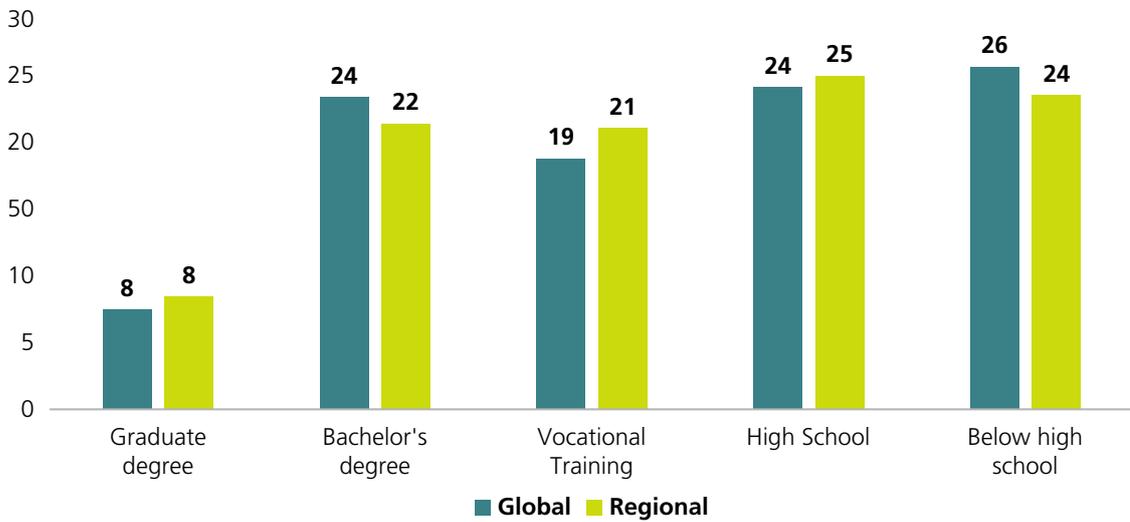
FIGURE 4.10: Educational backgrounds of online gig workers and intensity of online gig work



Source: Global RDIT survey conducted by the study team.
 Note: Results are shown as percentages.

Local platforms tend to attract a slightly larger share of workers with intermediate education (high school and vocational) than global platforms. Almost half of the gig workers on local platforms have vocational or high-school-level training, while global gig platforms tend to attract slightly more diverse workers, at both the high-skills end (workers with a bachelor's degree) and the low-skills end (workers with below-high-school education) (Figure 4.11). However, the differences remain minor and may be due to the tasks available on regional/local platforms versus global platforms and the level of education required to complete such tasks (see chapter 3 for a discussion of tasks on global and regional/local platforms).

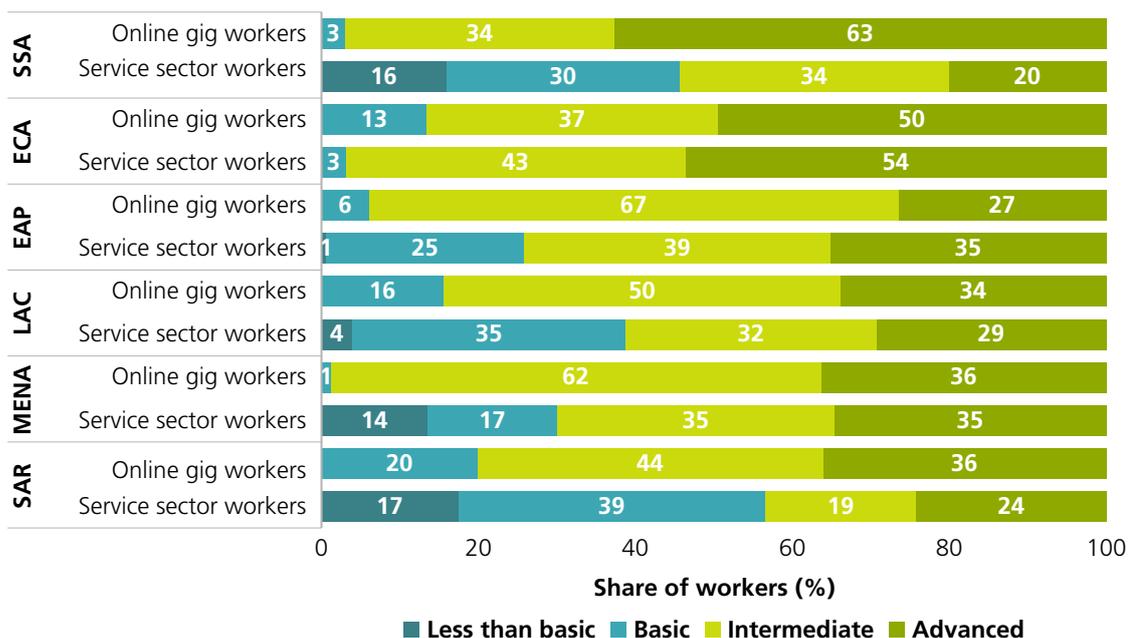
FIGURE 4.11: Educational backgrounds of online gig workers using global and regional/local platforms



Source: Study team analysis of global RDIT survey conducted by the team.
 Note: Results are shown as percentages.

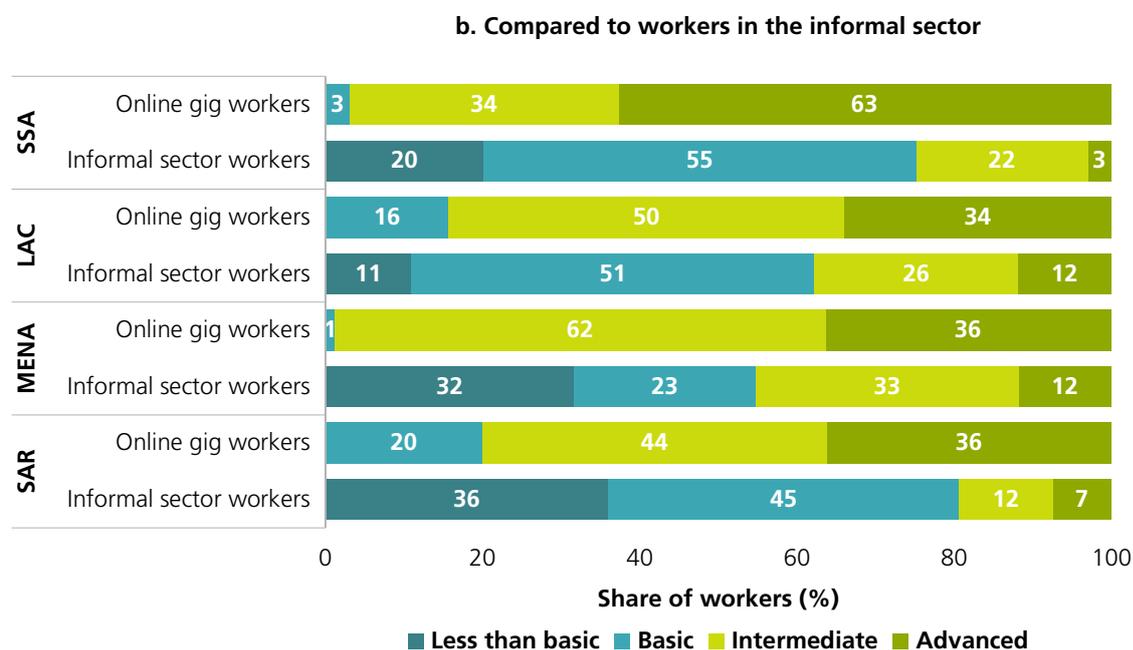
On average, online gig workers are more educated than workers in the services sector and the informal sector. In most regions, the share of online gig workers with advanced education is greater than that of workers in the services sector; Europe and Central Asia and East Asia and Pacific are the exceptions (figure 4.12, panel a). Online gig workers are significantly more educated than workers in the informal sector (only 3 to 12 percent of informal workers have advanced education) (figure 4.12, panel b).

FIGURE 4.12: Educational backgrounds of online gig workers, by region
 a. Compared to workers in the services sector



(Continued)

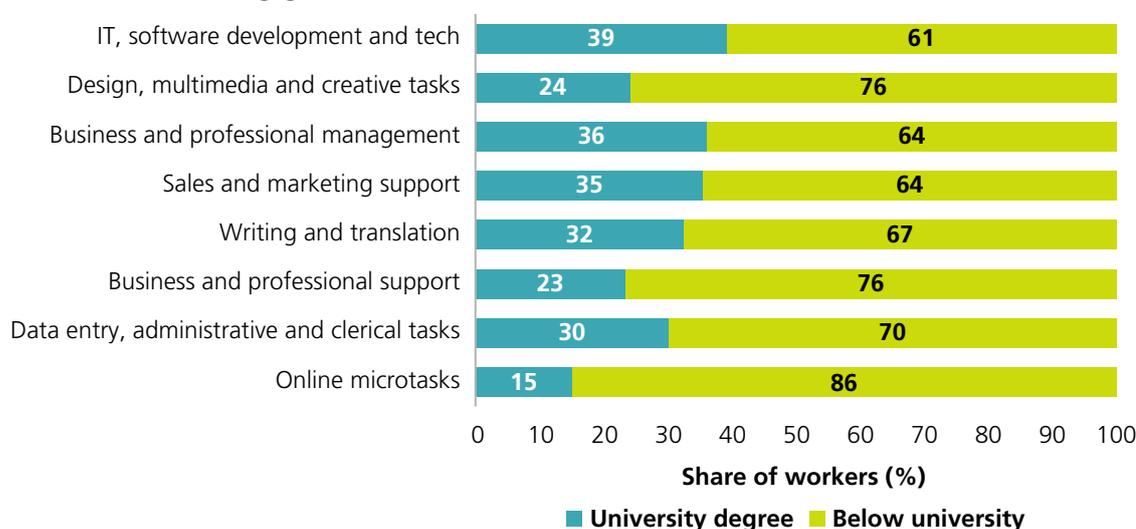
FIGURE 4.12: (Continued)



Source: Study team analysis of global RDIT survey and labor force and household surveys. See tables D.4. and D.5 in appendix D.

Note: The values for online gig workers by region differ between the two figures because the comparator countries vary in data availability. The online gig worker estimates refer to the same countries in each region as those in the labor force surveys (LFSs). For a list of countries and LFSs used, please refer to appendix C, specifically tables C.4 and C.5. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

Microtasks provide more opportunities than more-complex online freelancing tasks for low-skilled workers. Microwork generally includes repetitive, routine tasks, such as data classification, that can be performed relatively easily by following a set of instructions. Workers doing online microtasks tend to have a lower level of education (77 percent have only high school or less education, and only 15 percent have university-level education) than online gig workers who conduct complex tasks such as IT and software development (almost 40 percent have university-level education) and business and professional management (36 percent of gig workers have university-level education; see figure 4.13). The ILO also shows that online gig workers who do microtasks tend to be less educated than online gig workers who do more-complex freelancing tasks (64 percent of microworkers are highly educated, compared to 83 percent of freelancers) (ILO 2021b).

FIGURE 4.13: Highest level of education attained by online gig workers and their main online gig tasks

Source: Analysis of global RDIT survey conducted by the study team.

Note: IT = information technology.

Microtasks can help drive the inclusion of low-skilled workers. Data from the eRezeki platform and GLOW PENJANA program in Malaysia suggest that over 50 percent of online gig workers carry out data entry and clerical tasks rather than more-complex digital tasks or digitally enabled tasks such as delivery and domestic services. In comparison, only 8.3 percent of the overall labor force in Malaysia carries out similar tasks¹⁰⁴ (clerical support¹⁰⁵), suggesting that online gig work opens up new opportunities for gig workers that are otherwise not that common in the general labor market. From this perspective, online gig work can also provide more opportunities for workers who are not highly skilled. This is particularly relevant since the majority of workers by occupation in Malaysia are concentrated in services and sales (24.3 percent), an occupation group that generally relies on workers with secondary education or postsecondary, nontertiary education. While administrative and clerical occupations are not among the most common in Malaysia, they are accessible since they do not require a high level of skills and thus may provide opportunities for a broad range of workers in the labor market.

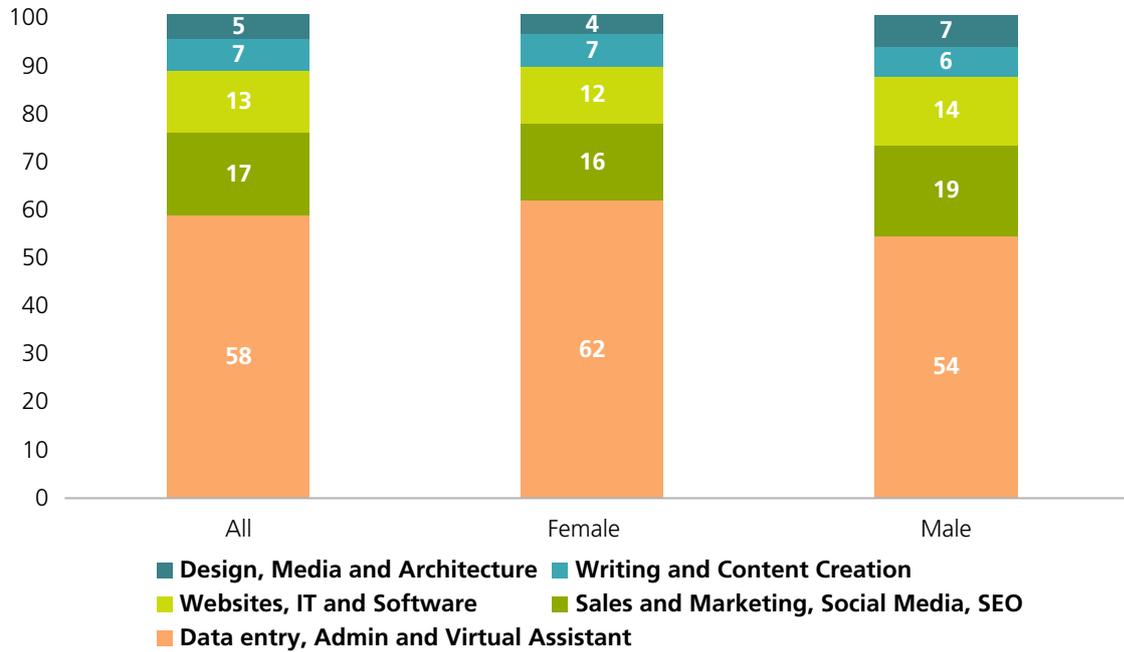
Online digital work replicates the occupational segregation observed in the offline labor market, with men dominating tasks that require higher-technology skills (such as IT and software development) and that pay more. On Workana, for example, the share of men doing IT-related tasks is very high compared to that of women (44 versus 5 percent). In contrast, the proportion of women working in sales and marketing, data entry, and online microtasks is higher than that of men. Similarly, on SoyFreelancer, another Latin American platform, IT-related tasks offer higher pay than data entry and online microtasks. In Malaysia, women also do data entry and administrative and clerical tasks to a greater extent than men on the GLOW program¹⁰⁶ (figure 4.19). Globally, women gig workers generally perform work in legal services, translation, writing and editing, business services, and sales and marketing more than men do, while men dominate work related to technology and data analytics (ILO 2021b).

¹⁰⁴ Based on data from 2020 (Department of Statistics Malaysia 2020).

¹⁰⁵ Data entry, administrative, and clerical tasks are equivalent to the job of clerical support workers, as defined by the International Standard Classification of Occupations ISCO-08, which include general office clerks, data entry clerks, secretaries and such (ILO 2012). The International Standard Classification of Occupations-ISCO-08 is available at <https://www.ilo.org/ilostat-files/ISCO/newdocs-08-2021/ISCO-08/ISCO-08%20EN%20Vol%201.pdf>.

¹⁰⁶ The GLOW PENJANA program was developed by MDEC as a spin-off to the eRezeki platform to support individuals affected by the COVID-19 pandemic. The program provides training to aspiring online gig workers.

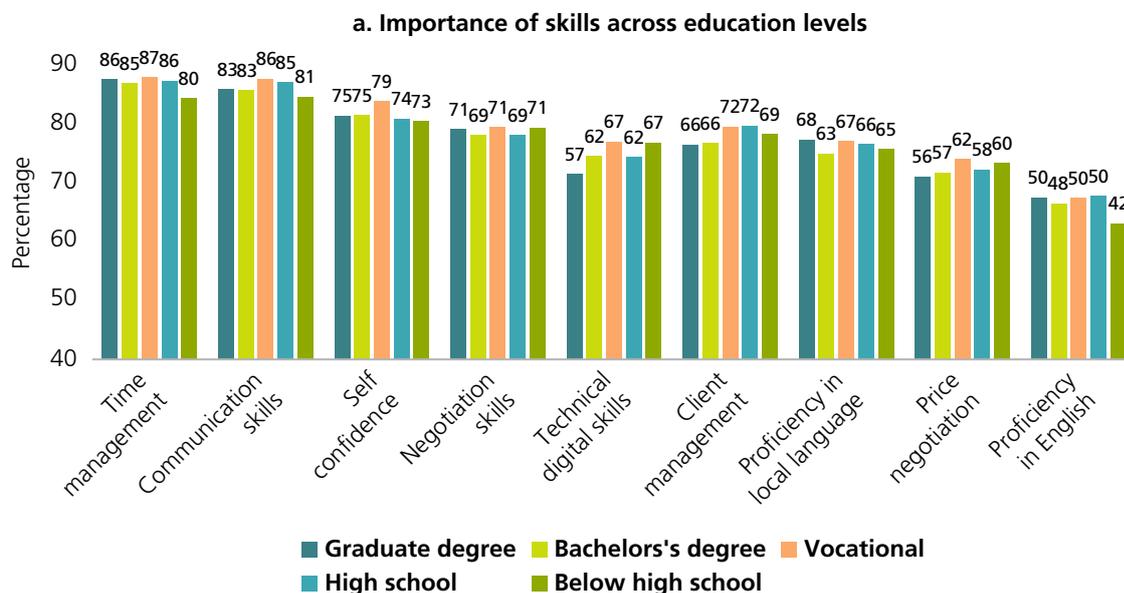
FIGURE 4.14: Share of users by gender and workstream, GLOW PENJANA program, Malaysia, 2021



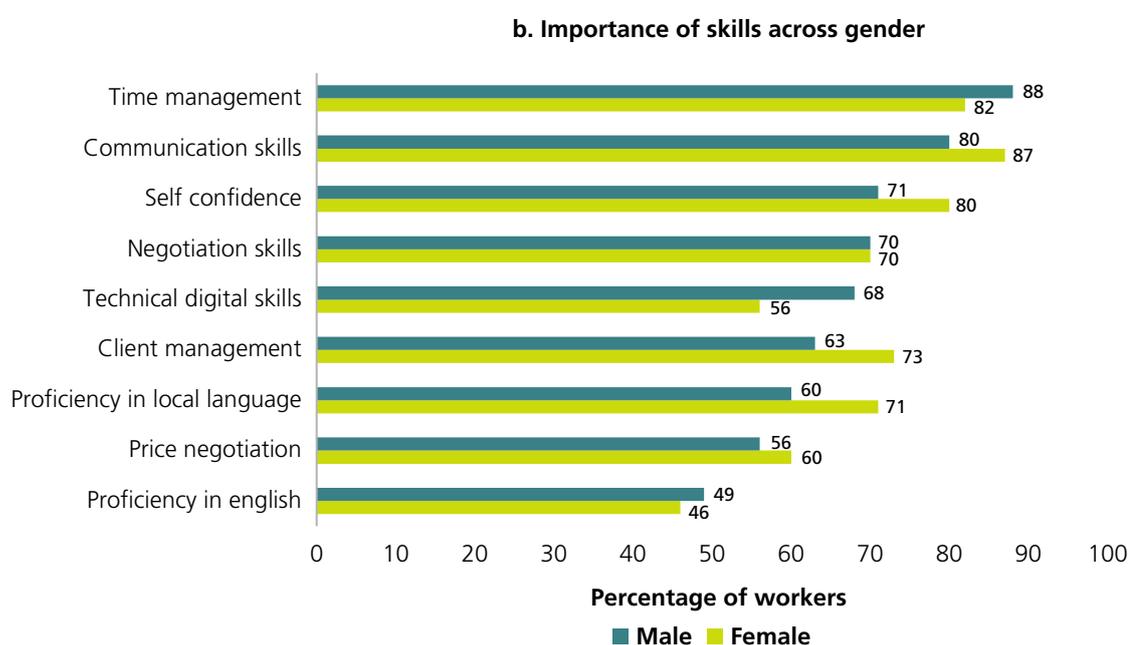
Source: Study team analysis based on Malaysian Digital Economy Corporation (MDEC) data.
 Note: IT = information technology; SEO = search engine optimization.

Gig work requires more than just digital skills. In the study surveys, socioeconomic skills in particular are consistently mentioned as necessary for success on digital platforms. For Workana workers, communication skills and time management were listed as most important, alongside a set of other skills such as self-confidence; this observation holds true across education levels and genders (see Figure 4.15).

FIGURE 4.15: Top skills for succeeding in online gig work, by education level and gender of online gig workers on Workana



(Continued)

FIGURE 4.15: (Continued)

Source: Study team analysis based on Workana survey data.

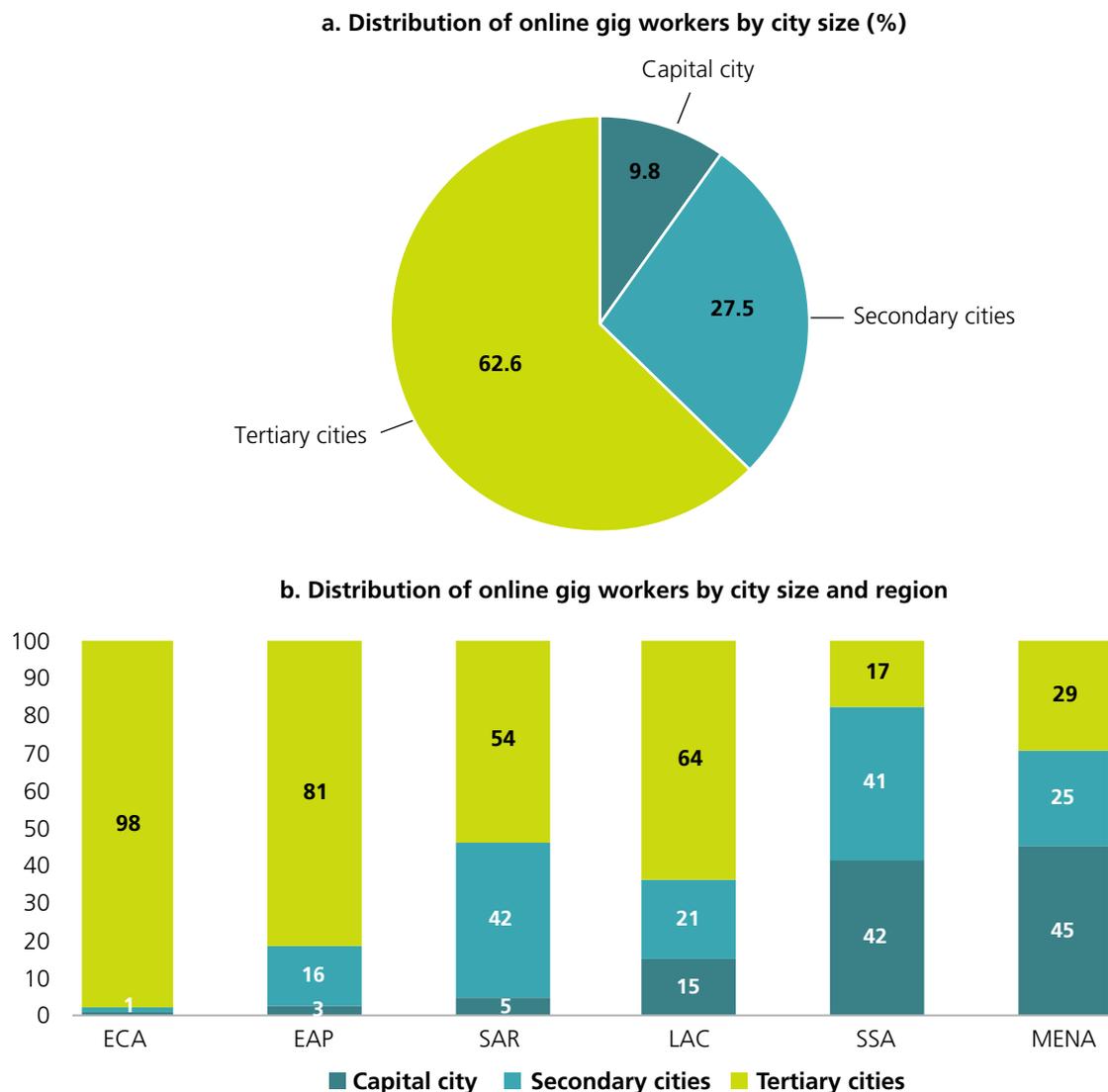
Note: Values are percentages of respondents; respondents could choose multiple options. The survey results indicate that there are statistically significant gender differences in all of the skills that were identified as very important, except for negotiation skills and the ability to speak and read English, for which there were no significant differences (5 percent level) observed.

4.6 SPATIAL INCLUSION

Online gig work creates work opportunities beyond major cities. The global survey was able to track a respondent's location; the survey automatically recorded geolocation data for each respondent. The team used the location data to classify gig workers into **three types of cities**: (a) capital cities, (b) secondary cities (cities that are not the capital city but among the top 10 largest cities in a given country), and (c) tertiary cities (smaller cities and towns beyond the capital city and the top 10 largest cities in a given country). The data show that more than 6 in 10 gig workers live in tertiary cities and over a quarter live in a secondary city (Figure 4.16, panel a). Patterns may differ at the platform level, but generally a good share of online gig workers come from cities other than the capital. On the India-based Truelancer platform, for instance, more than 60 percent of the online gig workers surveyed live in secondary or tertiary cities and villages; 40 percent live in capital cities.

Nevertheless, there are strong differences between regions. The vast majority of online gig workers in Europe and Central Asia, East Asia and Pacific, and Latin America and the Caribbean are based in tertiary cities (Figure 4.16, panel b). However, in Sub-Saharan Africa and in the Middle East and North Africa, a much greater share of online gig workers is in capital cities than in the other regions (42 and 45 percent, respectively). There is no major difference between the location of gig workers on global platforms and regional platforms. The spread of gig workers across both major and minor cities within countries shows that online gig work can bring tangible benefits for workers beyond the main economic centers or capital cities.

FIGURE 4.16: Distribution of online gig workers by city size



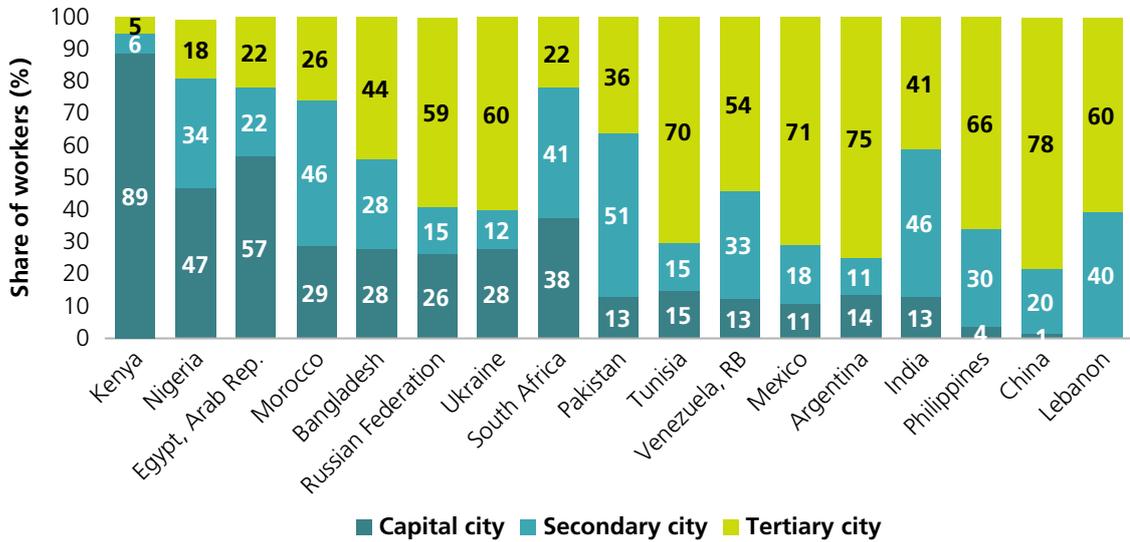
Source: Global RDIT survey conducted by the study team.

Note: Secondary cities in this context refer to the top 10 largest cities in a given country except for the capital. Tertiary refers to the rest of the smaller cities and towns. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

While remote online work can provide more job options for rural workers, the availability of digital infrastructure and devices is one of the main constraints. The spatial distribution of online gig work is dependent on the level of internet penetration, rural electrification, and the overall level of economic development of the country. With greater availability of internet access, greater levels of rural electrification, and higher income per capita, gig workers tend to be more spread out in secondary and tertiary cities in the country (figures 4.17 and 4.18). A study conducted with US platform workers also found that the least urbanized areas with poor infrastructure and lower levels of education are least likely to participate in online platform work (Braesemann et al. 2022). A digital divide between urban and rural areas still exists in developing countries. The difference in access to the internet between urban and rural areas is marginal in developed countries (89 and 85 percent, respectively), but in developing countries the disparity is much wider (72 and 34 percent, respectively) (ITU 2021). The difference in the enabling environment and access to the Internet may limit opportunities in developing countries that lack the infrastructure to support online gig work.

A study based on data from a major global platform suggests that online gig job projects flow to the capital cities in the Global South to a greater extent than in other regions of the countries, with capitals attracting 15 times as many projects.¹⁰⁷

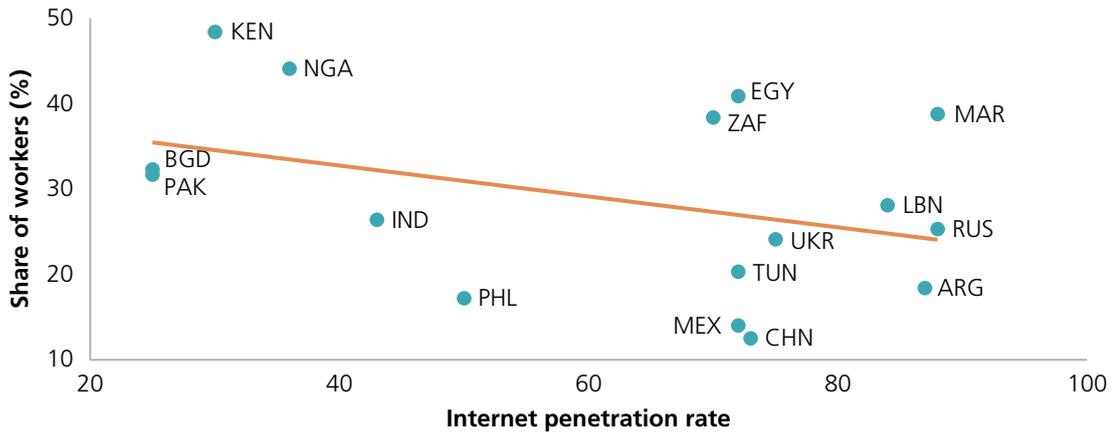
FIGURE 4.17: Spatial distribution of gig workers within countries



Source: Global RDIT survey conducted by the study team.

FIGURE 4.18: Relationship between spatial distribution of gig workers within countries and key infrastructure and economic development factors

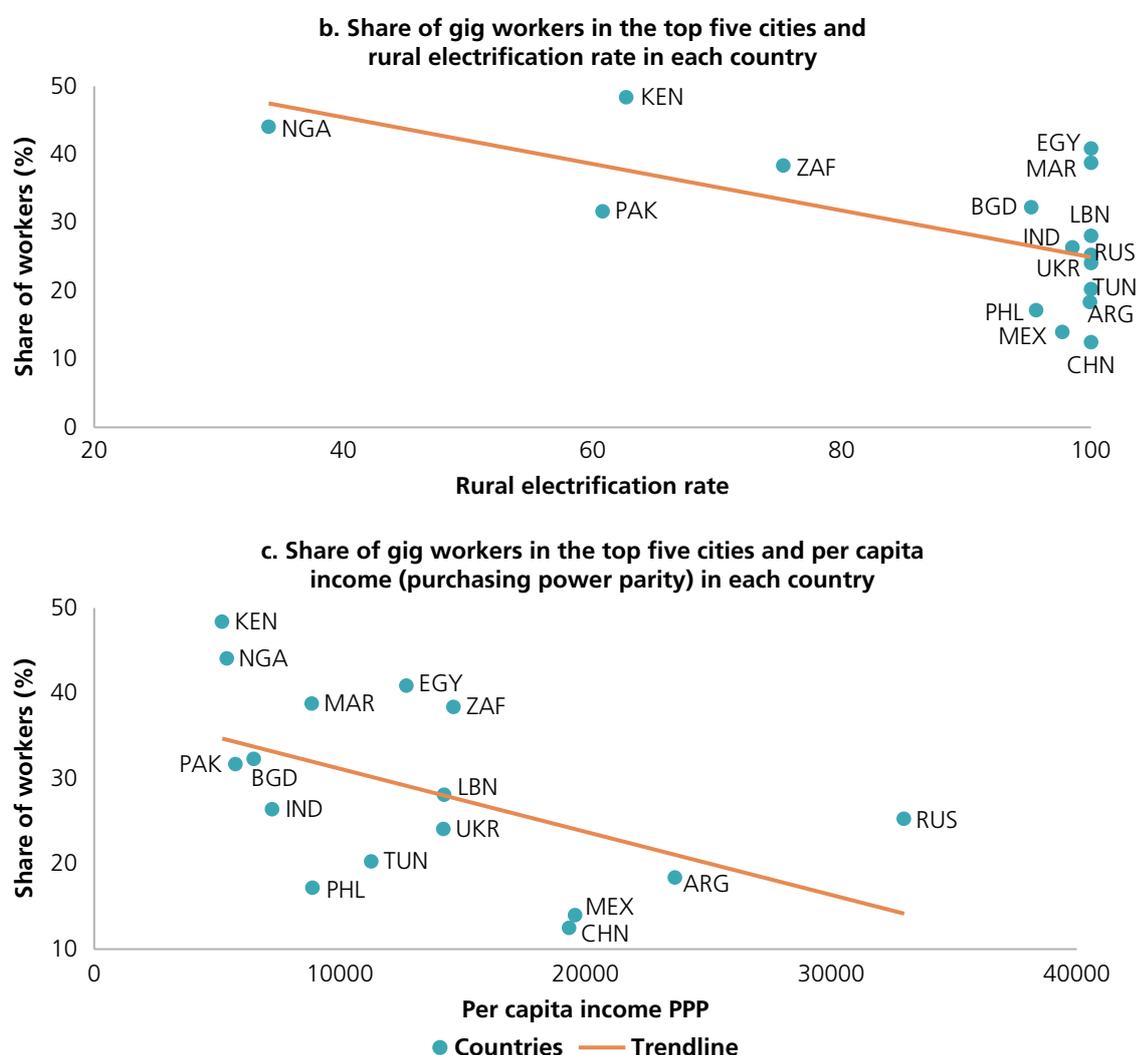
a. Share of gig workers in the top five cities and internet penetration rate in each country



(Continued)

¹⁰⁷ Braesemann, Lehtonvirta, and Kässi (2022) used data from one major global platform and found that gig jobs tend to be clustered in capital cities. Their study used different indicators of concentration and used data from only one platform, while our survey, conducted in 12 languages, reached a larger proportion of people in smaller cities. In addition, the Global South classification used in this paper does not account for several countries, including China, India, and South Africa, which are included in the team’s estimates based on the global survey and which carry significant weights in the team’s analysis.

FIGURE 4.18: (Continued)



Source: Analysis based on the global RDIT survey conducted by the study team and WDI data.
 Note: The analysis is restricted to the percentage of gig workers in the top five cities in each of the countries in the global survey. ARG = Argentina; BGD = Bangladesh; CHN = China; EGY = Arab Republic of Egypt; IND = India; KEN = Kenya; LBN = Lebanon; MAR = Morocco; MEX = Mexico; NGA = Nigeria; PAK = Pakistan; PHL = the Philippines; RUS = Russian Federation; TUN = Tunisia; UKR = Ukraine; ZAF = South Africa.

Gig work could provide some temporary opportunities for a particularly vulnerable group—namely, refugees, who often face difficulties in integrating in the local labor market and for whom location is thus a barrier to traditional work. An International Finance Corporation (IFC) report (IFC 2021) analyzing the experience of women refugees in Jordan and Lebanon emphasizes that while the digital economy may hold promise for refugees, at least as a temporary source of income, there are still barriers to be overcome to integrate refugees into the economy (such as easing legal restrictions on the type of work that refugees can carry out and improving knowledge about the refugee demographic). Box 4.2 presents key initiatives promoting online gig work as an opportunity for refugees and other displaced people.

BOX 4.2: ONLINE GIG WORK AS AN OPPORTUNITY FOR REFUGEES

Online gig work can be a solution to the entry barriers of local traditional labor markets for refugees and displaced people. Several initiatives around the world are tapping this potential, through a combination of training programs directly geared to or open to refugees, among other participants, and access to online gig job opportunities.

Humans in the Loop is a social enterprise founded in 2017 and based in Bulgaria (Humans in the Loop 2020). It is active in Iraq, the Syrian Arab Republic, and Türkiye and trains and employs displaced people to work on data annotation projects for artificial intelligence start-ups. Humans in the Loop takes a two-pronged approach to fostering access to online gig work opportunities for refugees by providing low-entry-barrier jobs, such as easy-to-complete data annotation online tasks, and by offering training opportunities that focus on digital skills, English language skills, and career guidance. The organization currently employs over 250 refugees, migrants, internally displaced people, and vulnerable locals; its workforce has grown from 167 in 2019. In addition to providing employment opportunities, Humans in the Loop had trained 137 people as of June 2022. The organization pays particular attention to the challenges faced by women and ensures that at least 50 percent of participants in the training and employment programs are women. In 2020, women made up 54.6 percent of its workforce (Humans in the Loop 2020).

Gaza Sky Geeks^a is an initiative of Mercy Corps founded in 2011 in Gaza and currently operating in Gaza, the West Bank, and East Jerusalem. Gaza Sky Geeks supports freelancers, founders, and coders working online and in the tech field. For online freelancers, Gaza Sky Geeks offers two types of programs: the Freelance Academy,^b a three-month mentorship program, and the Code Academy, courses to improve programming skills. The Freelance Academy helps aspiring online freelancers understand the essentials of online freelancing platforms, how to build a competitive profile, and how to apply for jobs, communicate with clients, and negotiate. The Freelance Academy partners with Upwork and supports freelancers in setting up their accounts. The Freelance Academy has trained 2,225 online freelancers, 61 percent of whom were women. Through the Coding Academy, Gaza Sky Geeks provides two courses on web development: a foundational course for those without experience and an advanced course for students with some experience. More than 130 students have graduated from the Coding Academy. Gaza Sky Geeks has also supported refugees in using online gig opportunities. For instance, in 2021, 35 refugees and internally displaced people in Iraq completed the Freelance Academy program, delivered remotely with support from the Mercy Corps Iraq team.^c Success stories of Gaza Sky Geeks also show their impact in the Palestinian refugee camp of Al Faraa, where Gaza Sky Geeks organized a four-day boot camp to boost online freelancing skills.^d

(Continued)

BOX 4.2: [Continued]

The **Dadaab Collective** provides an interesting example of leveraging training and the agency approach to online gig work to support refugees and displaced people. The Norwegian Refugee Council and the International Trade Centre, with funding from the Dutch Ministry of Foreign Affairs, have been training refugees in the Dadaab refugee camp in Kenya for online freelancing as part of the Refugee Employment and Skills Initiative (RESI).^e The initiative provides courses for young refugees to develop skills that are sought-after on online gig work platforms, including graphic design, digital marketing, data entry, translation, and digital journalism and photography. The technical courses are complemented by trainings in soft skills and business skills to empower refugees to pursue online freelancing. The key to integrating the students into the market for online gig jobs, however, is not solely the training, but a cooperative of freelancers to support and motivate them to work. The cooperative, the Dadaab Collective, brings together the graduates of the training program and is independent and run solely by youth. The organization facilitates the sourcing of jobs among its members and is registered as an agency for Upwork.^f

By simplifying the process of searching for jobs, the agency model may be particularly useful for ensuring that less experienced graduates can learn and be motivated by graduates of the program who have gained experience in online freelancing, increasing their chances of success in the early stages of freelancing after having finished their training.

a. See <https://gazaskygeeks.com>.

b. See <https://gazaskygeeks.com/freelance/>.

c. See "Letter from the Director," January 5, 2022, https://www.linkedin.com/pulse/letter-from-director-gaza-sky-geeks/?trk=organization-update-content_share-article.

d. "Rapid Success in Just Two Years of Freelancing!", May 12, 2022, <https://www.linkedin.com/pulse/rapid-success-just-two-years-freelancing-gaza-sky-geeks>.

e. Paul Ireland, "Meet the Refugees Joining the Digital Economy," NRC, March 31, 2021, <https://www.nrc.no/perspectives/2021/meet-the-refugees-joining-the-digital-economy/>.

f. Dadaab Collective Freelancing Agency, Upwork, <https://www.upwork.com/ag/dadaabcollectiveagency/>.

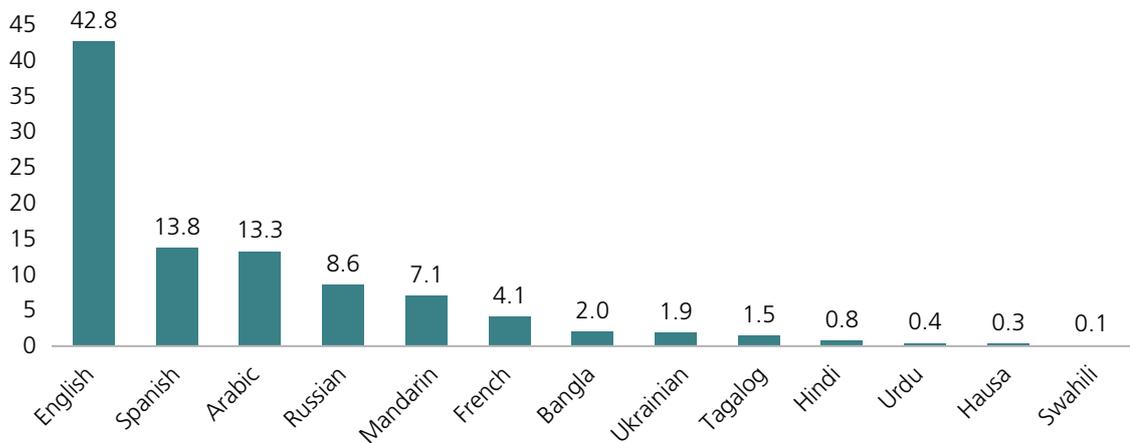
4.7 LANGUAGE

Language can be a significant barrier to accessing online gig work opportunities. Some 33 percent of online gig workers confirm that one of the main challenges they face on global platforms is English language skills. The global supply of online gig work is dominated by workers in English-speaking countries. Three countries in particular—India, Bangladesh, and Pakistan—account for over 50 percent of the supply of online gig work on the basis of data collected by the Online Labour Index (OLI),¹⁰⁸ signaling that workers from non-English-speaking countries are likely to face language barriers to enter the online gig work market.

¹⁰⁸ The OLI collects data from the five largest English-language online gig work platforms and six non-English-language platforms (three in Russian and three in Spanish), <http://onlinelabourobservatory.org/oli-supply/>.

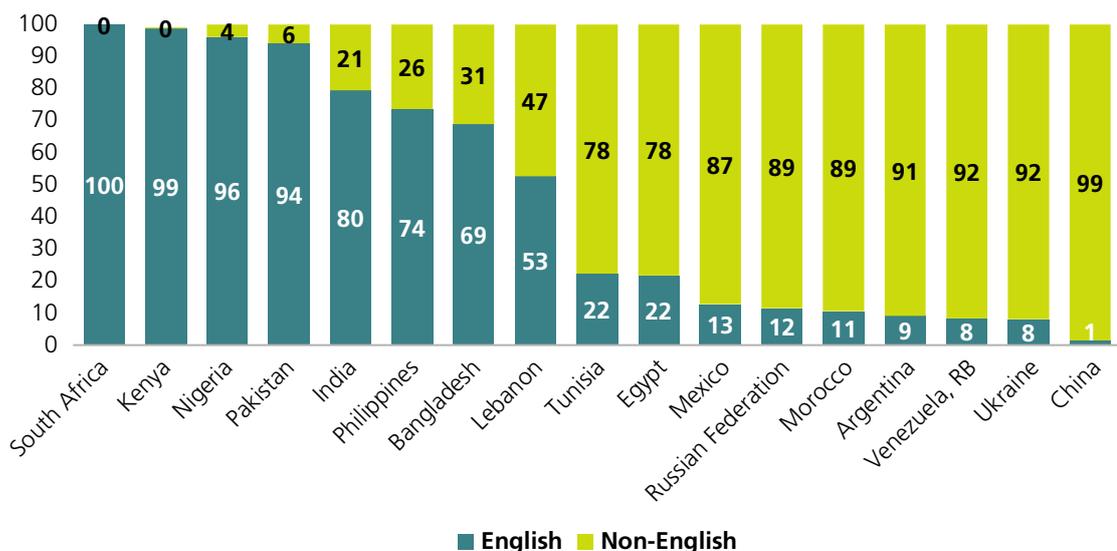
Surveys conducted in English tend to not only exclude non-English-speaking populations but also might underestimate the overall size of the online gig workforce. The study team’s global survey was translated into 12 languages to ensure a wider reach. In addition, the team was keen to reach gig workers who may be working on regional/local platforms. A substantial number of responses (57 percent) were in languages other than English (figure 4.19). For countries where English is not the official language or a widely used language, English-only surveys could neglect a significant proportion of the online gig work population (China, Ukraine, República Bolivariana de Venezuela; Figure 4.20).

FIGURE 4.19: Languages of responses received to the global survey



Source: Global RDIT survey conducted by the study team.
 Note: Values are percentages.

FIGURE 4.20: Distribution of languages of responses by online gig workers by country



Source: Global RDIT survey conducted by the study team.
 Note: Values are percentages.

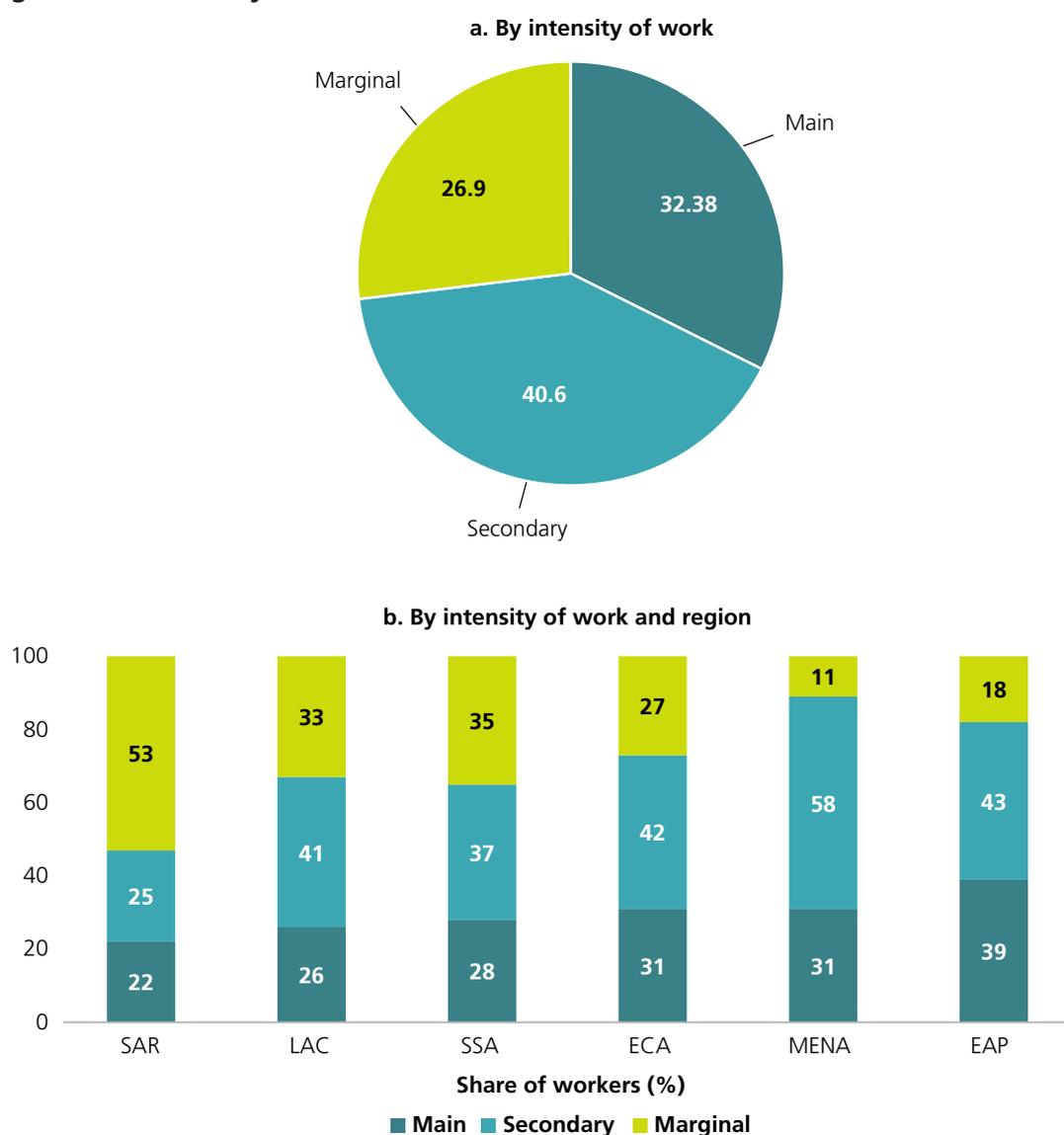
Local platforms could help bring non-English-speaking people to digital platforms. Data from the global survey on differences between workers on global versus regional/local platforms provide supporting evidence. Two-thirds of online gig workers in the global survey who work on regional/local platforms completed the survey in a language other than English, while 50 percent of workers on global platforms responded in English. Platforms in Latin America and the Caribbean have especially catered to local-language speakers. On Workana, English is among the lowest-ranked skills needed to succeed in online gig work; in comparison, Spanish is considered more important by online gig workers on Workana (see figure 4.20). Similarly, on SoyFreelancer, survey respondents see English language skills as less important than other skills (such as communication skills, time management, and Spanish language skills). The lesser importance of English language skills in the region may be a sign of the growing maturity of the regional online gig work market and the diversity of work opportunities in the local language. The availability of work opportunities in the local language on Workana could contribute to a greater inclusion of workers in the (online) labor market.

4.8 EARNINGS AND INCOME

Online gig work is an important means of earning supplemental income. Gig work is a secondary activity for 4 in 10 workers (figure 4.21, panel a), which means they spend 10 to 19 hours and earn 25 to 50 percent of their income through gig work; workers with uneven work patterns are also considered in this group (people spending little time but earning a large share of their income from gig work, or spending substantial time but earning a small share of their income from online gig work; see table 4.2). Around one in three online gig workers is engaged in online work as their main activity, earning a majority of their income from or spending the majority of their working time (more than 20 hours a week) on online gig work, and more than one-quarter do online work only sporadically (that is, as a marginal activity, earning less than 25 percent of their income from and spending less than 10 hours a week on online gig work). A greater share of workers on regional/local platforms carry out online gig work only as a marginal activity compared to workers on global platforms (46 versus 24 percent), while greater shares of workers on global platforms conduct online gig work as a main or secondary activity.

Intensity of gig work differs regionally. In East Asia and the Pacific, a greater share of online gig workers engage in online work as their main occupation (39 percent), while in the South Asia region most online gig workers do such work only marginally (53 percent; figure 4.21, panel b). A comparable study from Europe estimated the share of main gig workers at 11 percent based on data from 2018 and found that most gig workers were secondary gig workers.¹⁰⁹

¹⁰⁹ Caveat: this figure also includes workers who perform location-based gig work, based on data collected through a survey conducted in 16 European countries (Urzi Brancati, Pesole, and Fernández-Macías 2020, 16).

FIGURE 4.21: Share (%) of online gig workers by intensity of work based on the global RDIT survey

Source: Global RDIT survey conducted by the study team.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

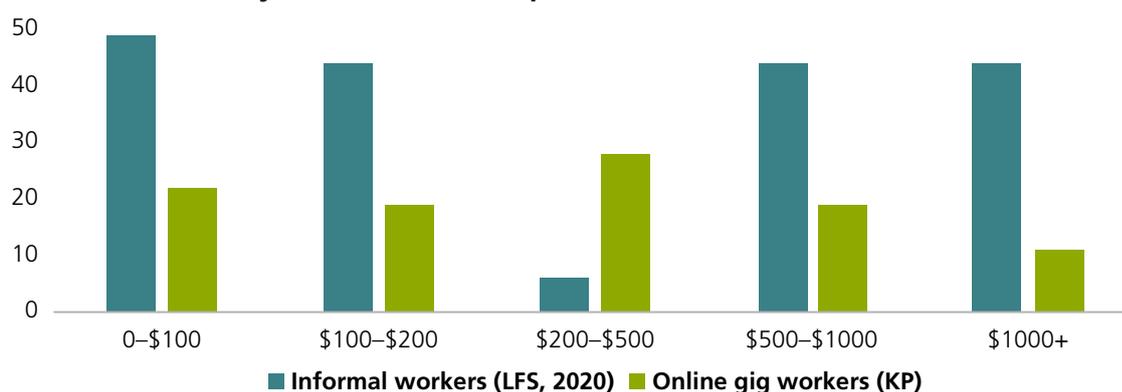
Evidence at the platform level also confirms that online gig work is used primarily to earn supplemental income. On SoyFreelancer, a Latin American gig platform, two out of three online gig workers report having another job. Half of them report working for an employer, and over one-quarter report running their own business. On Workana, for most of the respondents, earnings from gig work account for less than 25 percent of their household and individual income, with no significant variations across gender.

Still, for almost a quarter of workers, online gig work is the main source of their income. This is consistent with other estimates of 10 percent¹¹⁰ to 30 percent (ILO 2021b). In Bangladesh, respondents to the study survey earned a significant share of their income from freelancing platforms.

¹¹⁰ This figure does not distinguish between location and web-based online gig work (Goldfarb 2019).

On average, online gig workers report earning Tk 82,943 per month (equivalent to US\$967) from freelancing platforms,¹¹¹ while the average monthly household income is estimated at Tk 16,000 (equivalent to approximately US\$150).¹¹² In Pakistan, the study survey finds that monthly earnings of online gig workers are substantially higher than those of informal workers. Over 90 percent of the informal workers earn less than US\$200 per month, while the same parameter is only 41 percent for online gig workers, as shown in figure 4.22.

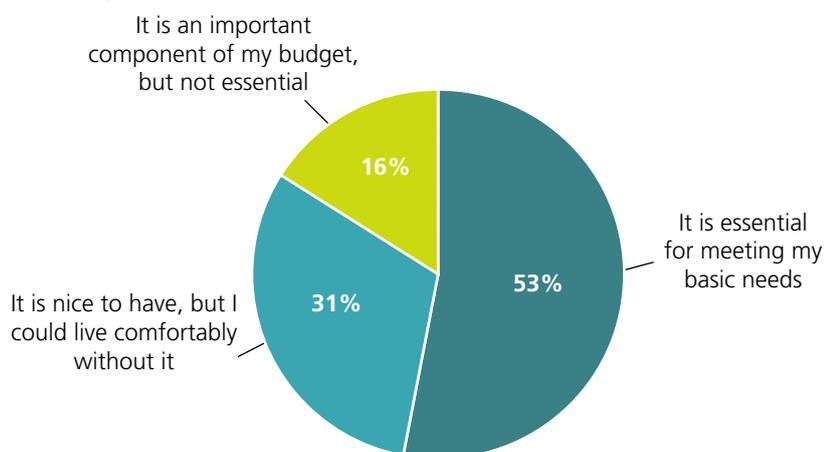
FIGURE 4.22: Monthly incomes of online gig workers compared to informal workers in the Khyber Pakhtunkhwa province, Pakistan



Sources: Survey conducted by study team in Khyber Pakhtunkhwa province, Pakistan, and Pakistan labor force survey (LFS), 2020. Note: The figure compares the wages of informal workers in the Khyber Pakhtunkhwa province of Pakistan to the information on income provided by online gig workers in the Khyber Pakhtunkhwa province who completed the gig worker survey conducted by the study team. We conducted a pooled regression analysis by combining data from the Khyber Pakhtunwa survey and the LFS for the KP region. We controlled for age, education, and marital status and found that online gig workers are more likely to be in higher income brackets than similar workers in the informal sector. USD = US dollars.

In Africa, household survey data from nine African countries from 2017 and 2018 show that the income earned through gig economy activities is essential for the majority of gig workers (figure 4.23).

FIGURE 4.23: Importance of income earned through gig economy activities (% of gig economy participants)



Source: Chen, forthcoming.

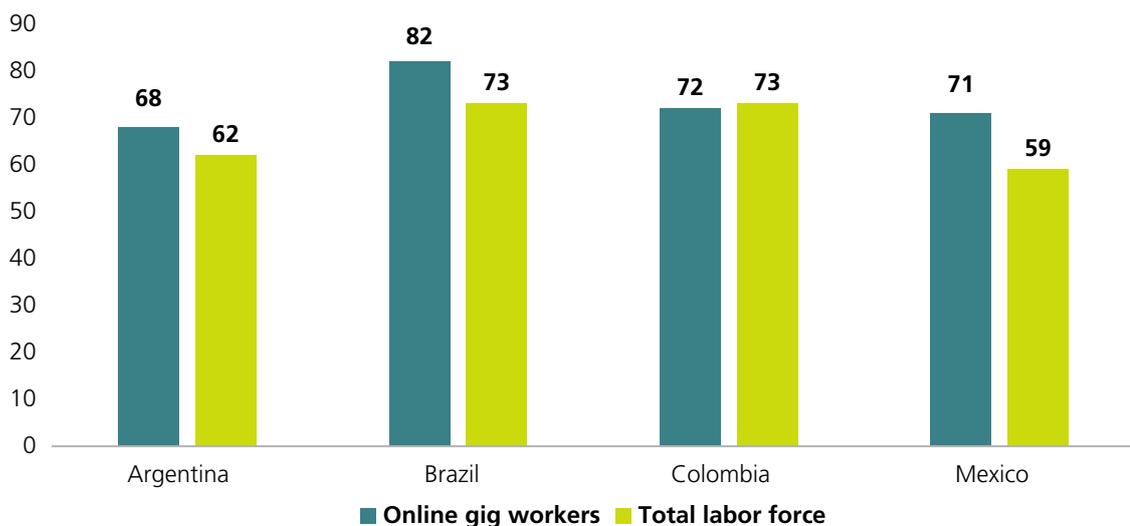
¹¹¹ The average earnings of online gig workers are based on self-reported information collected through the survey, and biases can exist.

¹¹² The figure for the average household income is based on the latest information available from the Bangladesh Bureau of Statistics, through the Household Income and Expenditure Survey from 2016, <http://data.bbs.gov.bd/index.php/catalog/182>.

With targeted initiatives, online gig work can help bring unemployed people back into the labor market. The eRezeki program of Malaysia is an excellent example of a country that has intentionally used online gig work to increase access to jobs. The program was set up by MDEC to foster the inclusion of underserved citizens, especially low-income citizens, in the labor market. Between 2016 and 2020, on average one in three workers on eRezeki was unemployed upon registering on the platform. In 2019 and 2020, eRezeki took a more targeted approach to engaging users, which resulted in a much larger share of unemployed people joining the platform (in 2019, three in four workers who registered on the platform were unemployed). (More details are given in chapter 7.)

In terms of earnings, the gender pay gap among online gig workers is lower than in the general labor market. Data for online gig workers from Argentina using Workana show that, on average, a female online gig worker's wages are equivalent to 68 percent of her male counterpart's. In contrast, that figure is only 62 percent for the general labor force (figure 4.24). The same is true for online gig workers from Brazil and Mexico using Workana, though the magnitudes differ. Nevertheless, there is still a considerable wage gap between men and women, even in the online gig economy.

FIGURE 4.24: Women's wages as a percentage of men's wages for online gig workers using Workana compared to national LFSs



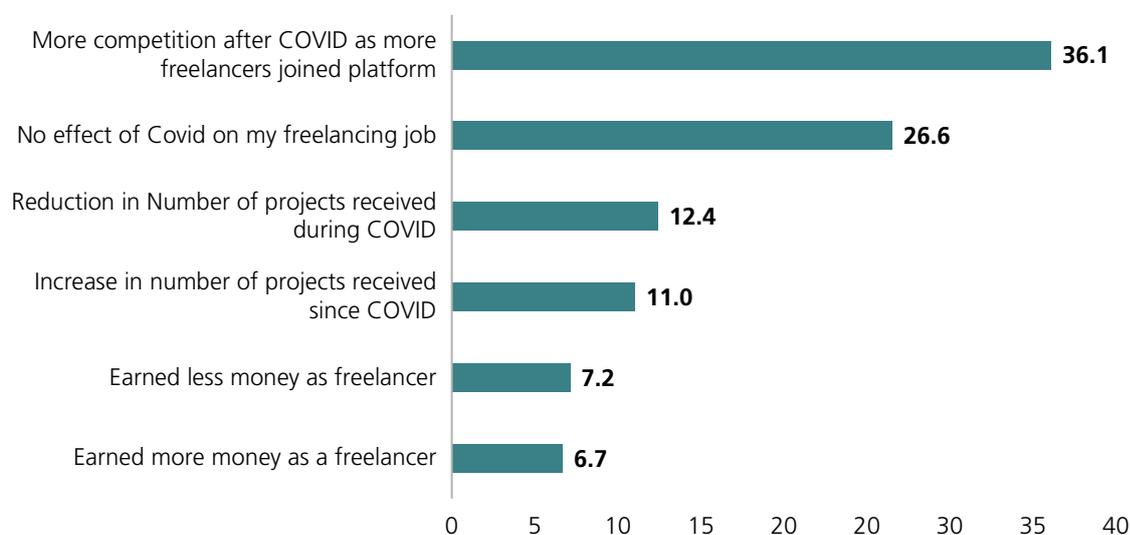
Source: Study team analysis of Workana survey and the latest available national labor surveys in the selected countries, conducted with an Inter-American Development Bank team.

Note: The earnings of online workers in the Workana survey are indirectly inferred by asking them, "What is the minimum monthly salary that a full-time salaried job would have to offer for you to stop doing freelance work on Workana (in USD)?" LFS = labor force survey; USD = US dollar.

Gig work is becoming increasingly competitive as the supply of gig workers increases. The COVID-19 pandemic exacerbated some of the existing trends in online platform work and increased competition. The notion of remote online work has become more widespread because of the pandemic and policies to reduce social contacts (Fairwork 2021), but issues of oversupply of labor are increasing, as evidenced by the platform country surveys conducted by the team and other studies (Stephany et al. 2020). In Bangladesh, respondents to the survey confirm that they were affected by COVID-19, primarily by the increase in competition. At the platform level on Workana in Latin America, there is a similar perspective (see figure 4.25). More than one-third of the respondents find that COVID-19 increased competition among freelancers.

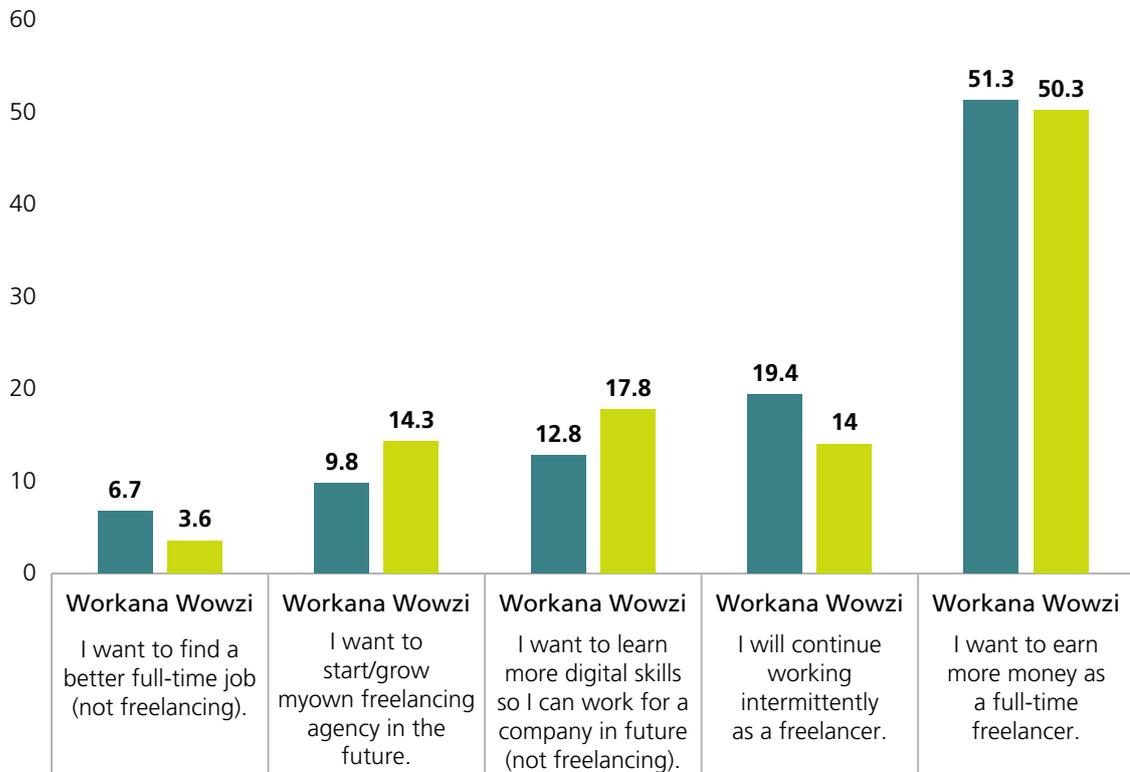
Workers in developing countries would like to do more gig work but find it hard to access enough well-paying tasks. Skills and reputation are the key assets of online gig workers, but reputation is not always easy to build. The anonymous and sporadic nature of gigs means that a prior reputation is critical for access to better-paid or longer-term work opportunities (Wood et al. 2019). This pressure of building a reputation or rating leads to significant stress for gig workers, who often work on short notice and at odd hours or on unfair terms simply to avoid low ratings (Wood and Lehdonvirta 2021). This risk is amplified by the limited transparency in platform policies and processes behind the rating systems (Sutherland et al. 2020; Wood and Lehdonvirta 2021).

FIGURE 4.25: Impact of the COVID-19 pandemic on online gig work, according to workers on Workana



Source: Study team analysis based on Workana survey data.
 Note: Values are percentages.

In terms of career prospects, freelancing is a career path for some online gig workers, though not most. More than one in three online gig workers in Pakistan strive to be entrepreneurs, wanting to start their own agency or grow their existing online freelancing agency. Another 35 percent would like to earn more from their online gig work. Interviews with women online freelancers in Pakistan also show how online freelancing can become not just an activity to earn additional income, but also a career in its own right, allowing women to become entrepreneurs (see box 4.1). Data at the platform level shows that preferences may vary, however. Over 50 percent of respondents in the surveys conducted on Workana and Wowzi confirm that they want to increase their earnings from online gig work, but only about 1 in 10 online gig workers on either platform wants to start or grow a freelancing agency (figure 4.26). On SoyFreelancer, the vast majority wish to grow and earn more as a freelancer (64 percent). Another 20 percent of respondents would like to go beyond the platform work and start their own business.

FIGURE 4.26: Career aspirations among survey respondents on Workana and Wowzi

Source: Study team analysis based on Workana and Wowzi survey data.

4.9 CONCLUSION

Our study finds that online gig work is dominated by youth, giving them the chance to earn money and learn new skills and the flexibility to earn while studying or doing another job. While men make up most of the online gig workers, women are participating in the online gig economy to a greater extent than in the general labor market in similar sectors and occupations. Although still dominated by people with higher education levels, the online gig economy can provide opportunities to a variety of skill levels, particularly of those with high school education. More than 6 in 10 online gig workers are based in tertiary cities—in other words, smaller cities and towns other than the capital or the top 10 largest cities in their country, which points to the role that online gig work could play in addressing regional inequalities in access to jobs. Regional/local platforms offer more opportunities for non-English-speaking workers, thus enabling inclusion in countries where English is not the main language. Overall, gig work remains a secondary means of earning income for most, but not all, gig workers.

References

- Adams-Prassl, Abigail. 2020. "The Gender Wage Gap on an Online Labour Market: The Cost of Interruptions." CEPR Discussion Papers 14294. Centre for Economic Policy Research, Brussels. <https://cepr.org/publications/dp14294>.
- Anwar, Mohammad Amir, and Mark Graham. 2020. "Hidden Transcripts of the Gig Economy: Labour Agency and the New Art of Resistance among African Gig Workers." *Environment and Planning A* 52 (7): 1269–91. <https://doi.org/10.1177/0308518X19894584>.
- Braesemann, Fabian, Vili Lehdonvirta, and Otto Kässi. 2022. "ICTs and the Urban-Rural Divide: Can Online Labour Platforms Bridge the Gap?" *Information Communication and Society* 25 (1): 34–54. <https://doi.org/10.1080/1369118X.2020.1761857>.
- Braesemann, Fabian, Fabian Stephany, Ole Teutloff, Otto Kässi, Mark Graham, and Vili Lehdonvirta. 2022. "The Global Polarisation of Remote Work." *PLOS ONE* 17 (10). <https://doi.org/10.1371/journal.pone.0274630>.
- Cedefop. 2021. "Skill Development in the Platform Economy: Comparing Microwork and Online Freelancing." Cedefop Research Paper 81, Luxembourg. <https://doi.org/10.2801/592284>.
- Chen, Rong. Forthcoming. "Who Are Participating in and Benefiting from the Gig Economy?"
- Department of Statistics Malaysia. 2020. "Labour Force Survey Report, Malaysia, 2020." https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=126&bul_id=dTF2dkJpcUFYU-WRrczhqUHVpcDRGQT09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09.
- Fairwork. 2021. "Work in the Planetary Labour Market. Fairwork Cloudwork Ratings 2021." <https://fairwork/en/fw/publications/work-in-the-planetary-labour-market-fairwork-cloudwork-ratings-2021/>.
- Goldfarb, Danielle. 2019. "A New Way to Measure Online 'Gig' Work." Presentation to ILO-UNECE Steering Group on Measuring Quality of Employment, November 6, 2019. https://unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.12/2019/S3_RIWI.pdf.
- Humans in the Loop. 2020. "Impact Report 2020." <https://humansintheloop.org/resources/whitepapers-and-reports/impact-report-2020/>.
- IFC. 2021. "Barriers and Opportunities to Refugee Women Engaging in the Digital Economy in Jordan and Lebanon." IFC, Washington, DC. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/barriers+and+opportunities+to+refugee+women+engaging+in+the+digital+economy+in+jordan+and+lebanon.
- ILO. (International Labour Organization). 2012. "The International Standard Classification of Occupations: ISCO-08." <https://isco-ilo.netlify.app/en/isco-08/>.
- ILO (International Labour Organization). 2021a. "Digital Platforms and the World of Work in G20 Countries: Status and Policy Action." ILO, Geneva. https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/reports/WCMS_829963/lang--en/index.htm.
- ILO (International Labour Organization). 2021b. *World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work*. Online Labour Observatory. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_771749.pdf.

-
- Pesole, A., M. C. Urzì Brancati, E. Fernández-Macías, F. Biagi, and I. González Vázquez. 2018. *Platform Workers in Europe: Evidence from the COLLEEM Survey*. Publications Office of the European Union. <https://doi.org/10.2760/742789>.
- Stephany, Fabian, Michael Dunn, Steven Sawyer, and Vili Lehdonvirta. 2020. "Distancing Bonus or Downscaling Loss? The Changing Livelihood of Us Online Workers in Times of COVID-19." *Journal of Economic and Human Geography* 111 (3): 561–73. <https://doi.org/10.1111/tesq.12455>.
- Sutherland, Will, Mohammad Hossein Jarrahi, Michael Dunn, and Sarah Beth Nelson. 2020. "Work Precarity and Gig Literacies in Online Freelancing." *Work, Employment and Society* 34 (3): 457–75. <https://doi.org/10.1177/0950017019886511>.
- UNDESA (United Nations Department of Economic and Social Affairs), Population Division. 2022. "World Population Prospects 2022 Summary of Results." United Nations, New York. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf.
- Urzì Brancati, M. C., A. Pesole, and E. Fernández-Macías. 2020. "New Evidence on Platform Workers in Europe. Results from the Second COLLEEM Survey." Joint Research Centre Paper JRC 118570, Publications Office of the European Union, Luxembourg. <https://doi.org/10.2760/459278>.
- Wood, Alex J., Mark Graham, Vili Lehdonvirta, and Isis Hjorth. 2019. "Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy." *Work, Employment and Society* 33 (1): 56–75. <https://doi.org/10.1177/0950017018785616>.
- Wood, Alex J, and Vili Lehdonvirta. 2021. "Platform Precarity: Surviving Algorithmic Insecurity in the Gig Economy." Online Workshop at the University of Sheffield, jointly hosted by the Sheffield Institute for Commercial and Corporate Law (SICCL) and the Sheffield Political Economy Research Institute (SPERI).

CHAPTER 5

Demand for Online Gig Work

5.1 INTRODUCTION

The past decade has seen dramatic transformations in the labor market. Decentralization of information networks, big data analytics, artificial intelligence (AI), cloud infrastructure services, availability of internet services, and accessibility of mobile digital devices have led to a proliferation of digital platforms that help coordinate transactions and economic activities (Pesole et al. 2018). Digital labor platforms are part of these developments. The 2019 World Development Report identifies *platformization* as one of the most important new transformations in the world of work that is changing how people work and the terms according to which they work (World Bank Group 2019). Firms are increasingly using nontraditional hiring practices such as digital labor platforms to find, hire, supervise, and pay workers (Kässi and Lehdonvirta 2018). This chapter discusses some emerging trends in the demand for online gig work.

5.2 METHODOLOGY

Primarily, this analysis draws on data from a global survey of firms that hire gig workers which was conducted for the purposes of this study.¹¹³ In total, 1,171 firms of various sizes, including 364 companies which hire gig workers, participated in the survey. The latter group forms the basis for the analysis presented in this chapter. Several recruitment channels were used to gather survey responses, including roughly 20,000 invites sent to individual firms dispersed globally whose contacts were acquired from the PitchBook database,¹¹⁴ Twitter, and World Bank communication outlets (see appendix H for details on methodology). The survey findings are complemented with data from the Online Labour Index (OLI),¹¹⁵ which provides an online gig economy equivalent of conventional labor market statistics for several of the largest online labor platforms. Furthermore, the research team conducted interviews with firms that hire through online platforms, platforms themselves, and other relevant stakeholders. An in-depth literature review was also conducted to triangulate the results. The chapter first discusses the state of labor in the gig economy, followed by findings on who hires gig workers, a review of tasks demanded by different businesses, the motivations for turning to labor platforms, and expected future trends in the demand for gig work.

¹¹³ The authors express gratitude to the World Bank's External and Corporate Relations team for helping to distribute the survey.

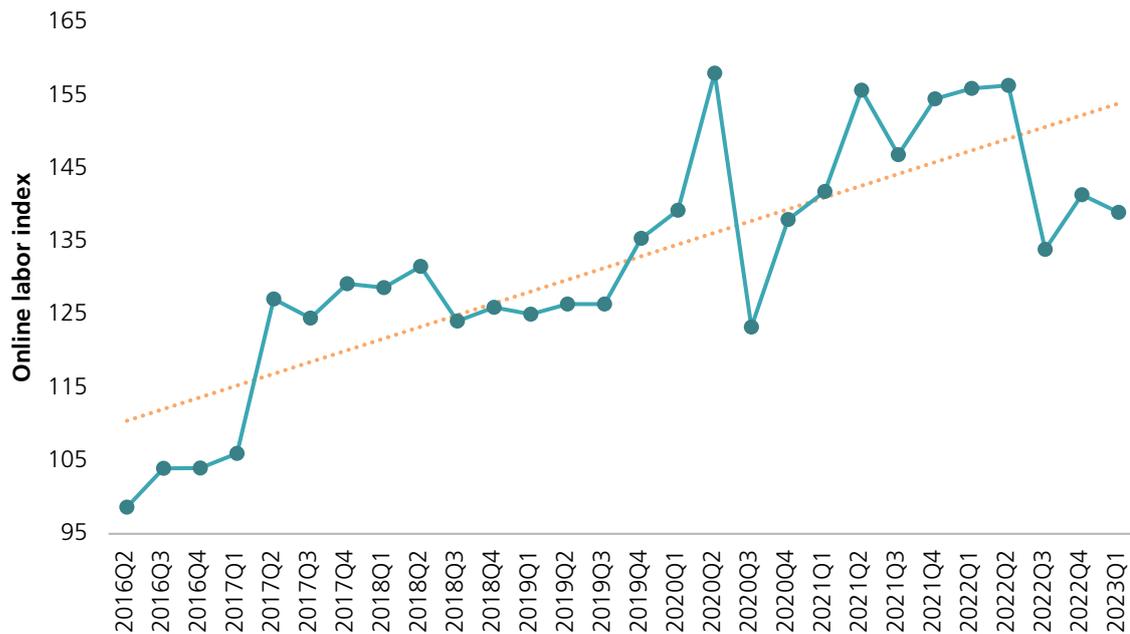
¹¹⁴ See <https://pitchbook.com/>.

¹¹⁵ The OLI tracks projects and tasks posted on the five largest English-language online labor platforms, representing at least 70 percent of the market by traffic. In addition, since 2020, the OLI 2020 covers six non-English-language platforms: three in Spanish and three in Russian. The index is based on tracking all projects and tasks posted on a sample of platforms, using application programming interface (API) access and web scraping. The data from which the OLI is calculated are collected by periodically crawling the list of vacancies available on each of the sample platforms. A vacancy refers to a job, project, or task offered by a firm that wishes to hire a worker. For each crawl, a list of vacancies is saved. Comparing changes in status permits calculation of the number of new vacancies between two crawls. A new vacancy for day t is defined as a vacancy which has not been observed for any period $0, \dots, t-1$, and is observed on period t . For details, see Kässi and Lehdonvirta (2018).

5.3 STATE OF LABOR DEMAND IN THE GIG ECONOMY

The demand for gig workers has been increasing over the past few years. OLI data show that the demand for gig work increased by 41 percent between 2016 and the first quarter of 2023 (see Figure 5.1). The growing demand is also reflected in the mushrooming of global online gig platforms: between 2010 and 2020, the number of platforms tripled (ILO 2021).

FIGURE 5.1: OLI labor demand index, 2016 (Q2)–2023 (Q1)



Source: Study team illustration based on OLI data.
Note: Index = 100 on June 1, 2016.

Adding to the overall trend, the COVID-19 pandemic expanded the use of digital platforms.

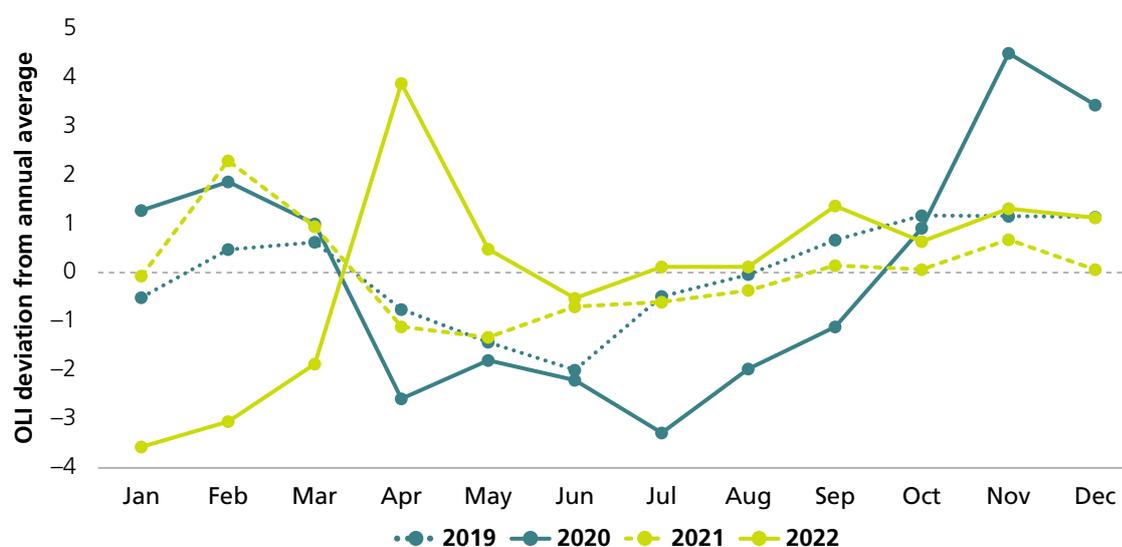
As illustrated in Figure 5.1, after the initial drop in demand for online labor in the third quarter of 2020, the demand surpassed that of the prepandemic period. The initial drop was caused by lower demand for various products early in the pandemic, leading to lower demand for labor, including gig workers (the phenomenon is also known as *downscaling loss*) (Stephany et al. 2020). However, after the initial shock, the demand for products as well as labor recovered. The demand for gig work, in particular, surpassed prepandemic levels because of the so-called distancing bonus: since many offices remained shut down during 2020 and 2021, firms may have found online platforms an attractive option for finding remote workers because of the trust fostered by their existing reviews, which increased in importance when employers could no longer monitor employees on-site (Stephany et al. 2020). Upwork,¹¹⁶ in its 2021 annual report, confirms these findings, showing that after an initial downturn in the beginning of the pandemic, the platform's gross services volume and revenue growth increased, driven by an acceleration in the shift toward remote work (Upwork 2022). Countries faced multiple waves of COVID-19 and lockdowns, which explains why the demand curve depicted

¹¹⁶ By various metrics, Upwork is either the largest or one of the largest digital labor platforms for online work in the world. According to Upwork's latest quarterly report, its revenue in 2022 was US\$618 million, compared to US\$337 million for Fiverr, which is considered one of its top competitors. According to SimilarWeb, on average between November 2022 and January 2023, Upwork was visited 46 million times per month (compared to Fiverr's 64 million), by 8.682 unique monthly visitors on average (versus Fiverr's 13.62). See <https://www.investors.upwork.com> and <https://www.investors.fiverr.com> as well as SimilarWeb, <https://www.similarweb.com/>.

in Figure 5.1 continued to fluctuate throughout 2021; another drop in demand was observed in the third quarter of 2022, likely driven by the war in Ukraine and subsequent supply chain disruptions resulting from sanctions imposed against the Russian Federation.

Despite increasing overall, the demand for gig workers has seasonal fluctuations, which are universal across occupations and regions. With the exception of 2022—which may reflect the war in Ukraine—the demand for online labor peaks at the beginning and end of the year and is lower in the second and third quarters, likely affected by the holiday season (Figure 5.2).

FIGURE 5.2: Seasonal fluctuations of demand for online labor

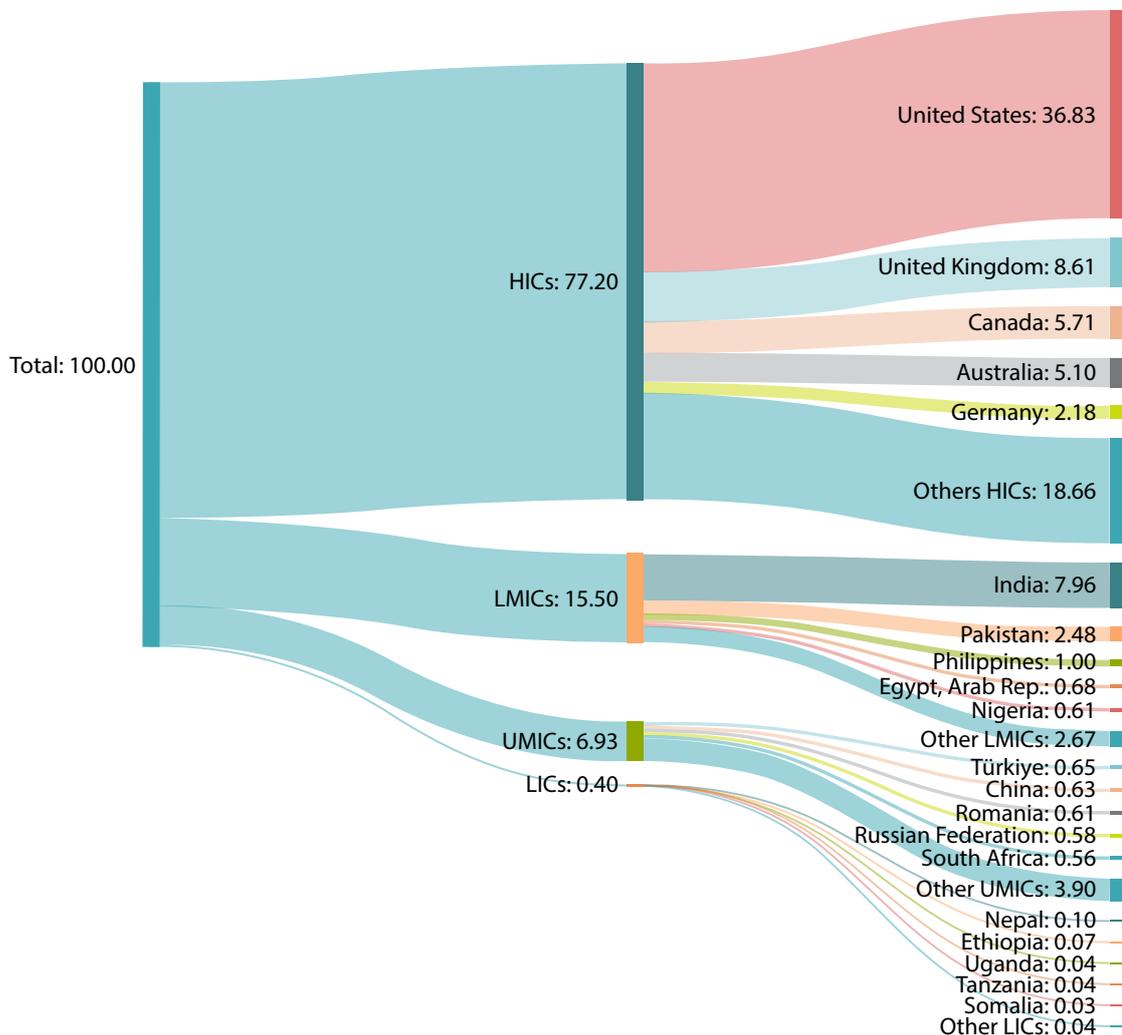


Source: Study team illustration based on Online Labour Index (OLI) data.

Developed countries dominate the demand for online labor, but interestingly, lower-middle-income countries (LMICs) rather than upper-middle-income countries (UMICs) appear as the second most important contributors. According to OLI data, about 78 percent of the global demand comes from high-income countries (HICs), especially the United States: close to 4 in 10 vacancies are posted by firms operating there (Figure 5.3). The United States is followed by the United Kingdom, India, Canada, Australia, and Germany as the countries that account for the largest shares of the demand for online gig work. LMICs—rather than UMICs—are the second most important contributors to the global online labor demand, collectively accounting for 15.4 percent, which includes demand generated in India, Pakistan, the Philippines, Nigeria, and Ukraine. Nevertheless, this may be influenced by the fact that OLI data used here capture only a selection of platforms using English, Spanish, or Russian.¹¹⁷ UMICs and low-income countries (LICs) account for 6.8 and 0.3 percent of global demand, respectively, though as mentioned, these shares are likely underestimated, especially when it comes to China.

¹¹⁷ Since 2020, the OLI has covered six non-English-language platforms: three in Spanish and three in Russian. However, they were not included in the analysis so as not to exaggerate the impact of the Russian and Spanish platforms, since the representation of regional platforms overall remains limited in the OLI. See <http://onlinelabourobservatory.org/oli-demand/>.

FIGURE 5.3: Demand for online labor, by country and country income groups, 2022

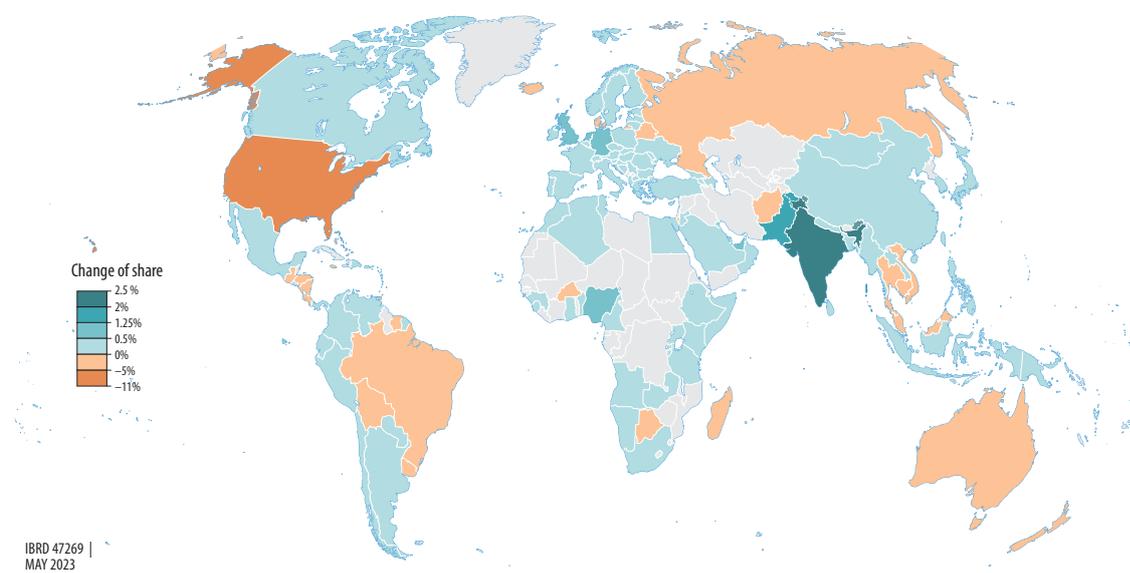


Source: Study team illustration based on Online Labour Index data.

Note: Values are percentages. HIC = high-income country; LIC = low-income country; LMIC = lower-middle-income country; UMIC = upper-middle-income country; UK = United Kingdom; USA = United States.

Although firms in developed countries hire most gig workers, the demand in developing countries is increasing. In particular, according to OLI data, between 2017 and 2022 India's share of global labor demand increased by 2.5 percentage points (Figure 5.4), and Pakistan's rose by 1.3 percentage points. The shares of other developing countries such as Nigeria, the Philippines, Bangladesh, the Arab Republic of Egypt, and China also increased, though the magnitudes are very small. On the flip side, the share of global demand accounted for by the United States decreased by 10 percentage points.

FIGURE 5.4: Change (%) in shares of demand for global gig work between 2017 and 2022

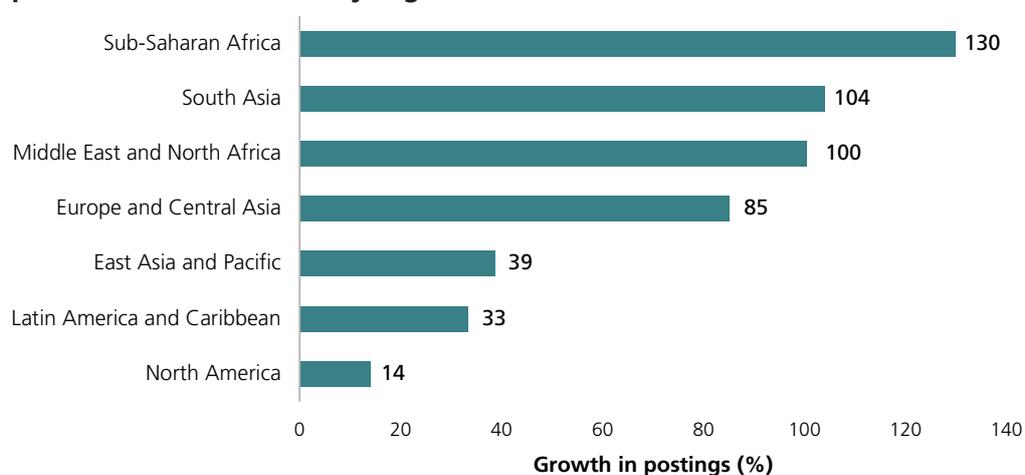


Source: Study team illustration based on Online Labour Index data.

Although these changes may seem small overall, their magnitude can be appreciated more clearly by looking at the growth rate of jobs posted on digital labor platforms in each region.

A representative sample of job postings scraped from one of the largest digital labor platforms¹¹⁸ shows the number of jobs posted is growing the fastest in Sub-Saharan Africa, where the overall number of postings more than doubled between 2016 and 2020 (130 percent growth rate; see Figure 5.5), despite accounting for the smallest share of jobs on the platform overall. Sub-Saharan Africa is followed by South Asia (104 percent growth rate) and the Middle East and North Africa (100 percent growth rate). Although most jobs posted on the platform originated from North America, the growth rate there was the smallest (14 percent), meaning that the number of jobs posted from companies in North America grew roughly nine times more slowly than that in Sub-Saharan Africa.

FIGURE 5.5: Growth rate of job postings on one of the largest digital labor platforms for 2016–20, by region



Source: Study team illustration based on data shared by the Online Labour Index team.

¹¹⁸ Shared with the researchers by the OLI team on February 22, 2023. The specific platform cannot be disclosed for confidentiality reasons.

These findings are corroborated by the research team’s survey of firms hiring gig workers conducted for this study, suggesting that the share of global demand for gig work emanating from developing countries will continue to grow. Of the surveyed firms in LMICs or LICs, 29 percent started hiring gig workers less than a year ago, compared with only 16 percent of firms based in UMICs or HICs.¹¹⁹ Furthermore, firms based in LMICs or LICs were more likely than businesses in UMICs or HICs to report that the share of work outsourced to gig workers increased over time (59 versus 45 percent). The former businesses were also more likely than the latter to claim that they plan to hire more gig workers in the future than they did in the past (53 versus 42 percent).

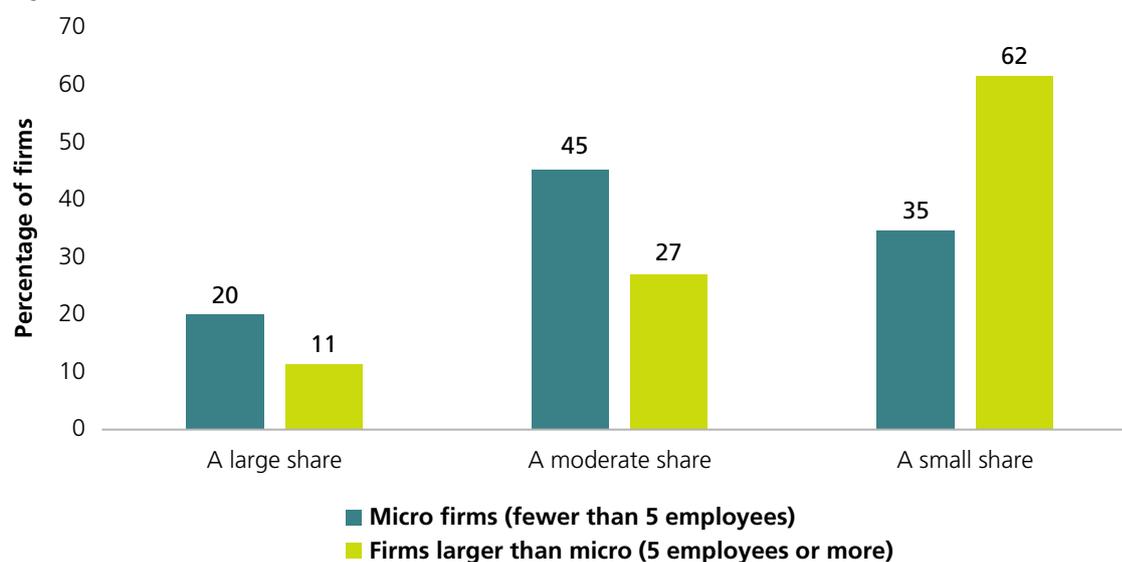
5.4 WHO IS HIRING GIG WORKERS?

Across various online platforms, micro, small, and medium enterprises (MSMEs) drive the demand for gig workers. According to the survey of firms conducted by the team, MSMEs are more likely than large businesses to hire gig workers.¹²⁰ Furthermore, digital platforms interviewed for this study, including Freelancer, Apna, Findworka, Hsoub, AI7Arefa, Onesha, Wowzi, and others, reported that MSMEs are their major clients. Upwork stated that the vast majority of transactions on the platform are small companies hiring people to do small tasks, such as website development, graphic design, app development, and so forth.

Not only are smaller businesses more likely to hire gig workers, but they also outsource a larger share of work through platforms than large firms do. Perceptions of survey respondents indicate that 20 percent of microfirms (with fewer than five employees) that hired gig workers over the past year outsourced a large share of their work through platforms, 45 percent outsourced a moderate share, and 35 percent outsourced a small share. The equivalent estimates for firms with five employees or more are 11, 27, and 62 percent, respectively (see Figure 5.6). Microcompanies were also more likely than larger ones to say that the share of their work outsourced through online platforms increased over time. Furthermore, microfirms outsourced tasks more frequently than larger businesses. For example, 34 percent of businesses with fewer than five employees hired gig workers every week or more often, compared to half as many larger firms. Nevertheless, note that microfirms were less likely to hire for longer-duration tasks (for instance, only 26 percent of companies with fewer than five employees hired for tasks lasting more than a week, compared to 42 percent of firms with more employees) while the numbers of gig workers hired during the year were similar regardless of the business size. Finally, respondents working in microenterprises were more likely than those working for larger companies to say that their firms plan to hire more gig workers in the future.

¹¹⁹ Survey results presented in this paragraph were estimated on the assumption that República Bolivariana de Venezuela is an HIC, although it is currently not classified by the World Bank due to a lack of reliable data.

¹²⁰ Totals of 40 percent of self-employed individuals, 55 percent of firms with 2 to 4 employees, 53 percent of firms with 5 to 19 employees, 47 percent of firms with 20 to 99 employees, and 33 percent of businesses with 100 or more employees said they hire gig workers. Note that all of these statistics are overestimates because the survey purposefully targeted firms that hire gig workers. The pattern holds regardless of whether firms hire through global or regional platforms.

FIGURE 5.6: Perceived shares of work outsourced through online gig platforms, by firm size

Source: Study team's survey of firms hiring through digital labor platforms, 2022.

Note: The figure is based on respondents' perception as to what constitutes a large, moderate, or small share of work.

Platforms bring more benefits to MSMEs than to large businesses. For example, an MSME may forgo corporate branding entirely if it needs a designer for only a small task (such as creating a logo), whereas large companies are more likely to have sufficient work for a permanent designer position, meaning that platforms provide an opportunity for MSMEs to hire someone even if they have just limited tasks to outsource (Kuek et al. 2015). The relative cost of hiring and firing permanent workers is higher for MSMEs than for larger businesses because of economies of scale. Platforms provide a low-cost alternative to traditional hiring, and the consistent supply of labor reduces risks for small firms, which need to quickly adjust their operations during market shocks (Corporaal and Lehtonvirta 2017). Finally, MSMEs often change their business model to secure their place in the market, requiring flexibility, which labor platforms provide.¹²¹

Not only firms but also governments generate local demand. For instance, the judiciary in Kenya, the Ministry of ICT, and the Kenya Private Sector Alliance (KEPSA) are working together on the Ajira Digital Project,¹²² which allows the judiciary to find local gig workers to transcribe court proceedings. This both enhances the quality of judicial proceedings and creates local job opportunities.¹²³ To provide another example, driven by a push to digitalize public records to safeguard information, the government of India started digitizing national archives and consolidated 2.6 million records in an archival information management system, where electronic records can be made available to scholars and researchers.¹²⁴ This initiative required gig workers to undertake small typing, data entry, and text transcription tasks for which they were paid a piece rate. Under the same initiative, the government also kickstarted the digitization of land records, including the setup of state data centers, digitization of cadastral maps, and integration of textual and spatial data. For another example, see Box 5.1 regarding NASA.

¹²¹ There are challenges to using online platforms, including coordination problems, lack of trust, and regulatory barriers (Cirera, Comin, and Cruz 2022).

¹²² See <https://ajiradigital.go.ke/#/index>.

¹²³ Information acquired during an interview with KEPSA and from documents shared by the KEPSA team.

¹²⁴ National Archives of India, "Computerisation," <http://nationalarchives.nic.in/content/computerisation>.

BOX 5.1: NASA TOURNAMENT LAB

In 2010, the National Aeronautics and Space Administration (NASA) and Harvard University established NASA Tournament Lab (NTL), which consists of various open innovation platforms and competitions. NASA's scientists, engineers, and others have launched more than 300 challenges and crowdsourcing projects through the NTL between 2011 and 2020, seeking innovative, efficient, and optimized solutions for specific, real-world challenges the agency faces. Technical projects have included ideation, system architecture design, algorithm performance improvement, and software and applications development. There are also nontechnical projects such as graphics and video work.

NASA is using crowdsourcing to enhance its access to the vast creative potential of people worldwide through open innovation. This helps NASA keep up with the fast rate of change in knowledge and technology. Moreover, crowdsourcing helps improve the agency's surge capacity by quickly implementing work contracts.

These experiences led NASA to study the open innovation space with Harvard and others. The agency realized that finding the right talent through online platforms and communities was faster and led to more diversity and innovation. A report by NASA shows that 80 percent of crowdsourcing projects led to cost savings and 92 percent of them met or exceeded the organization's expectations (NASA 2020).

In its evolution of engaging with global talent, in 2015, NASA started a program to try to bring innovation into its core business by using a multivendor contract to onboard digital labor platforms with a total combined value of US\$20 million for five years. The program's name was NASA Open Innovation Services (NOIS).

A second round of the program (NOIS2), focusing on delivering technical solutions, multimedia, data science, software, engineering design, crowd program formulation, and public engagement campaigns, was launched in 2020. Vendors on the contract use one or more of the following methods to meet the government requirements: crowd-based challenges and prizes, freelance projects, microtask projects, and other crowd-based methods.

The public procurement process involved two steps. First, through a framework contract, NASA preselected 32 online platforms (most of which were based in the United States, but some were international contractors). These 32 platforms then competed for the award of specific assignments requested under the same framework contract. NOIS2 allowed NASA to access up to 120 million freelancers through the 32 vendors and their collaborators.

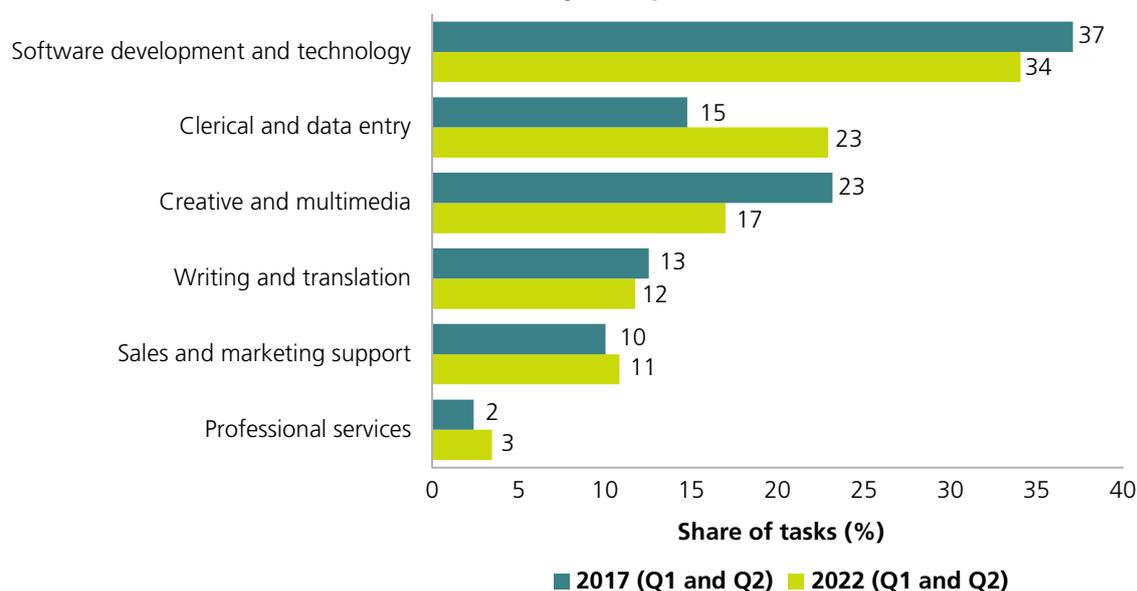
The NOIS2 process was meant to be more agile than traditional procurement for NASA and other US federal agencies, which takes about nine months to a year; under NOIS2, the whole process for a specific assignment could be completed within three to four weeks. Therefore, the program was an efficient way to procure services and bring talent on board in a timely way.

Finally, although large firms are less likely to hire gig workers than MSMEs are, large firms are also contributing to the overall demand by experimenting with platform adoption as part of their sourcing strategy (Corporaal and Lehdonvirta 2017). For a few examples, Philips, a Dutch multinational company, has created its own platform called the Philips Talent Pool, which maintains a pool of vetted freelancers who are familiar with the company; Twago Talent Pool creates and manages bespoke gig labor platforms under the brands of its corporate clients; and SAP Fieldglass offers its customers total management of both external and internal workers. Such internal marketplaces were created in response to the long time it takes companies to find the right talent for a job, especially highly qualified professionals for whom companies often compete (Wallenstein et al. 2019).

5.5 TASKS DEMANDED

From a skill and occupational perspective, the largest global market share of demand for gig work is taken by software development and technology skills, with more than one-third of all posted tasks belonging to that category in 2022, according to OLI data. Software development and technology jobs are followed by clerical and data entry tasks (23 percent of all tasks posted), creative and multimedia (17 percent), writing and translation (12 percent), sales and marketing support (11 percent), and other professional services (3 percent) (Figure 5.7).

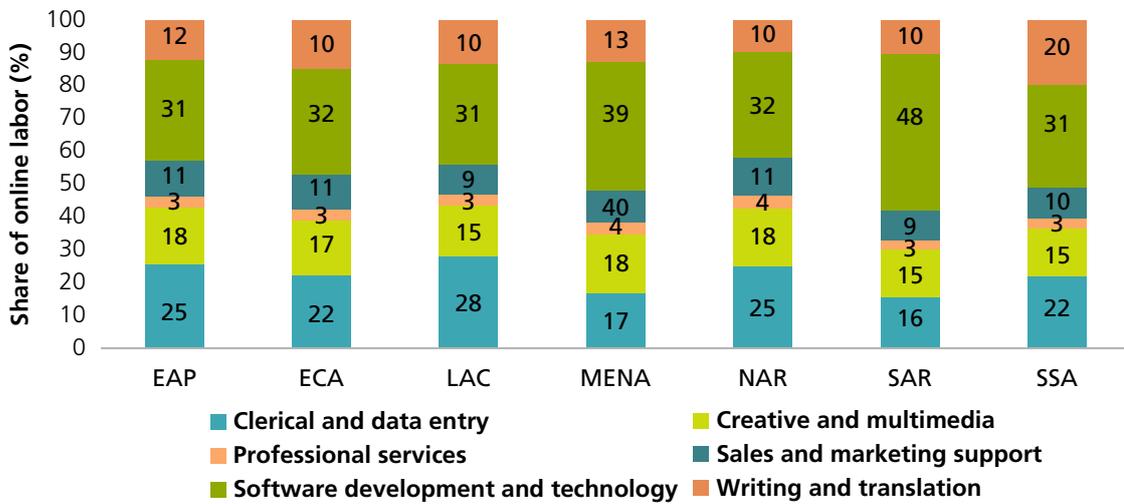
FIGURE 5.7: Demand for online labor, by occupation



Source: Study team illustration based on Online Labour Index data.

These trends are relatively stable across the world regions, with the exceptions of the Middle East and North Africa and South Asia regions, where the proportion of IT tasks among all tasks outsourced is even higher than elsewhere, as well as Sub-Saharan Africa, where writing and translation appears more popular than in the other regions (Figure 5.8). One plausible explanation for the last finding is the prevalence of multiple African countries where European languages are spoken. For example, some interviewed French firms reported contracting microworkers in French-speaking African countries such as Cameroon, Côte d'Ivoire, and Madagascar (Tubaro and Casilli 2019).

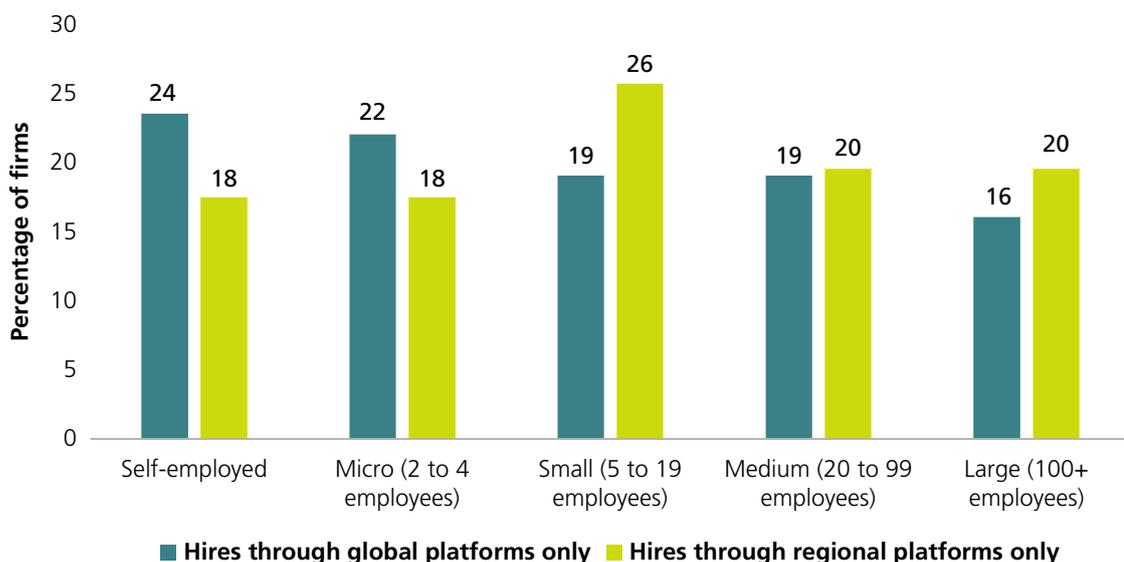
FIGURE 5.8: Demand for online labor, by occupation and region



Source: Study team illustration based on Online Labour Index data.
 Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; NAR = North America region; SAR = South Asia region; SSA = Sub-Saharan Africa.

Small firms demand different types of tasks and turn to different types of platforms than large firms do. According to the survey of firms conducted for this study, the self-employed are more likely to hire gig workers for business and professional support as well as for sales and marketing support. In contrast, large firms with more than 100 employees are more likely to demand online microwork, confirming the trends observed in previous studies (Kuek et al. 2015). Furthermore, microfirms more often turn to global platforms to hire gig workers, whereas firms with more employees (particularly small firms) on average are more likely to utilize regional platforms (see Figure 5.9). This is because as firms grow, they need niche skills that may be more readily available on regional platforms (for example, specific language skills or familiarity with local markets). Larger firms also have more resources to look for platforms that would best suit their needs.

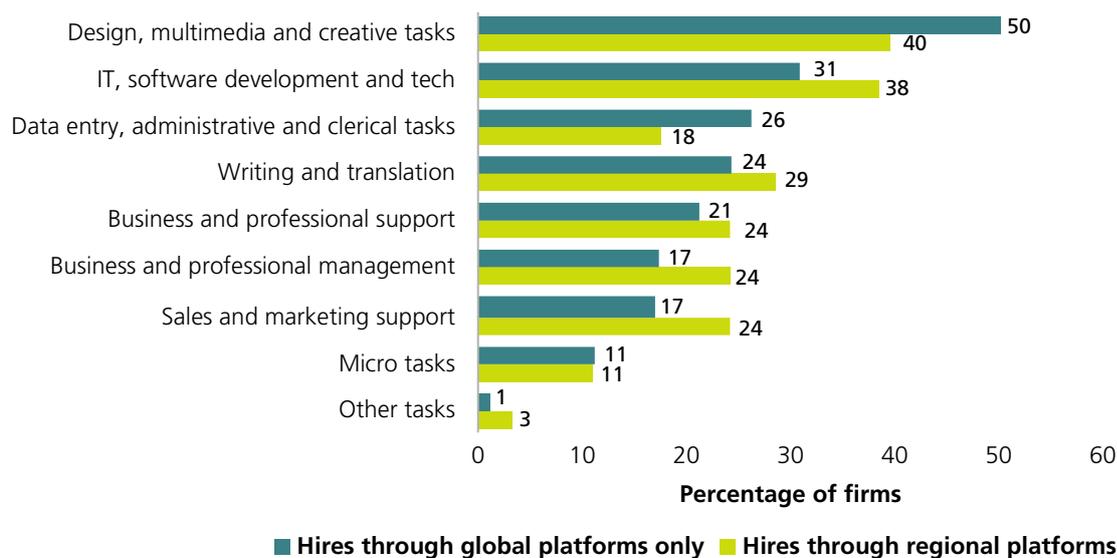
FIGURE 5.9: Firms hiring through online platforms, by size and type of online platform used



Source: Study team survey of firms hiring through digital labor platforms, 2022.

Regarding tasks, firms hiring through regional platforms appear more likely to outsource IT, writing, business, and sales tasks than those hiring through global platforms. The latter, however, are more likely to turn to gig workers to carry out design-related and data entry or administrative tasks (Figure 5.10). The reason for these differences could be linguistic or cultural: local language skills or awareness of the local context might be needed to write or sell to a particular audience but not to enter data or design a logo, thus warranting the need for regional platforms (see also Figure 5.10).

FIGURE 5.10: Tasks outsourced through regional and global platforms



Source: World Bank 2022 survey of firms hiring through digital labor platforms.
Note: IT = information technology.

Looking at trends over time, the demand for clerical and data entry tasks increased much more than for other types of tasks. The market share of clerical and data entry jobs in digital labor platforms has increased by more than eight percentage points between 2017 and 2022.¹²⁵ The shares of sales and marketing support as well as professional tasks increased also, although very slightly. By contrast, the shares of creative and multimedia and software development tasks among all tasks outsourced to gig workers dropped between 2017 and 2022 (see Figure 5.7). This increase likely reflects the rising demand for microwork: small tasks performed on crowd work platforms (Morris et al. 2017).

The growing adoption of artificial intelligence (AI) in different industries is increasing the demand for microworkers. AI producers create machine learning algorithms to develop applications ranging from chatbots and hands-free vocal assistants to automated medical image technologies, self-driving vehicles, and drones. Developing these algorithms requires the preparation of quality big data. This generates demand for microtasks such as tagging photographs, sorting items in a list, adding labels, providing sample audios, and so on. Moreover, microworkers are also needed to verify the predictions of AI. These tasks could be confirming the correctness of image classifications or checking that a virtual assistant understood what its users said, for example, to improve the AI functionality (Tubaró and Casilli 2019). Project Karya, a smartphone-based crowdsourcing platform, offers AI data labeling and enrichment tasks to people in rural communities in an attempt to tap into the growing market for AI tasks while simultaneously providing work opportunities for people previously excluded from the digital economy due to a lack of connectivity where they live.¹²⁶

¹²⁵ The analysis is limited to the first two quarters in 2017 to ensure comparability with the latest data from 2022.

¹²⁶ See "Project Karya," Microsoft, July 1, 2017, <https://www.microsoft.com/en-us/research/project/project-karya/>.

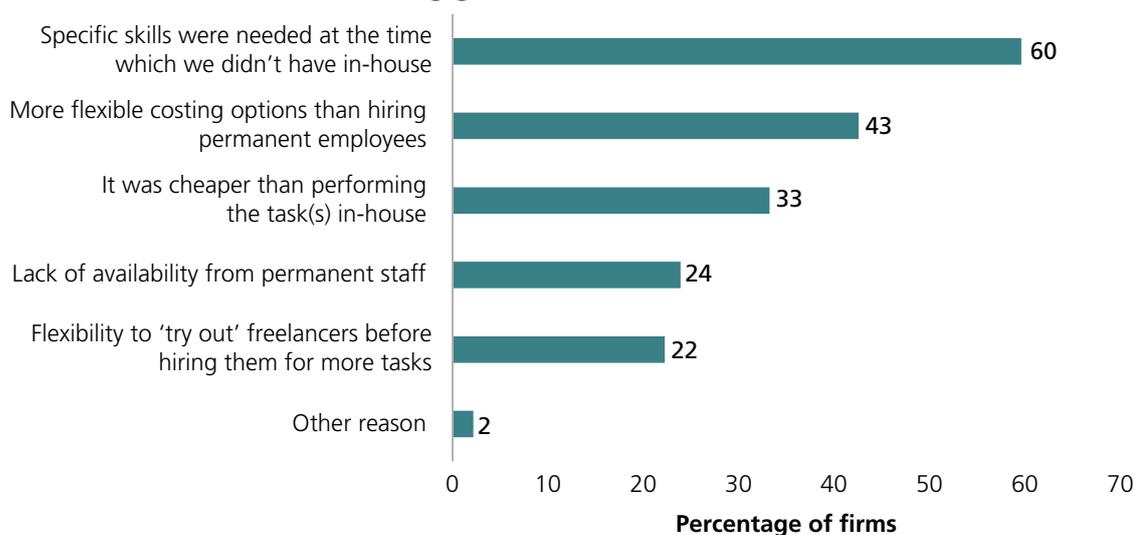
Developments in big tech are playing an important role, too, especially in creating new types of microtasks. As Google and Apple expand their user interface to incorporate Voice over Internet Protocol (VoIP) applications such as Siri and OK Google, the demand for microwork-related speech transcription, translation, and text transcription is moving to the forefront. As companies work to create more-accurate VoIP systems, nuances such as country-specific accents are playing an important role in creating a trend toward “inclusive tech.” This has created demand for simple microtasks such as reading, translating, or transcribing a sentence in a particular language, which is an important avenue of demand for regional platforms. Microsoft Research India, for example, built an Android application to measure the accuracy with which participants can digitize handwritten Marathi and Hindi words in rural India, based on the real-world need for digitization of handwritten Devanagari script documents (Chopra et al. 2019). Another study using a platform called mClerk for mobile crowdsourcing in developing regions demonstrated that mClerk can be effectively used to digitize local-language documents (Gupta et al. 2012).

5.6 WHY DO FIRMS HIRE GIG WORKERS?

Overall, access to a wide range of talent is the key reason that firms turn to platforms.

More than half of the businesses surveyed for this study reported that they started hiring online gig workers because specific skills not available in-house were needed at the time (see Figure 5.11). In a knowledge-based economy, companies increasingly create value from ideas, innovation, research, and expertise; therefore, finding the right talent is crucial (Manyika et al. 2015). However, firms often find it challenging to nurture and keep the best talent in highly specialized and professional services (Martin and Schmidt 2010). Digital platforms can potentially bridge this gap by eliminating many of the geographical barriers. Online freelancing platforms allow firms to access workers with diverse skill sets, cultural backgrounds, and work histories, thus acting as an important enabler for knowledge exchange, innovation, and peer learning. Instead of seeing knowledge flows across organizations as a threat, firms make strategic use of it, allowing them to accumulate knowledge, innovate, and adapt faster to environmental changes (Corporaal and Lehdonvirta 2017).

FIGURE 5.11: Reasons to hire gig workers



Source: Study team survey of firms hiring through digital labor platforms, 2022.

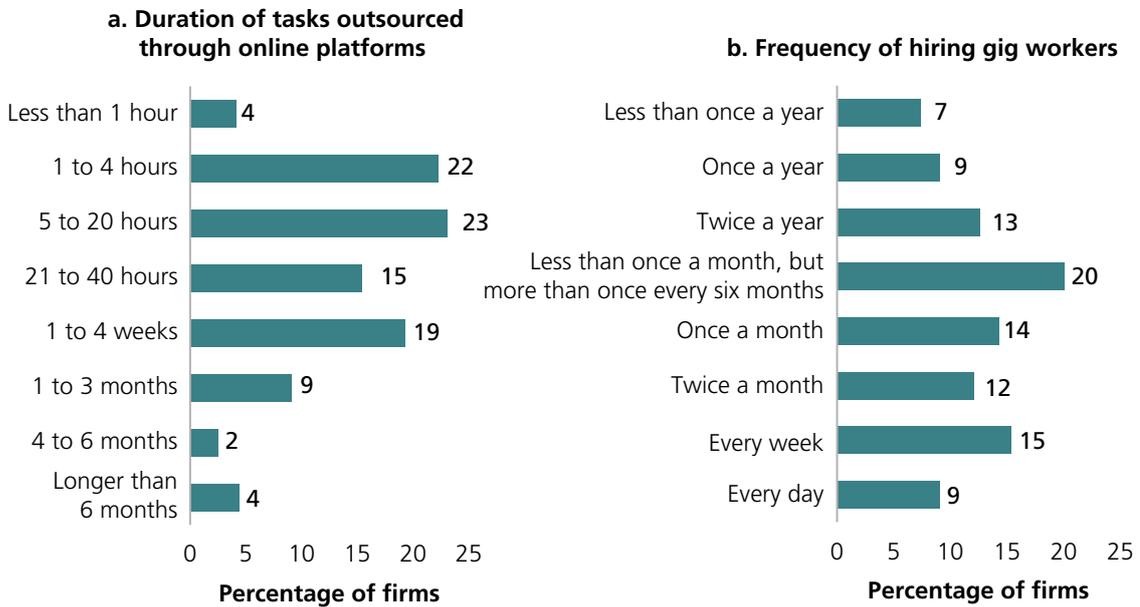
While access to specific skills was the most common reason for starting to hire gig workers among both small and large businesses, the survey results showed that firm size matters when choosing particular platforms. For example, trust in the platform was the most important consideration for 46 percent of microfirms versus 34 percent of larger firms. Microfirms also placed greater importance on whether platforms had convenient payment methods and effective dispute resolution mechanisms. Meanwhile, access to a wide set of skills was the most important reason for choosing platforms among firms with five employees or more. They also valued more the speed of hiring as well as platforms’ popularity (Figure 5.12).

FIGURE 5.12: Reasons for choosing specific online platforms, by firm size



Source: Study team survey of firms hiring through digital labor platforms, 2022.

Gig workers offer flexibility to firms. Flexibility may take various forms, such as functional flexibility (to allocate different types of tasks across the workforce that is available), numerical flexibility (to employ varying numbers of workers to meet the fluctuating demand for labor), and financial flexibility (to allow businesses to easily adjust wages) (ILO 2021). Online platforms arguably provide adaptability to firms in all these respects. Regarding functional flexibility, the variety of tasks outsourced through online platforms was discussed in the previous section. With respect to numerical flexibility, the survey showed that most firms (84 percent) hire gig workers for tasks that last up to one month and 96 percent for tasks that last up to six months (see figure 5.13, panel a). Such short-term assignments, while not providing job security for the gig workers, allow companies the flexibility to easily meet the changing demand for labor. Furthermore, the majority of firms (63 percent) hire gig workers once a month or less, likely indicating that gig workers are hired for ad hoc tasks (Figure 5.13, panel b).

FIGURE 5.13: Length of time needed for tasks and frequency of hiring on online platforms

Source: Study team survey of firms hiring through digital labor platforms, 2022.

Given the growing supply of gig workers using online platforms, the pay rates also vary, allowing firms to choose less or more expensive services, which corresponds to financial flexibility. Financial flexibility, however, is important not only regarding *how much* firms pay, but also *how* they pay. Roughly a quarter of all surveyed firms said that they started hiring gig workers because online platforms provide more flexible costing options (for example, ability to pay per task, per hour of work, or per image tagged) than traditional employment. This was also emphasized in interviews with individual firms.

Notably, respondents were more likely to select flexible costing options than to say that they started hiring gig workers because it was cheaper than performing tasks in-house (43 versus 23 percent; see Figure 5.11). In fact, some interviewees claimed that it was more expensive to hire through online platforms but argued that the extra cost was offset by the value platforms bring. Coca-Cola, for example, works with the Kenya-based online platform for influencers called Wowzi.¹²⁷ The company uses Wowzi to reach influencers, who then promote Coca-Cola's products online. According to Coca-Cola, on average, turning to Wowzi costs 20 percent more than the alternative option (looking for influencers through media agencies which manage them). Nevertheless, working with a variety of influencers identified through Wowzi allowed Coca-Cola to promote more diverse marketing content, leading to greater return on investment.¹²⁸ Still, cutting costs remains an important factor for many firms: for 27 percent of survey respondents, getting a lower price is one of the main factors they consider when selecting a digital platform to work with. Furthermore, a survey of 200 US firms showed that more than 58 percent of mid-market-size¹²⁹ firms and 66 percent of large firms cited cutting the cost of production as one of their main reasons for hiring gig workers (Ernst and Young Ltd. 2018).

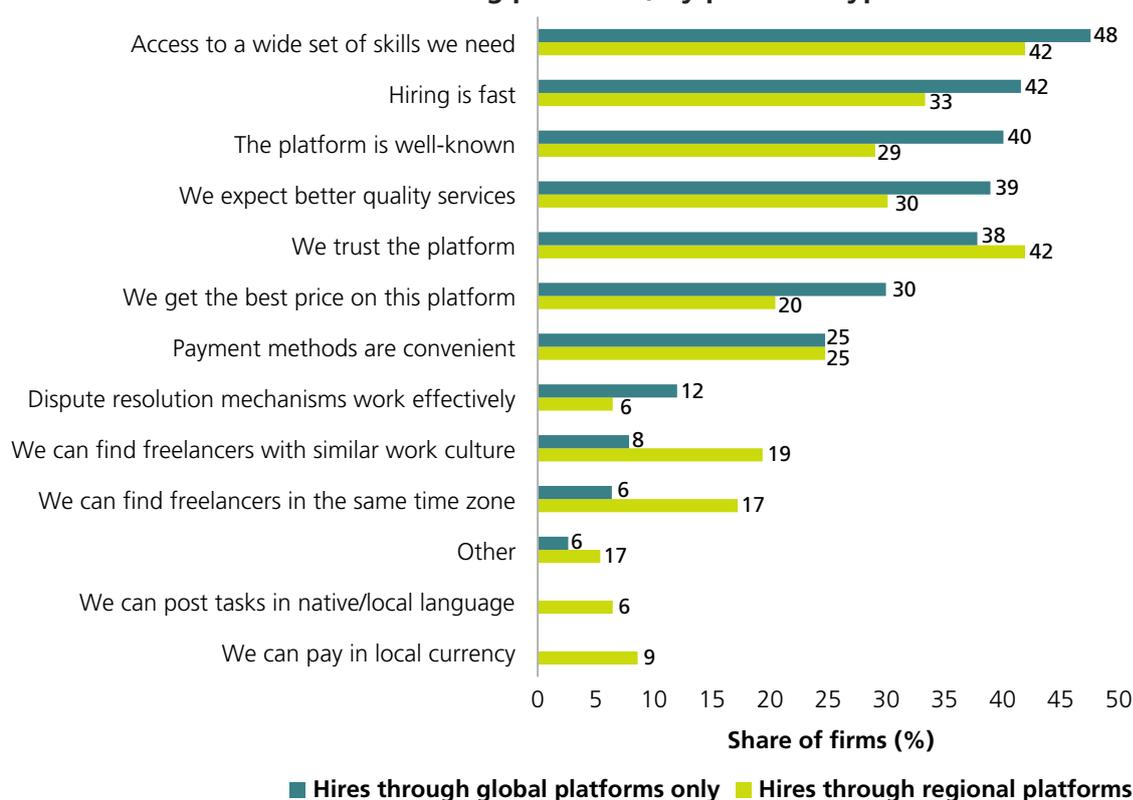
¹²⁷ See <https://www.wowzi.co/>.

¹²⁸ The information is based on interviews the research team conducted with Coca-Cola and Wowzi in 2022, on September 9 and June 30, respectively.

¹²⁹ Mid-market size refers to firms with an annual turnover of between US\$100 million and \$4.99 billion, whereas large firms refer to those with a turnover of over US\$5 billion.

Regional platforms seem to be most attractive to firms that are looking for gig workers with similar cultural backgrounds or in the same time zone. Whereas 19 percent of firms hiring through regional platforms indicated that they chose them because they could find freelancers with a similar work culture, only 8 percent of those hiring through global platforms said so. Similarly, while 17 percent of firms that opt for regional platforms said they chose them because they could find freelancers in the same time zone as their company, only 6 percent of those hiring through global platforms selected this option (Figure 5.14; see also chapter 4 for further details on differences between regional/local and global platforms).

FIGURE 5.14: Reasons for choosing platforms, by platform type



Source: Study team survey of firms hiring through digital labor platforms, 2022.

Note: Firms hiring through global platforms only were not shown the local-currency and native/local-language options.

This suggests that at least some of the demand for online gig work is locally driven, which might be an important engine for development. The more popular platforms become among businesses in developing countries, the more opportunities gig workers based in those countries may have to work. While some concerns regarding displacement effects (that is, hiring gig workers instead of permanent salaried employees) may be raised, most of the work in developing countries is informal, so *platformization* may serve as a vehicle to pull informal workers into formal or semiformal work arrangements (Kuek et al. 2015). Other ways in which platforms may contribute to development include reducing the time required to hire a person for a task or project because of the use of sophisticated algorithms, while also reducing the time spent searching by individuals between jobs; matching tasks with the right talent, thus improving labor productivity; and serving as a tool for knowledge creation and innovation (Kuek et al. 2015).

5.7 EMERGING AND FUTURE TRENDS

Online labor platforms are increasingly being used as staffing agencies. Online platforms, in addition to acting as a marketplace to hire gig workers, have started playing an active role in recruiting and staffing online workers for medium- to long-term projects (3 to 12 months) for client companies. In fact, 7 percent of firms surveyed for this study hired gig workers for longer than three months. Platforms play a project management role in which they vet freelancers for the job, ensure quality control, and manage the client-freelancer relationship. For example, Flexiport, a prominent Indian platform operating in South Asia, conducts offline recruiting by acting as a third-party staffing agency, while also facilitating freelance work on their online platform. Similarly, Workana, the largely Latin American online platform that also operates in Southeast Asia, is increasingly shifting toward a staffing model in which the firm recruits, vets, and manages tech talent. According to Workana, the demand for this type of service comes predominantly from clients who are looking to hire multiple workers for medium- to long-term IT projects. Demand for this type of talent is increasing over time, and studies suggest that the primary reason for this shift is that the flexibility and speed offered by platforms in acting as staffing agencies far exceed those of conventional staffing and sourcing channels (Corporaal and Lehdonvirta 2017).

Some platforms also help manage the projects themselves, which is a related but different business model. For example, 60 Decibels uses a network of researchers mainly from developing countries to help run research projects (Box 5.2).

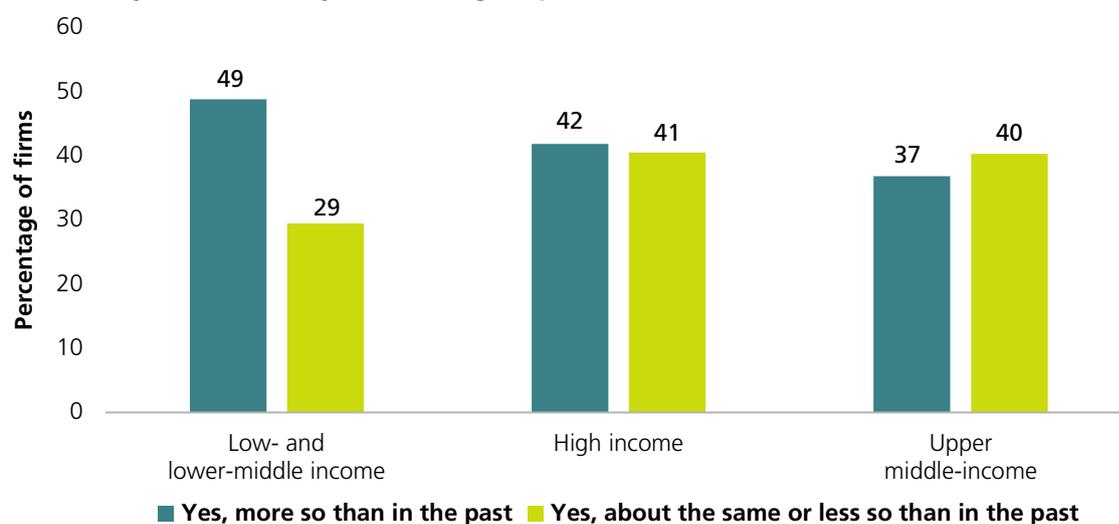
BOX 5.2: 60 DECIBELS

60 Decibels^a is an impact measurement organization that taps the potential of online gig work by offering what it calls “research assistants” to engage in flexible social research. Research assistants who join the network are trained by 60 Decibels in project management and research methods. Once they complete the training, they can be deployed to projects on a part-time or full-time basis, depending on their time availability. The research assistants, coming from 75 countries and covering over 178 languages, help conduct phone interviews, collecting impact data from the ground that feeds into their customers’ monitoring and evaluation efforts. The firms’ clients are from various sectors, including education, financial inclusion, gender and inequality, health and disability, micro and small businesses, off-grid energy, quality jobs, and supply chains. 60 Decibels has implemented over 1,300 projects using this approach.

a. See <https://60decibels.com>.

The survey results indicate that the demand for online gig workers is expected to continue rising, especially in LICs and LMICs. Figure 5.15 shows that 48 percent of firms surveyed in these countries expect to hire freelancers through online platforms more than they did in the past, compared to 41 percent of firms in HICs and 36 percent in UMICs. Furthermore, 90 percent of executives at 700 US firms that use gig workers believe that gig workers will be key to their ability to compete in the future (Fuller et al. 2020).

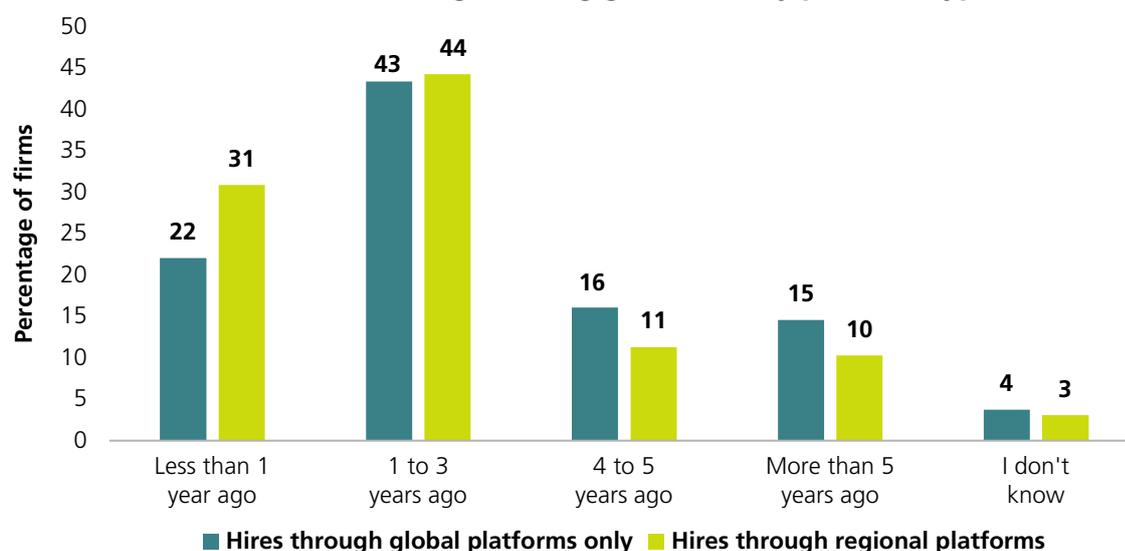
FIGURE 5.15: Firms’ responses on how much they plan to hire gig workers in the future, by their country’s income group



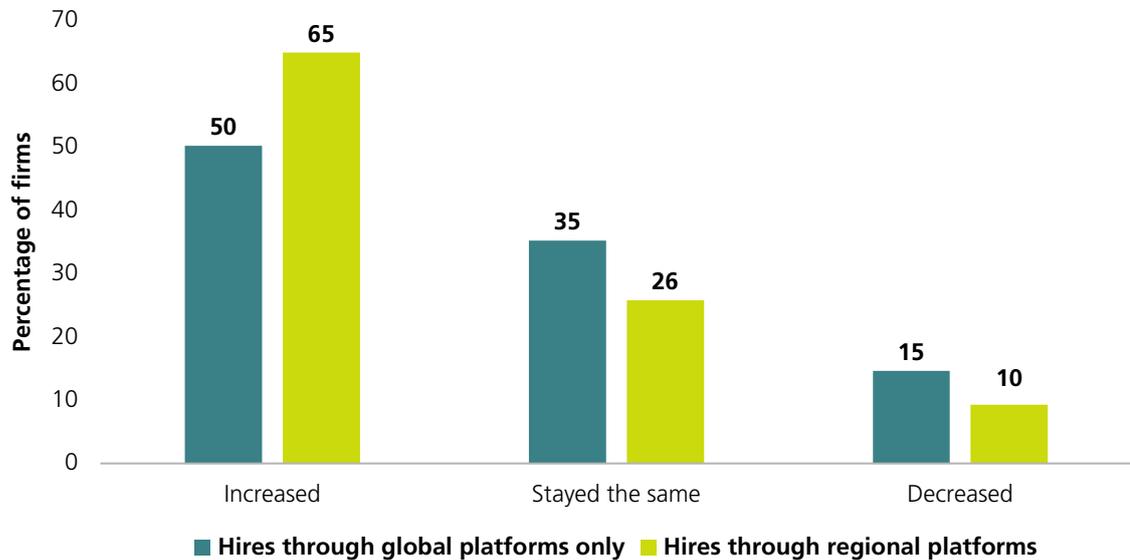
Source: Study team survey of firms hiring through digital labor platforms, 2022.

Finally, the demand for regional/local platforms appears to be growing faster than that for global platforms. Since regional platforms entered the market more recently than their global counterparts, it is not surprising that surveyed firms using regional platforms on average started using them more recently than companies hiring through global platforms (Figure 5.16). However, more of the firms hiring through regional/local platforms than firms using global platforms said that the share of work performed by gig workers increased over time (65 versus 50 percent) (figure 5.17). In addition, when asked about future prospects, 64 percent of businesses hiring through regional platforms, compared to 43 percent of those hiring through global platforms, said that they will continue to hire gig workers and plan to hire them more than in the past (figure 5.18). Hence, it seems that regional platforms are filling an important niche in the market and will continue to grow.

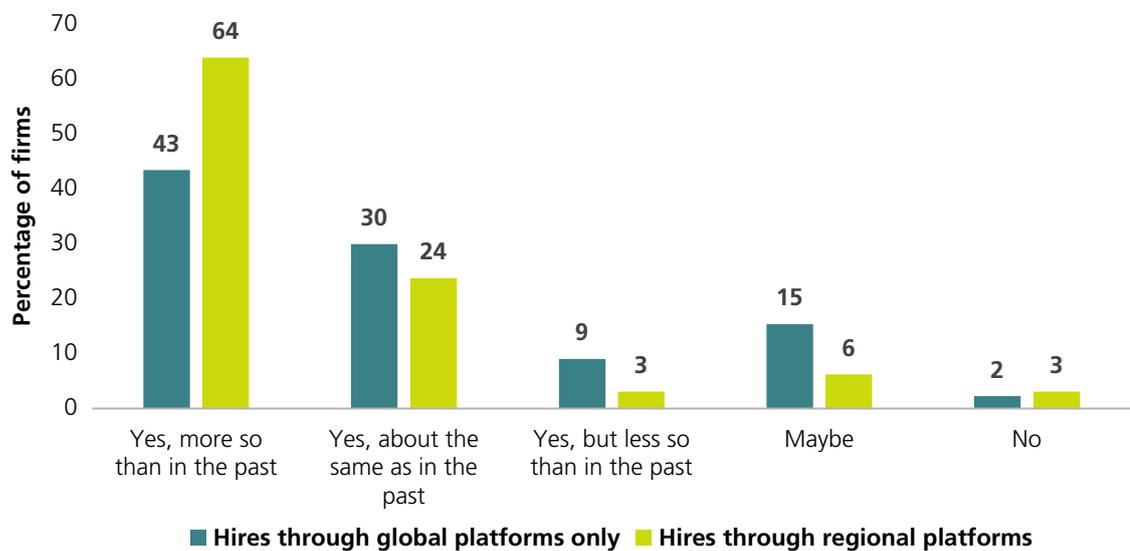
FIGURE 5.16: Time since starting to hire gig workers, by platform type



Source: Study team survey of firms hiring through digital labor platforms, 2022.

FIGURE 5.17: Share of work performed by gig workers over time, by platform type

Source: Study team survey of firms hiring through digital labor platforms, 2022.

FIGURE 5.18: Intentions to hire gig workers in the future, by platform type

Source: Study team survey of firms hiring through digital labor platforms, 2022.

5.8 CONCLUSION

We expect demand for gig work to continue to rise in the future. The COVID-19 pandemic accelerated the already rising demand for gig workers. While that demand was generated largely by MSMEs in developed countries, more and more firms in the developing world are starting to use digital labor platforms as well. Awareness of the local context is a necessary prerequisite for some tasks outsourced through online platforms, so rising demand in developing countries suggests that more people there may also benefit from work opportunities generated through online platforms. Future demand for gig workers appears strong as well, particularly in LICs and LMICs and for gig workers hired through regional platforms.

Firms are increasingly using online platforms to access a wide range of skills. Also, the flexibility platforms offer is necessary for companies to adapt to shifting market trends. Most tasks outsourced through online platforms require software development and technology skills, but we also see a rise in demand for more low-skilled tasks such as clerical and data entry tasks driven by the growing use of AI and developments in big tech.

The study team found that regional/local platforms, often overlooked in global studies, are playing an important role not only in supporting local private sector development, especially in areas with limited English skills, but also by addressing the needs of local small firms and microfirms, which often have limited resources to hire expensive staff with specialized skills. Thus, local labor platforms can help address talent and HR constraints faced by microfirms and small firms or start-ups.

Finally, governments can also be crucial drivers of demand for digital work. The growing demand for transparency in governance, as well as provision of digital services and information by governments, can be a source of demand for digital and gig work for local youth. Digitization of government records, for example, can offer microwork opportunities to relatively low-skilled people from developing countries (see chapter 4 for more details).

References

- Ajira. 2021. "Kenya's Digital Outsourcing Barometer 2021." <https://ajiradigital.go.ke/#/index>.
- Chopra, Manu, Indrani Medhi Thies, Joyojeet Pal, Colin Scott, William Thies, and Vivek Seshadri. 2019. "Exploring Crowdsourced Work in Low-Resource Settings." Paper 381. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19)*, 1–13. Association for Computing Machinery, New York. <https://doi.org/10.1145/3290605.3300611>.
- Cirera, Xavier, Diego Comin, and Marcio Cruz. 2022. *Bridging the Technological Divide: Technology Adoption by Firms in Developing Countries*. World Bank: Washington, DC. doi:10.1596/978-1-4648-1826-4.
- Corporaal, Greetje F., and Vili Lehdonvirta. 2017. *Platform Sourcing: How Fortune 500 Firms Are Adopting Online Freelancing Platforms*. Oxford: Oxford Internet Institute.
- Ernst & Young Ltd. 2018. "The Gig Economy: A Chance to Control Your Cost or Accelerate Growth?" April 26, 2018. ey.com.
- Fuller, Joseph, Manjari Raman, Allison Bailey, and Nithya Vaduganathan. 2020. "Rethinking the On-Demand Workforce." *Harvard Business Review* 98 (6): 96–103.
- Gupta, Aakar, William Thies, Edward Cutrell, and Ravin Balakrishnan. 2012. "mClerk: Enabling Mobile Crowdsourcing in Developing Regions." In *Proceedings of the Conference on Human Factors in Computing Systems (CHI 2012)*, May 2012, Austin, Texas; University of Toronto, Canada; and Microsoft Research India.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook—Trends 2021*. Geneva: ILO.
- Kässi, Otto, and Vili Lehdonvirta. 2018. "Online Labour Index: Measuring the Online Gig Economy for Policy and Research." *Technological Forecasting and Social Change* 137: 241–8.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. "The Global Opportunity in Online Outsourcing." World Bank, Washington, DC. <http://hdl.handle.net/10986/22284>.
- Manyika, J., S. Lund, K. Robinson, J. Valentino, and R. Dobbs. 2015. "A Labor Market That Works: Connecting Talent with Opportunity in the Digital Age." McKinsey Global Institute.
- Martin, J., and C. Schmidt. 2010. "How to Keep Your Top Talent." *Harvard Business Review* 88 (5): 54–61.
- Morris, M. R., J. P. Bigham, R. Brewer, J. Bragg, A. Kulkarni, J. Li, and S. Savage. 2017. "Subcontracting Microwork." In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, edited by G. Mark et al., 1867–76. New York: ACM Press.
- NASA (National Aeronautics and Space Administration). 2020. "Open Innovation at NASA: Enhancing Problem Solving and Discovery through Prize Competitions, Challenges, Crowdsourcing, and Citizen Science." NASA, Washington, DC. <http://www.nasa.gov>.
- OLI (Online Labor Index). 2020. "Online Labor Supply." <http://onlinelabourobservatory.org/oli-supply/>.
- Pesole, A., M. C. Urzú Brancati, E. Fernández-Macías, F. Biagi, and I. González Vázquez. 2018. *Platform Workers in Europe: Evidence from the COLLEEM Survey*. Luxembourg: Publications Office of the European Union.

- Stephany, Fabian, Michael Dunn, Steven Sawyer, and Vili Lehdonvirta. 2020. "Distancing Bonus or Downscaling Loss? The Changing Livelihood of Us Online Workers in Times of COVID-19." *Journal of Economic and Human Geography* 111 (3): 561–73. <https://doi.org/10.1111/tesg.12455>.
- Tubaro, P., and A. A. Casilli. 2019. "Micro-Work, Artificial Intelligence and the Automotive Industry." *Journal of Industrial and Business Economics* 46 (3): 333–45.
- Upwork. 2022. *2021 Annual Report*. San Francisco, CA: Upwork.
- Wallenstein, Judith, Alice de Chalendar, Martin Reeves, and Allison Bailey. 2019. "The New Freelancers: Tapping Talent in the Gig Economy." Boston Consulting Group.
- World Bank Group. 2019. *World Development Report 2019: The Changing Nature of Work*. World Bank, Washington, DC. <https://documents1.worldbank.org/curated/en/816281518818814423/2019-WDR-Report.pdf>.

CHAPTER 6

Social Protection for Online Gig Workers

6.1 INTRODUCTION

This chapter investigates challenges to extending social protections (including social assistance and social insurance [SI]) to gig workers and especially examines the issue in the context of developing countries. The discussion begins with assessing the social insurance coverage of gig workers and later expands to cover aspects of social protection more generally. As such, the chapter first presents a working definition of SI. It then addresses the following questions: (a) What is the state of SI coverage among gig workers? (b) What constrains social insurance coverage for gig workers? (c) What emerging approaches are being taken to extend SI to self-employed workers? (d) What can governments do to provide SI to gig workers?¹³⁰

To address the question of coverage, the chapter presents empirical evidence from gig worker surveys. After a description of SI and its importance, the chapter explains the methodology of the surveys. Following evidence of the lack of SI coverage from platforms, the team presents a diagnosis of constraints to extending insurance to gig workers and the self-employed in general. The role of government in contributory and noncontributory SI programs and other forms of social protection for gig workers is discussed as well as the cases of private innovations and market-making approaches to close the coverage gap for gig workers. For practitioners, including World Bank operational teams and other development partners (DPs), this chapter initiates a conversation on considerations for structuring technical assistance and lending support to governments faced with a high degree of informality and rising gig work.

6.2 WHAT SOCIAL INSURANCE IS AND WHY IT IS IMPORTANT

SI systems seek to smooth consumption and prevent poverty through two instruments: (a) a risk-pooling mechanism and (b) savings arrangements (Winkler, Bulmer, and Mote 2017). Risk-pooling mechanisms allow individuals and employers to contribute to a collective fund to finance transfers to those who face a negative shock. Savings arrangements enable individuals to save money in individual savings accounts to pay their expenses when they face a negative shock. SI is an instrument in the social protection toolbox which can be delivered through employment-linked plans, means-tested programs, or universal programs (Figure 6.1). Of relevance in the discussion of gig work is the provision of SI through employment-linked programs.¹³¹ A key feature of non-gig,

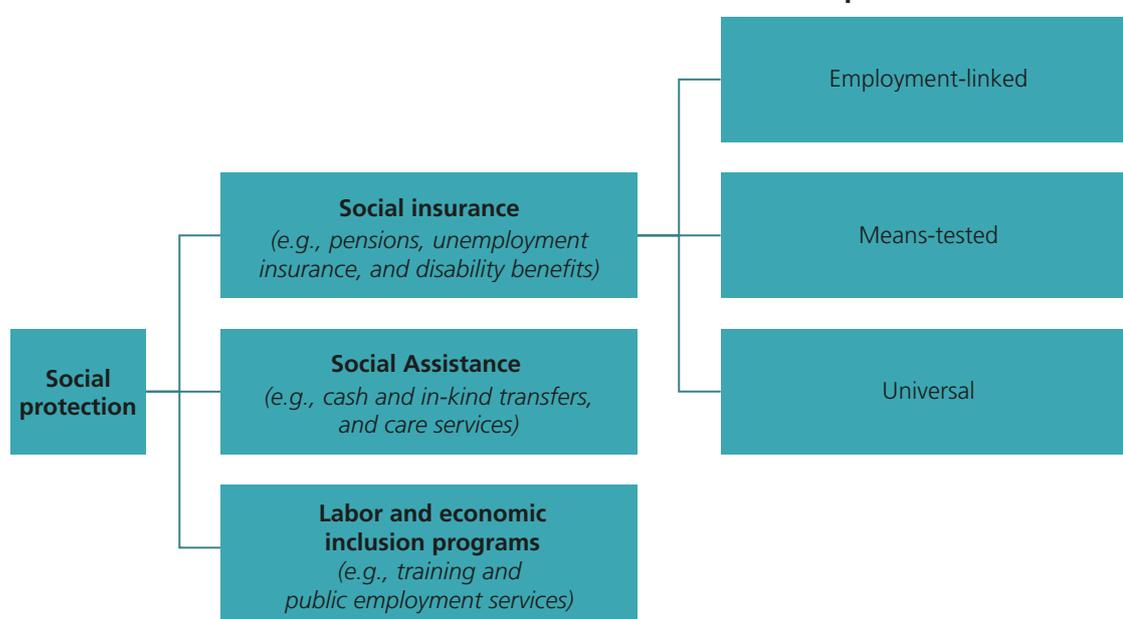
¹³⁰ As explained in a previous chapter, this report does not address the important issue of the role of labor regulations, because it was being addressed by another team, but focuses only on SI.

¹³¹ SI systems often provide old-age contributory pensions (including survivors and disability) and social security and health insurance benefits (including occupational injury benefits, paid sick leave, and maternity and other SI). Source: World Bank, ASPIRE (Atlas of Social Protection Indicators of Resilience and Equity) dataset, https://data.worldbank.org/indicator/per_si_allsi.cov_pop_tot.

formal wage jobs is their facilitation of contracts through insurance companies that provide risk-sharing mechanisms to allow covered workers to address these risks. One rationale for government interventions to promote SI is its underprovision by private insurance markets, which creates a need for welfare-improving government involvement (Chetty and Finkelstein 2020). SI is also associated with economic growth and continues critical consumption (Cylus and Avendano 2017; Ganong et al. 2021). SI programs have been found to increase aggregate growth through participants' increased savings and, thus, the potential deepening of capital markets.¹³²

The nontraditional nature of the gig economy usually means that gig workers, who are typically treated as self-employed or independent contractors, lack an employer to cofinance insurance contributions (Friedman 2014; Myhill, Richards, and Sang 2021; Wood, Lehdonvirta, and Graham 2018). As the share of gig work grows, the economywide benefits of SI are threatened unless reforms are made to insure platform gig workers and other self-employed individuals.

FIGURE 6.1: Social insurance is one instrument in the social protection toolbox

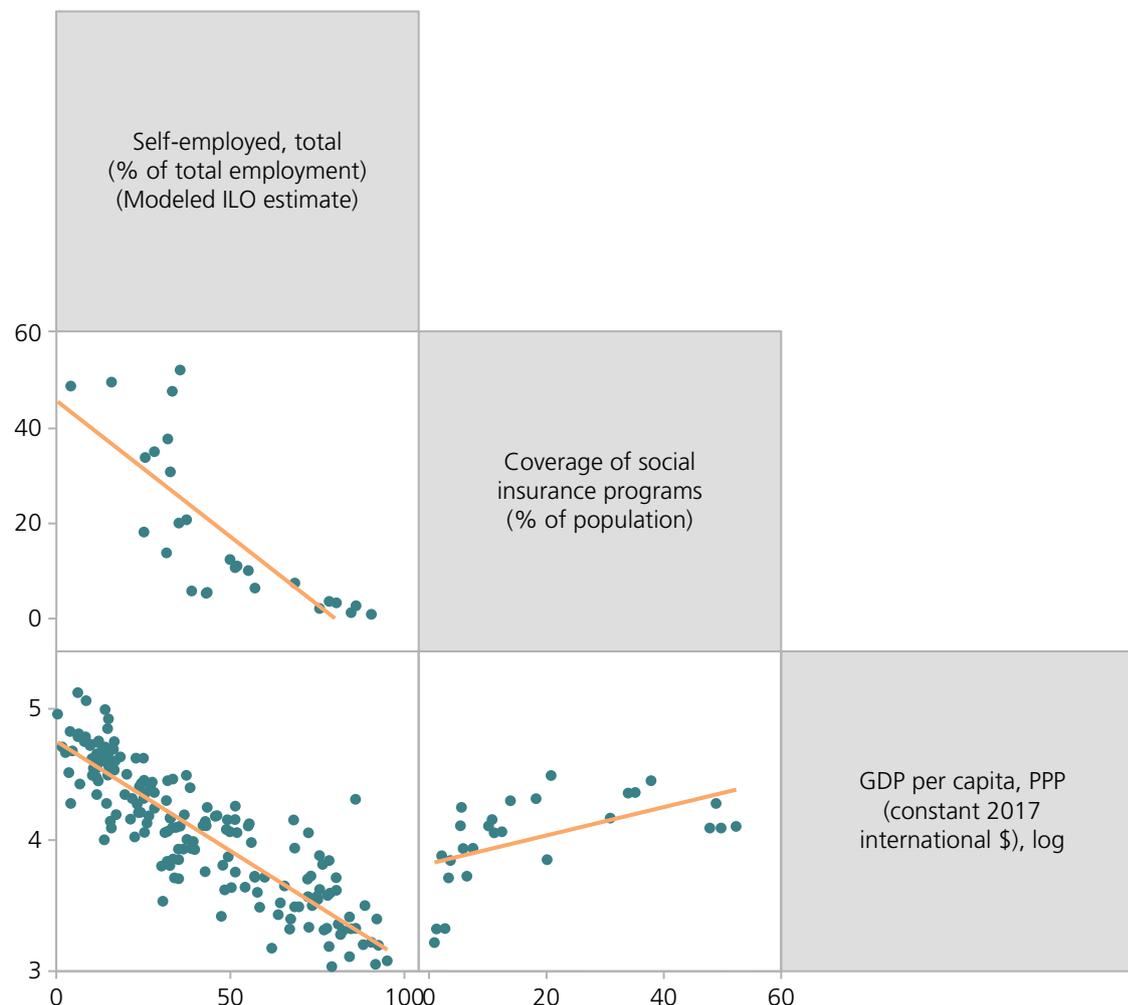


Source: Study team.

To the extent that gig workers are classified as self-employed, the discussion of SI provision to gig workers is thus part of a larger challenge of extending SI in low-income countries, where self-employment and informality predominate. The negative correlation between the proportion of self-employment and SI coverage mirrors the negative correlation between the distributions of income and self-employment. Figure 6.2 illustrates the cross-country correlation between self-employment (including gig work), SI coverage, and per capita incomes. Only a small minority of self-employed workers are innovative, successful entrepreneurs, while most of the self-employed work for themselves and earn little, either because they are rationed out of wage jobs or because they prefer the autonomy and flexibility of self-employment (Gindling and Newhouse 2012). The predominance of unproductive self-employment may explain the negative association with SI, for which subscribers would have to pay premiums from their meager earnings.

¹³² To address endogeneity, Bijlsma et al. (2018) focus on the interaction between an industry's dependence on external finance and the size of pension assets at the national level.

FIGURE 6.2: Employment status, social insurance coverage, and income



Source: Study team analysis using World Development Indicators (WDI) and World Bank ASPIRE data.

Note: Coverage of SI programs shows the percentage of population participating in programs that provide old-age contributory pensions (including survivors and disability) and social security and health insurance benefits (including occupational injury benefits, paid sick leave, maternity, and other SI). GDP = gross domestic product; ILO = International Labour Organization; PPP = purchasing power parity; SI = social insurance.

6.3 METHODOLOGY

This chapter uses data from multiple sources described earlier in the report, including (a) a global random domain intercept technology (RDIT) survey of gig and non-gig workers; (b) platform surveys;¹³³ (c) Interviews with management of gig platforms, with policy makers, financial institutions, and relevant private sector players; and (d) focus group discussions with participants of digital worker operations supported by the World Bank. The data for empirical assessment in this chapter were collected by using a standard set of questions in the social protection module of the

¹³³ See appendix E for a description of the platform surveys. Due to sample size constraints, this chapter focused on Truelancer, Workana, Soyfreelancer, and Microworkers. World Bank colleagues from the East Asia and Pacific Social Protection and Jobs team also shared analysis from a survey from March to April 2022 of informal-sector workers in Indonesia, which sought to determine participation in old-age saving programs.

survey instrument.¹³⁴ The global survey was collected in partnership with RIWI and covers gig and non-gig workers across 17 countries working on several platforms. The global survey had fewer questions than the platform surveys and was conducted in 12 languages in addition to English to reach non-English-speaking populations. Complete surveys were collected from 7,015 respondents, including 956 responses from online gig workers and the rest from respondents who had never done any gig work. Platforms discussed in this chapter include Workana,¹³⁵ Truelancer,¹³⁶ Wowzi,¹³⁷ and Microworkers.¹³⁸ The Workana survey was conducted in collaboration with the Inter-American Development Bank (IDB) social protection team. Note that because of differences in the profile of work done on these platforms, the findings from the survey may reflect differences in the characteristics of these workers. For instance, tasks posted on Workana and Truelancer comprise relatively high-skilled digital work, whereas tasks on Microworkers, which hosts large technology companies that outsource short data tasks such as labeling images, last a few seconds to a few minutes. The chapter also uses analysis of data collected from a survey of beneficiaries of a World Bank-funded operation: the Pakistan Digital Jobs for Khyber Pakhtunkhwa Project, which was a provincial project in Khyber Pakhtunkhwa province focused on supporting regulations, institutions, and capabilities with the objective of promoting job creation and growth.

6.4 SOCIAL INSURANCE COVERAGE AMONG SURVEYED GIG WORKERS

Most online gig workers currently do not receive any insurance coverage from platforms.

Platforms that enable gig work typically have the same model: Customers or clients post tasks they need completed on an online platform, and gig workers bid for these tasks. Once the task is complete, the requestor pays the gig worker, with the mediating platform taking a percentage of the gig worker's fee. Therefore, there is usually no contractual employer-employee relationship between gig workers and the platforms where they obtain tasks. Thus, gig workers have to contribute to public or private SI programs outside the platform.

Across platforms, there is a wide range in shares of workers reporting a lack of coverage.

About half of gig workers on Workana do not subscribe to a pension or retirement program (Figure 6.3, panel a). In República Bolivariana de Venezuela, 73 percent of gig workers report not subscribing to a pension program. Brazil has the greatest share of gig workers reporting that they contribute to a pension or retirement plan. On Truelancer, close to 60 percent of surveyed gig workers do not subscribe to any health insurance plan, 30 percent subscribe to publicly provided health insurance, and just 15 percent subscribe to private health insurance (Figure 6.3, panel b). In Nigeria, three-quarters of gig workers do not subscribe to any pension or retirement plan. Across all three platforms, República Bolivariana de Venezuela and Nigeria are among the countries with large shares of uncovered workers, ranging from 73 to 77 percent.¹³⁹ A large percentage of Kenya-based gig workers on Truelancer and Microworkers report that they have access to a government-provided pension or retirement scheme. Onduko, Gweyi, and Nyawira (2015) studied retirement planning in Kenya and found that financial literacy, income, and a respondent's education level are significant determinants of retirement planning. Analysis of 2020 Afrobarometer Survey data confirms the relatively high level of financial literacy among Kenyans compared to other Africans. The Kenyan case is explored in more detail in Box 6.1.

¹³⁴ See appendix E for further details.

¹³⁵ See <https://www.workana.com/en/>.

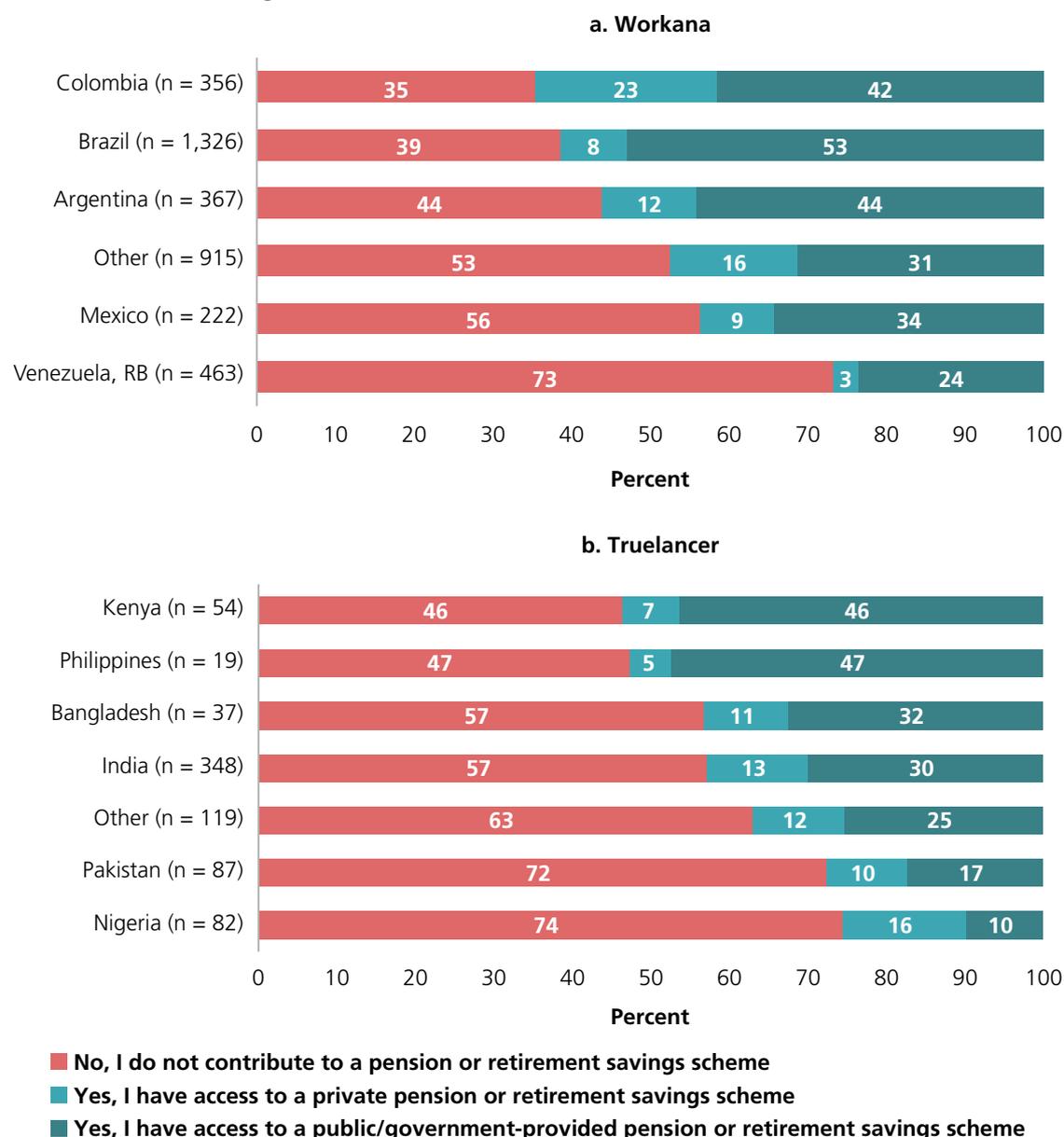
¹³⁶ See <https://www.truelancer.com/>.

¹³⁷ See <https://www.wowzi.co/>.

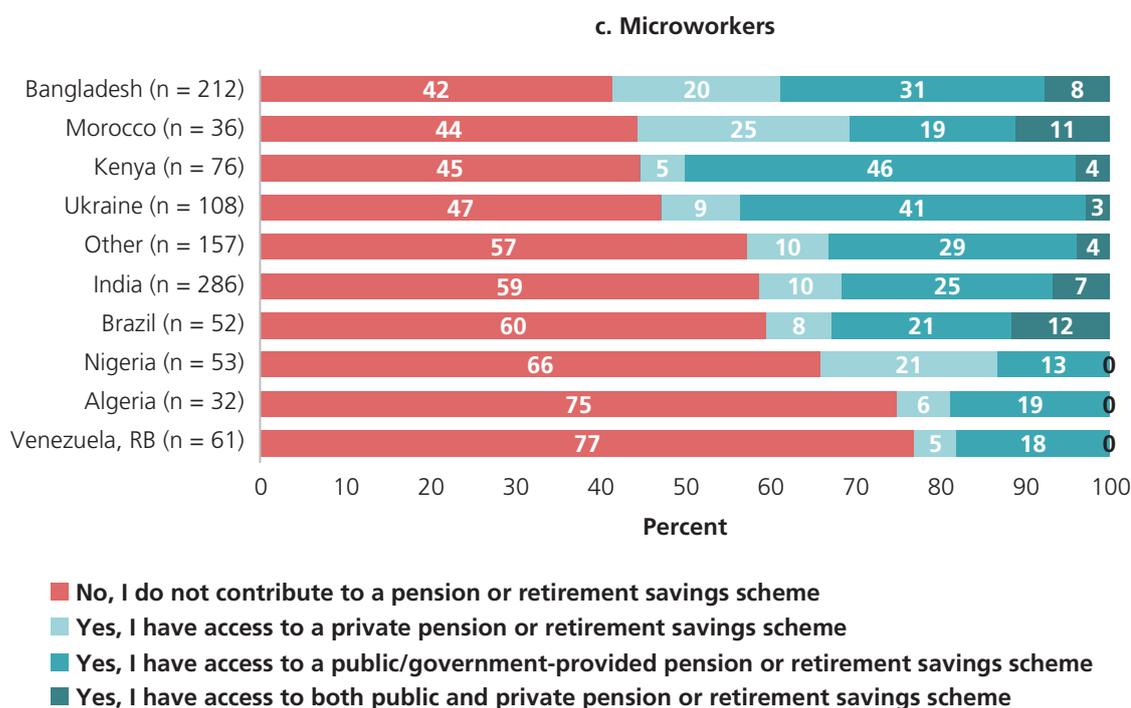
¹³⁸ See <https://www.microworkers.com/>.

¹³⁹ According to the World Bank's Social Protection Compass, 70 percent of the world's population lacks any comprehensive SI (World Bank Group 2022).

FIGURE 6.3: Question to gig platform workers: Do you contribute to a pension or retirement savings scheme?



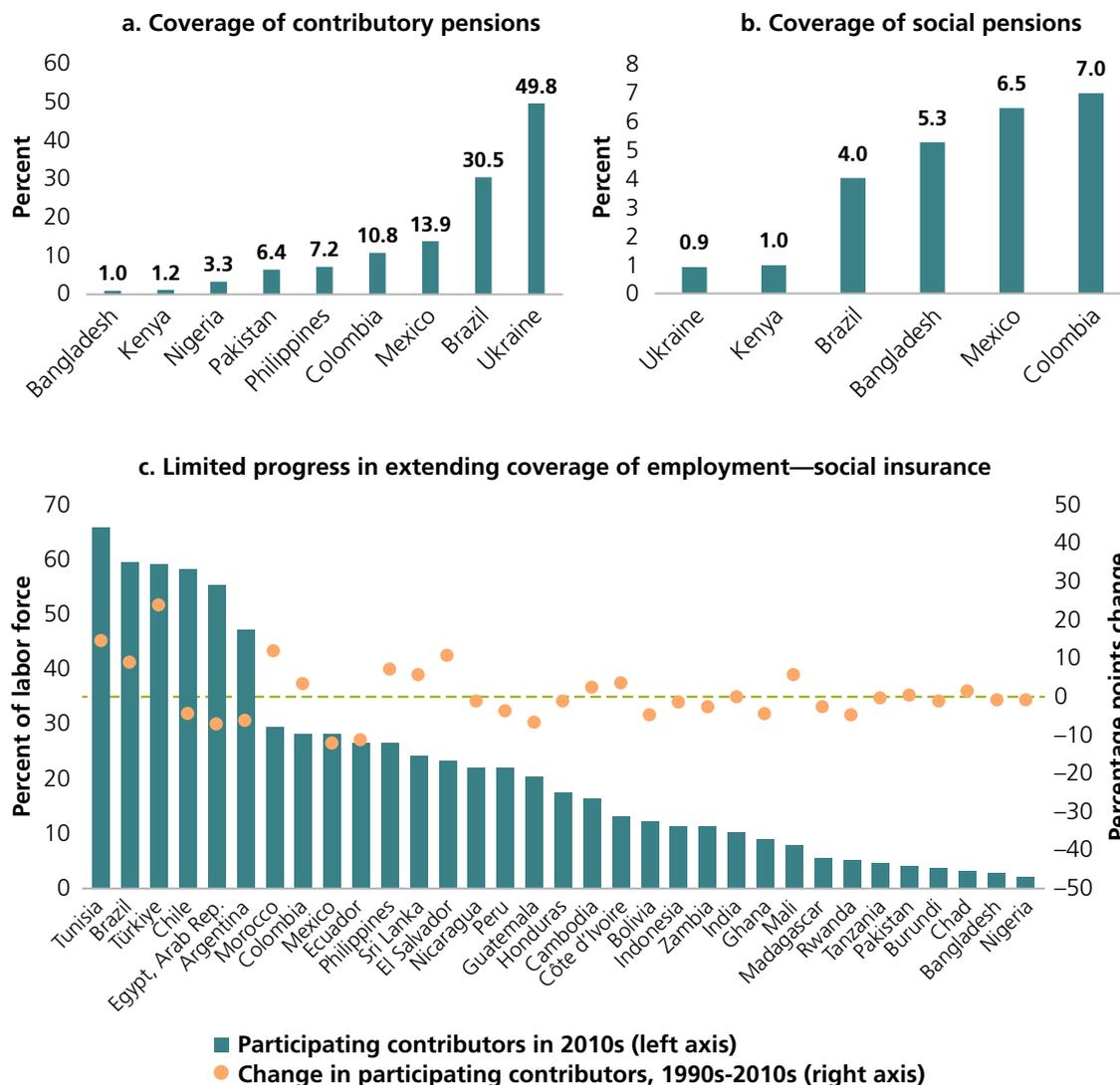
(Continued)

FIGURE 6.3: (Continued)

Source: Team analysis using platform survey data.

Pension coverage of the general population in select countries confirms trends observed in the platform surveys. We used data from the World Bank's ASPIRE database to understand pension coverage in the general population in the countries previously mentioned. The share of the population participating in contributory pensions (including direct and indirect beneficiaries) ranges from 1 percent in Bangladesh to close to 50 percent in Ukraine, with a clear association with income per capita, as noted earlier. Colombia-based gig workers were least likely to report *not* contributing to a pension or retirement plan, and as Figure 6.4, panel a, suggests, contributory pension coverage in Colombia is better than in Nigeria, where gig workers were most likely to *not* contribute to pension programs. Figure 6.4 illustrates the muted growth in coverage with a few exceptions. As a benchmark, globally, the International Labour Organization (ILO) estimates that 70 percent of the world's population lacks comprehensive social insurance (ILO 2017). This low level of coverage has persisted over time and, within countries, SI coverage is concentrated usually among people in the upper half of the income distribution. The estimated coverage rates for surveyed gig workers therefore suggest above-average performance compared to the global benchmark of 70 percent.

FIGURE 6.4: Pension coverage, from the ASPIRE database



Source: For figures a and b: Team analysis based on data from World Bank ASPIRE dataset and for figure c: Rutkowski (2018). Note: For panels a and b, the latest year available varies by country, but the series were restricted to data from 2015 onward. In panel a, coverage (percent) of contributory pensions = percentage of population participating in contributory pension programs (includes direct and indirect beneficiaries). In panel b, coverage (percent) of social pensions = percentage of population participating in social pensions programs (includes direct and indirect beneficiaries). For panel c, rates of participation in contributory pension plans from the 1990s to the 2010s are shown. The dashed line indicates no change in rates of contribution over time.

The share of surveyed gig workers who do not subscribe to health insurance plans is even larger than the share who do not have pension coverage (Figure 6.5). For health insurance, we observed patterns similar to those we found for the question on pensions. Kenya-based gig workers are least likely to report not subscribing to any health insurance plans, and Nigeria- and República Bolivariana de Venezuela-based gig workers on Workana or Microworkers are most likely to report not having health insurance subscriptions, either public or private. As Box 6.1 illustrates, subscription to health insurance programs among Kenya’s gig workers may be driven by high subscription rates among nonyouth (ages 25+) and educated workers.

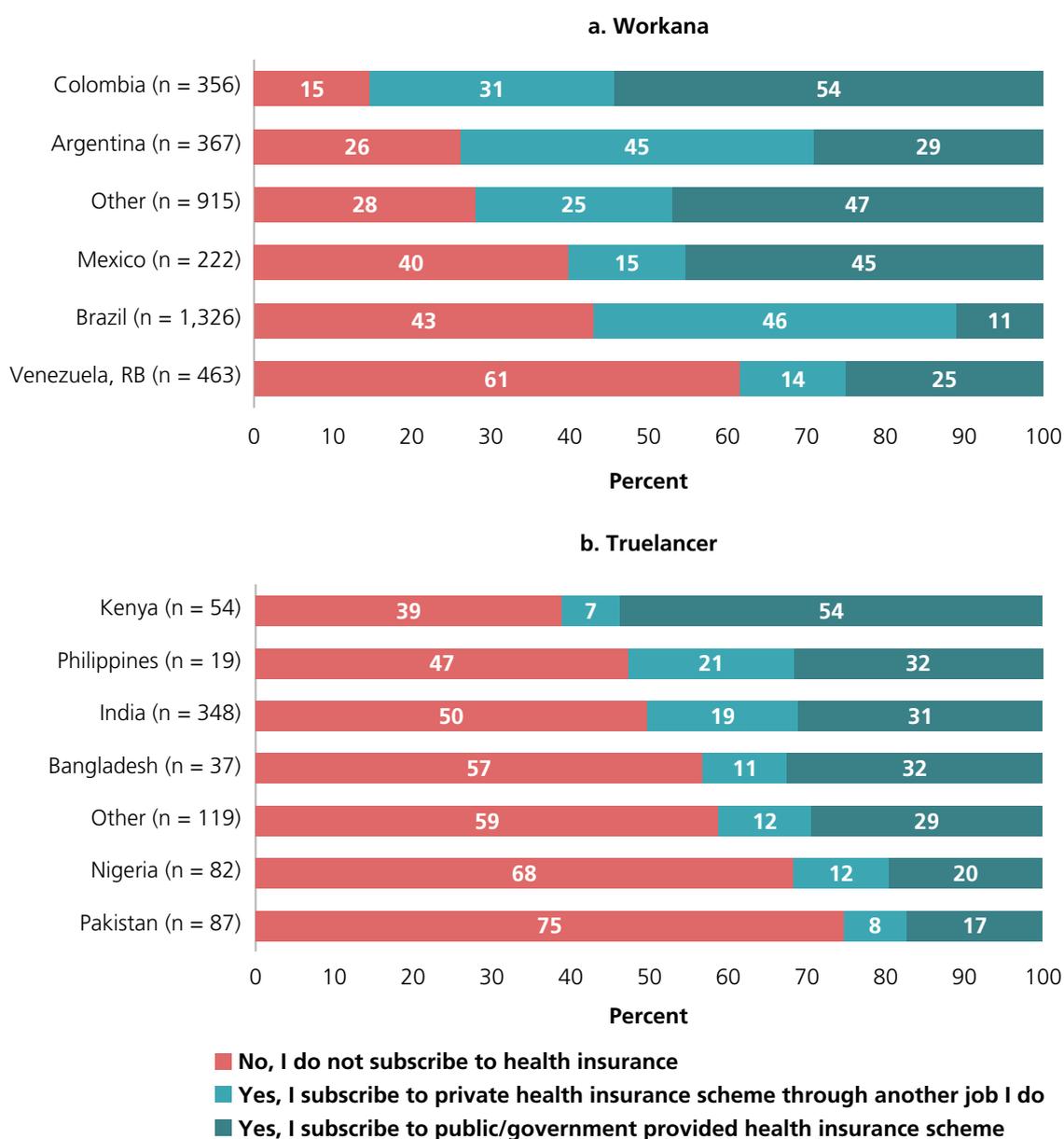
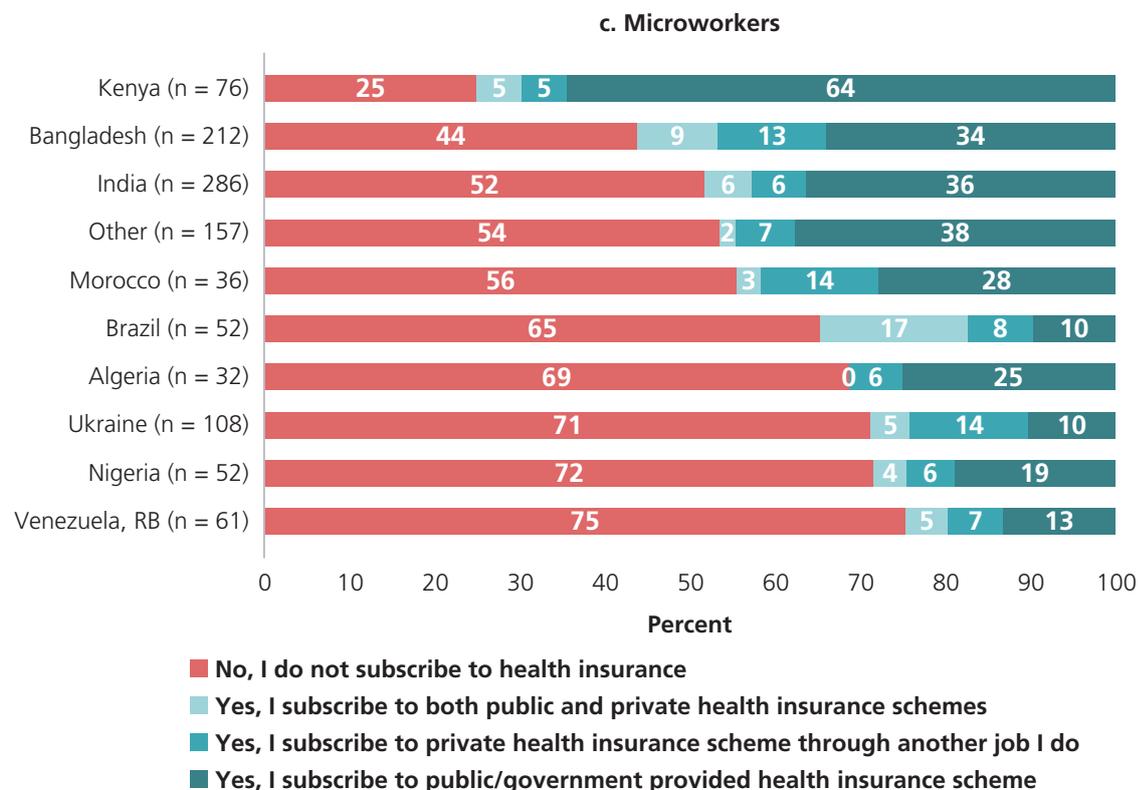
FIGURE 6.5: Question to gig workers: Do you contribute to a health insurance scheme?*(Continued)*

FIGURE 6.5: (Continued)



Source: Study team analysis using platform survey data.

BOX 6.1: SOCIAL INSURANCE AMONG PLATFORM WORKERS IN KENYA

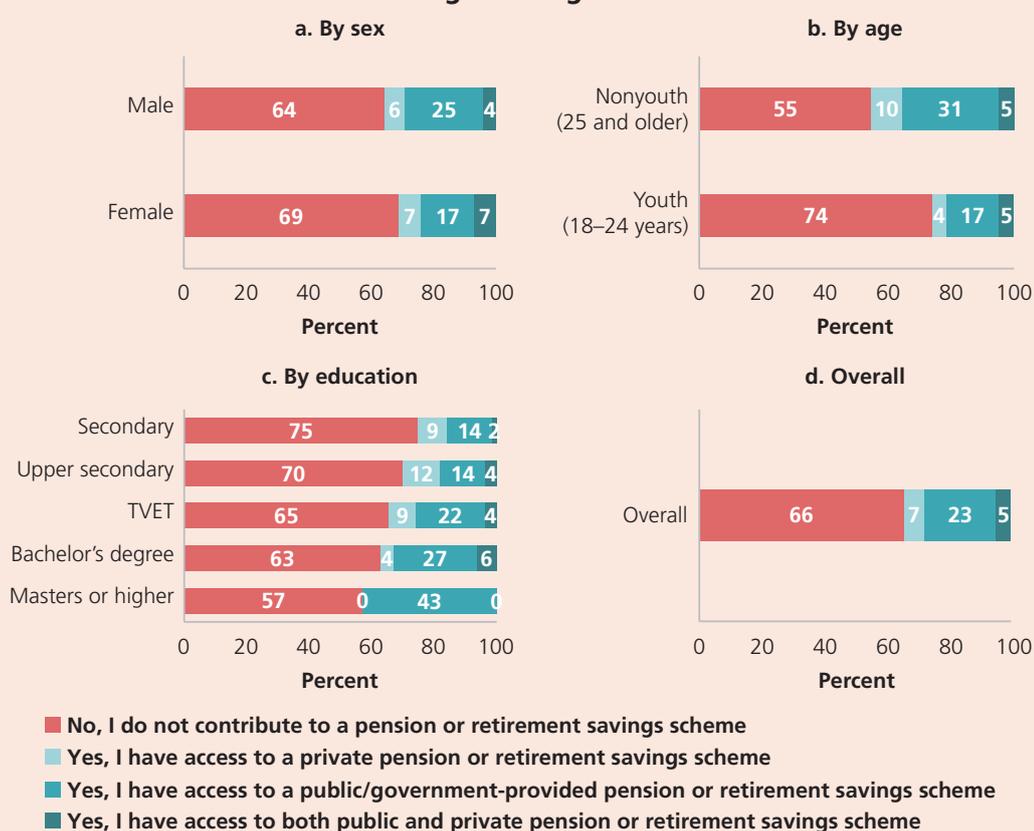
A greater share of gig workers in Kenya reported subscribing to social insurance than in the other countries surveyed.

Pension

Just over a third (35 percent) of Wowzi's Kenya-based gig workers contribute to public or private retirement or savings plans (figure B6.1.1, panel d). Male freelancers are 8 percentage points more likely than female freelancers to have access to government-provided plans (panel a). Youth are 14 percentage points less likely than nonyouth to have access to government-provided retirement programs (panel b). In terms of education, as the self-reported highest level of education increases, so does the probability of having a retirement savings plan. Gig workers with a master's degree or higher are 18 percentage points more likely to report having some form of pension compared to gig workers with up to a secondary education (panel c). Onduko, Gweyi, and Nyawira (2015) studied retirement planning in Kenya and found that financial literacy, income, and a respondent's education level are significant determinants of retirement planning.

(Continued)

BOX 6.1: [Continued]

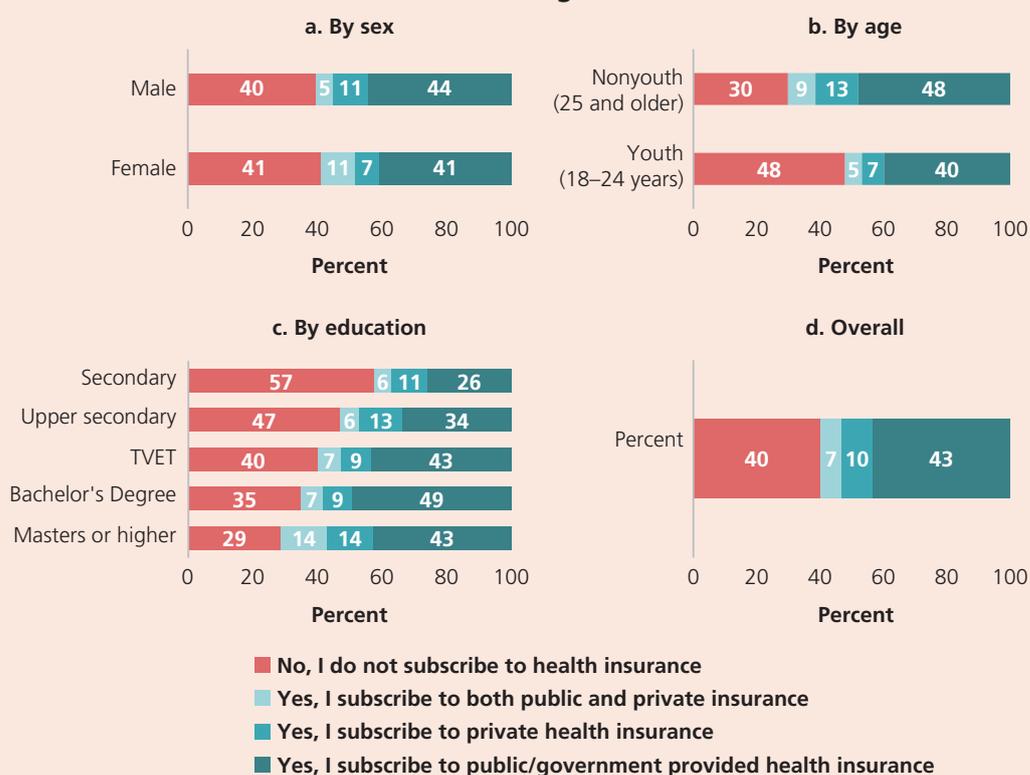
FIGURE B6.1.1: Pension coverage among Wowzi freelancers**Health insurance**

In Kenya, health insurance is provided by the National Hospital Insurance Fund (NHIF) and by private, employer-provided, and community-based and micro-health insurance plans (Kazungu and Barasa 2017). Like Truelancer's Kenya-based gig workers, 60 percent of Wowzi's Kenya-based gig workers subscribe to public or private health insurance, or both. Figure B6.1.2 illustrates the heterogeneity within workers on the same platform. There is no discernible difference by sex. Youth are 18 percentage points less likely than nonyouth to report having some form of health insurance subscription. By education, as the self-reported highest level of education increases, so does the probability of health insurance coverage. Gig workers with a master's degree or higher are 28 percentage points more likely than gig workers with up to a secondary education to report having some form of health insurance coverage.

(Continued)

BOX 6.1: [Continued]

FIGURE B6.1.2: Health insurance among Wowzi freelancers



In sum, while gig workers in the countries and platforms studied are overwhelmingly likely to report not having a pension or a health insurance subscription, their underinsurance rates are better than the global average. With a few exceptions, including Nigeria and República Bolivariana de Venezuela, the share of gig workers who reported not having SI is lower than the 70 percent global average. Furthermore, patterns observed in the platform survey data mirror country trends, with a positive correlation between SI coverage and economic development. Next, we turn to the question of what may be driving the underinsurance of gig workers.

6.5 WHAT CONSTRAINS SOCIAL INSURANCE COVERAGE FOR GIG WORKERS?

This section employs a reading of the gig work literature to discuss potential drivers of low SI coverage among gig workers. At the intersection of supply and demand are coordination challenges and market failures, including a lack of codified laws and regulations that guarantee social protections not only for freelancers, but also for informal and nonstandard workers in general, including own-account, temporary, and part-time workers and those with employee-sharing arrangements.

This section details the potential drivers of low coverage as being the lack of the following: (a) clear classification of status in employment, (b) systems to cover self-employed workers or people in informal employment broadly, and (c) collective bargaining among gig workers. These drivers are summarized in Table 6.1.

TABLE 6.1: Constraints to insuring gig workers

Challenge	Implications for social insurance coverage
Lack of clear classification of status in employment	There is considerable debate on how gig workers should be classified. Most gig workers are currently treated as independent contractors or self-employed, which excludes them from the system of employer-linked benefits.
Lack of systems to cover self-employed workers or people in the informal sector	While some gig workers are correctly classified as self-employed, most social security programs exclude self-employed workers. Informal-sector programs are being deployed in a growing number of countries to provide an entry point to cover gig workers, too.
Lack of collective bargaining among gig workers	Independent-contractor status limits organizing, since efforts may be seen as a form of collusion, which in turn violates antitrust laws. Gig workers are often engaged by a multitude of dispersed clients and platforms, making it difficult for workers to identify targets for collective action.

Another point to note is that one of the main challenges in seeking to effectively regulate gig work, especially *online* gig work, at the national level is that agents in this labor marketplace act not only nationally but also transnationally (Novitz 2020). The cross-border nature of online gig work often makes it difficult for gig workers to understand the applicable legislation on requirements about social security contributions and for governments to make the institutional arrangements to ensure that workers are effectively covered. Communication through platform interfaces, for example, or through relevant gig worker organizations could help gig workers understand both their obligations and their entitlements. Before this can happen, however, mechanisms for coordination between countries are necessary to determine the applicable tax, labor, and social security rules so that stakeholders have more clarity over what information to communicate. Additionally, the rules should be accompanied by cross-border cooperation over their enforcement.¹⁴⁰

Lack of clear classification of status in employment: Employees or independent contractors?

The question of how platform workers should be classified has attracted considerable debate and triggered court cases, most of which have been in developed countries. In most instances, platform workers are classified as independent contractors, and the platforms see themselves simply as intermediaries providing a digital marketplace that enables buyers and sellers of services to find each other. However, there is debate on whether platforms are more than just intermediaries, given the extent to which some platforms use innovative algorithms to control how work is allocated, managed, and supervised (De Stefano et al. 2021). Hiessl (2020) analyzed court cases in which an employment relationship with either a company operating a digital platform or a company using a platform to source its workforce was claimed or found to exist. Table 6.2 gives an overview of the decisions and their outcomes in relation to different platforms.¹⁴¹ It is clear from these decisions that national definitions of “employee,” as interpreted by these courts, contain elements of direction, authority, and control, acknowledging that employers traditionally expect their employees to be subject to instruction, supervision, monitoring, and disciplinary power.

¹⁴⁰ To this end, ILO’s Global Commission for the Future of Work has called for an international governance system for digital labor platforms that would ensure minimum rights and protections for workers on these platforms, including social protection, following the example of the Maritime Labor Convention, 2006. Nevertheless, building consensus for an international governance system of platform work might take years. In the meantime, bilateral agreements between platforms and gig workers could help improve social protection in platform work.

¹⁴¹ Based on the analysis of 175 judgments and administrative decisions in the 15 European countries where platforms have so far been subject to such decisions: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

TABLE 6.2: Examples of court cases on classifying gig workers

Type of platform	Judgment, decision, or outcome	Reasoning and rationales
Ride-hailing platforms	There are indications for a robust classification as employees (or an <i>intermediate status</i> , such as “workers” in the United Kingdom) in the six countries where there is case law for them. ^a	Rulings point to the limitations of the drivers’ theoretical freedom to accept or reject riders, for example, when an app penalizes the repeated use of the option to cancel rides. The platform’s (or its algorithm’s) unilateral determination of pay is crucial in virtually all decisions that end up classifying their workers as employees.
Food, parcel, and grocery delivery platform	Tendency toward classification of riders as employees . ^b	Judgments across countries point out that despite the absence of specific and mandatory instructions for each individual task , platforms determine and dominate all aspects of the service performed.
Platforms offering services in private households	Mixed outcomes (including cleaners and performers of errands for private households and including handyman tasks, relocation help, and so on). ^c	Platforms often enable customers to pick an individual (rather than assigning a worker based on an algorithm). There is also individual agreement of prices and specification of tasks between the cleaner and the customer.
Platforms providing services to businesses	Mixed outcomes from judicial assessment only in Austria, France, and Germany. The most recent judgment in Germany at the highest level ruled in favor of employee status.	Crowdsourcing platforms, which evaluate the worker’s submissions and decide whether to accept tasks as correctly completed, were deemed employers. However, the lack of supervision during the process of task completion led some courts to reject the employer status.

Source: Hiessl 2020.

a. **UK:** Uber BV and Ors v Aslam and Ors [2021] WLR(D) 108, [2021] ICR 657, [2021] UKSC 5.

Switzerland: Cour d’appel civile du Canton de Vaud [Vaud court of appeals] Apr. 23, 2020, HC/2020/535.

Netherlands: Rechtbank Amsterdam [Amsterdam Civil Court] Sept. 13, 2021, ECLI:NL:RBAMS:2021:5029 (Federatie Nederlandse Vakbeweging/ Uber B.V.)(Neth).

Spain: Inspección de trabajo [Labor Inspectorate] Mar. 2021 (Cabify) (Spain), <https://govern.cat/salaprensa/notes-premsa/401344/inspeccio-treball-catalunya-sanciona-cabify-dues-empreses-subcontractistes-ett-cessio-illegal-persones-treballadores>.

b. **Ireland:** Karshan (Midlands) Trading as Domino’s Pizza v. Revenue Commissioners [2019] IEHC 894 (Ir.). The UK is the exception. Evidence from Belgium, Finland, and Switzerland is limited

c. The Danish Competition Council’s decisions on Hilfr and Happy Helpers refused to see those platforms as employers, and the Norwegian and Swedish Labor Inspection’s decisions to reclassify Vaskerhvit, Taskrunner, and Tiptapp as employers have already been or are likely to be overruled.

In an effort to establish clear guidelines, the European Commission proposed a Directive (EC 2021), consisting of five criteria to be used to determine whether a platform is effectively an employer of a gig worker. The platform is an employer if it:

- Effectively determines or sets upper limits for the level of remuneration.
- Requires the person performing platform work to respect specific binding rules with regard to appearance, conduct toward the recipient of the service, or performance of the work.
- Supervises the performance of work or verifies the quality of the results of the work, including by electronic means.
- Effectively restricts the freedom, including through sanctions, to organize one’s work, in particular the discretion to choose one’s working hours or periods of absence, to accept or to refuse tasks, or to use subcontractors or substitutes.
- Effectively restricts the possibility of building a client base or performing work for any third party.

If the platform meets the necessary criteria, it is legally presumed to be an employer, implying that platform workers will have access to (a) guaranteed rest time and paid holidays; (b) at least the national or sectoral minimum wage (where applicable); (c) safety and health protection; (d) unemployment, sickness, and health care benefits; (e) parental leave; (f) pension rights; and (g) benefits relating to accidents at work and occupational diseases (European Labor Authority 2022).

In the United States, subnational authorities have developed rules to classify gig workers.

Iowa has a law that defines “marketplace contractors” and classifies them as independent contractors for all purposes under state or local law. The state of Utah’s Service Marketplace Platforms Act presumes that a “building service contractor” is an independent contractor. The Texas Workforce Commission, which is the agency responsible for administering unemployment benefits and assessing unemployment taxes, has adopted a rule which stipulates that certain workers who provide services via app-based businesses and websites cannot be considered employees for unemployment insurance purposes. These acts have different scopes but share one feature: they exclude the existence of an employment relationship and thus eliminate the possibility of accessing employer-linked protections for gig workers (De Stefano et al. 2021). In contrast, 20 states in the United States presume gig workers to be employees unless an employer can pass the so-called ABC test, showing that the individual is truly an independent entrepreneur if *all* of the following are true:

- The work is done without the direction and control of the employer.
- The work is performed outside the usual course of the employer’s business.
- The work is done by someone who has their own independent business or trade doing that kind of work.

The ABC test establishes a protective, pro-employee test, which streamlines the process for workers to prove they are employees if they have been misclassified as independent contractors (Rhinehart et al. 2021). This is because the test establishes a presumption of employee status and shifts the burden onto the employer to demonstrate that the individual is truly an independent contractor in business on their own. Some US states apply the ABC test to help with the administration of their unemployment insurance programs. In 2018, the California Supreme Court held that the ABC test was the appropriate test for evaluating employee status under California’s Wage Orders, which contain portions of the state’s wage and hour laws. The ruling was hailed by worker advocates as a major step forward for misclassified workers. California state legislators introduced Assembly Bill 5 (commonly referred to as AB5)¹⁴² to codify the 2018 California Supreme Court decision into law. AB5 establishes that the ABC test is the operative test for determining coverage not only under California’s Wage Orders, but also under the California labor code, unemployment insurance, workers’ compensation, and other labor laws, with certain limited exceptions. The legislation passed in September 2019 and took effect in January 2020.¹⁴³

¹⁴² AB-5, Worker Status: Employees and Independent Contractors (2019–2020), https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB5.

¹⁴³ Legislation providing additional exemptions from the ABC test for certain music industry professionals, performing artists, freelance writers and photographers, and individuals who provide underwriting inspections, premium audits, or risk management or loss control for insurance or financial services industries passed and was signed in September 2020. In the meantime, Uber and Lyft were sued by the California attorney general, the California labor commissioner, and several city attorneys for misclassifying drivers as independent contractors. The lawsuits were successful in securing court rulings that drivers were employees under AB5, but those findings were undercut by the passage of Proposition 22, such that only claims for unpaid wages predating the passage of Proposition 22 remain in litigation. As a result of the passage of Proposition 22, more than 750,000 app-based drivers are now exempted from AB5 and deprived of employee status under California law (Jacobs and Reich 2020). Proposition 22 promises drivers an hourly income of at least 120 percent of the state minimum wage plus a health care stipend, totaling a minimum of \$15.60/hour (Jacobs and Reich 2020).

Some countries have opted to classify gig workers under an intermediate employment status category, between employees and the self-employed. In France, the intermediate category between employee and self-employed is called “auto-entrepreneur”; in Austria, it is referred to as “employee-like” status; in Italy, it is called “quasi-subordinate worker”; in Belgium and Slovenia, it is called “student work”; and in Croatia, it is called “contract for services.” In other countries, there is an ongoing debate on introducing a third status for platform workers.¹⁴⁴ The Supreme Court of the United Kingdom, for example, has decided that Uber drivers should be classed as “workers”¹⁴⁵—a category specific to the United Kingdom under which Uber drivers receive minimum wage and paid holidays but are not entitled to full labor protections enjoyed by “employees,” such as protection against unfair dismissal.¹⁴⁶ In Italy, the status of food delivery riders’ work as *lavoro etero-organizzato* (workers whose work is organized by someone else) was confirmed by various court rulings, including one by the Supreme Court (Hiessl 2020). The precise scope of rights enjoyed by this group is still subject to controversy, as evidenced by diverging outcomes in platform-related judgments regarding protection against dismissal and against a principal’s anti-union behavior (Hiessl 2020).

Countries in Latin America are still in the early stages of developing regulations around gig work (Cruz Villafaña 2022; Fairwork 2021). In Argentina, a bill has been advanced to protect workers on gig platforms. Proposed protections include a maximum 48-hour workweek, a daily rest time of at least 12 hours, minimum guaranteed remuneration, and a holiday off for every 120 hours worked. The bill also includes mechanisms to calculate the compensation in case of unjustified dismissal (De Stefano et al. 2021). Mexico is in the early days of formulating regulations to protect platform workers; the government is working with the Social Security Institute (IMSS) and the authorities of Mexico City on a plan to regulate digital platforms (Market Research Telecast 2021). Chile has a new law (no. 21.431), which distinguishes between independent and dependent digital platform employees, depending on whether the requirements set out in article 7 of the Chilean Labor Code are met—that is, if gig work includes elements of *subordination* and *dependence*. Under the labor law system in Chile, subordination and dependence are understood as the power of command, direction, control, and supervision exercised by an employer over an employee, either directly or indirectly, by giving orders to the employee and by exercising disciplinary power when the employee commits misconduct (Salazar and Riveaux 2022). Under the new law, dependent workers’ health and safety rights are protected under the Chilean Labor Code: the onus is on the employer to take all the necessary measures for the effective protection of the life and health of its employees. The new law confers specific obligations on digital platform employers that offer on-demand services by imposing a protection duty on the employer regarding the safety and health of *dependent* digital platform employees. Critics of the new law, including the Fairwork Project, argue that, in practice, the fact that two possible forms of worker status exist on digital platforms may render the “dependent” category obsolete. Digital platforms may adjust their relationship with workers to avoid any indication that they should be classified as employees (Fairwork 2022; Salazar and Riveaux 2022). (See box 6.5 for an overview of Fairwork’s platform rating system.) In other words, the adjustment by digital platforms effectively creates “bogus” self-employment category.¹⁴⁷

Classification is not an issue yet in Sub-Saharan Africa. Unlike the discussion of gig work in advanced economies, the dialogue on gig work in many African countries largely has yet to focus on classification challenges (Ayentimi, Abadi, and Burgess 2022). In Kenya, Ethiopia, and Tanzania,

¹⁴⁴ Eurofound, Platform work: Employment status, employment rights and social, <https://www.eurofound.europa.eu/data/platform-economy/dossiers/employment-status#:~:text=The%20Unclear%20Employment%20status%20of%20Platform%20Workers>, and Frouin (2020).

¹⁴⁵ UK Supreme Court, Uber BV and others (Appellants) v Aslam and others (Respondents), Case ID: UKSC 2019/0029.

¹⁴⁶ “Employment Status,” <https://www.gov.uk/employment-status/worker>.

¹⁴⁷ <https://www.ftadviser.com/pensions/2022/06/15/rise-in-bogus-self-employment-will-lead-to-old-age-poverty/>

there is no legislation in place that mandates platforms to provide digital gig workers with welfare or social security protections. In 2020, Mercy Corps found that under Kenyan law, there was no specific employment legislation for digital gig workers, and platforms engaged digital gig workers as independent contractors through a contract for service. Gig workers under such a contract were not entitled to protections such as paid sick leave and annual leave, health insurance, or pension protections (Mercy Corps 2020).

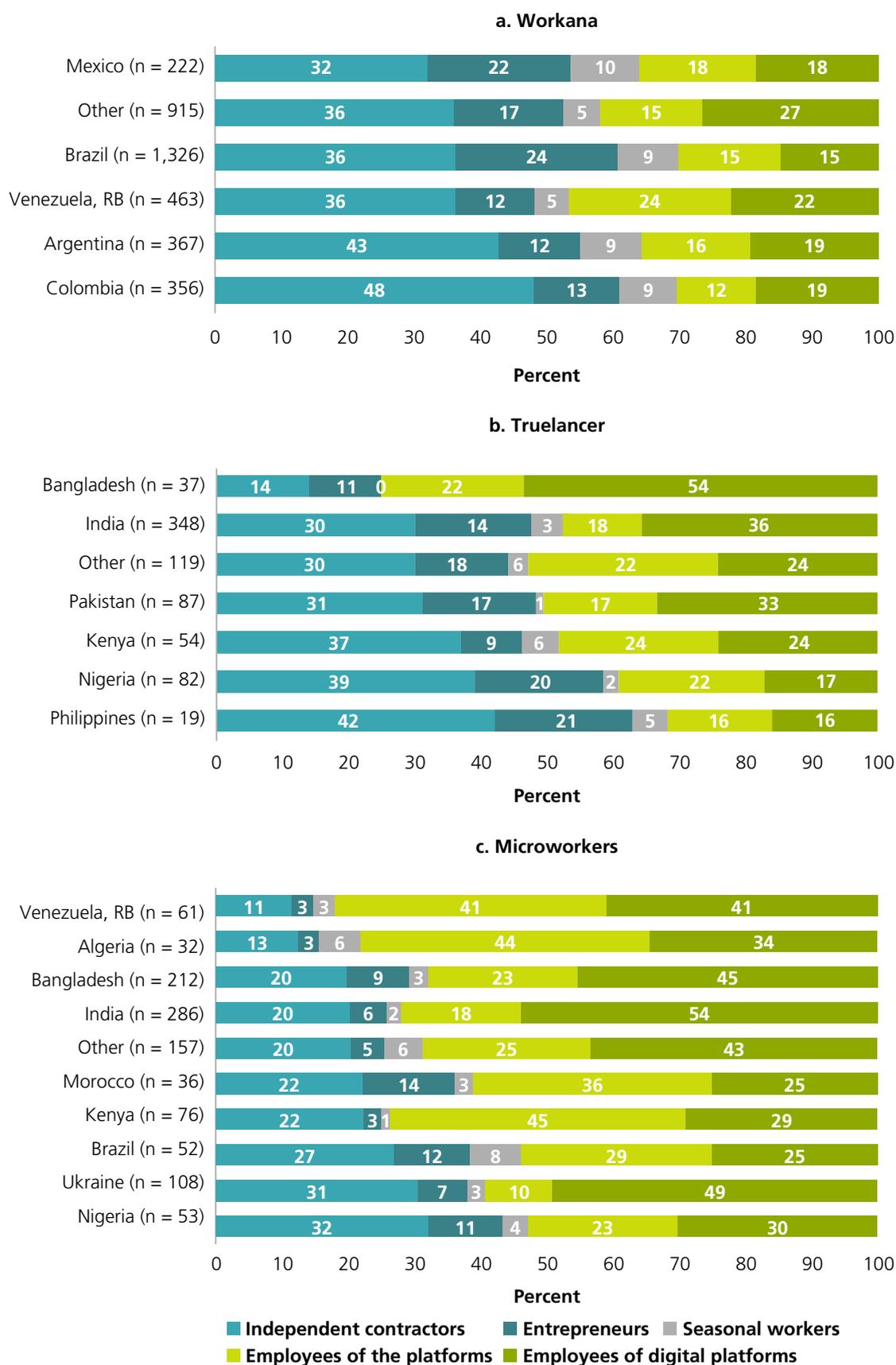
To summarize, in developed countries the issue of classification of gig worker status is being addressed through various mechanisms, including court cases and ballot measures. In Europe, outcomes of court cases over gig workers' status in employment point to the role of direction, authority, and control as key markers of whether one is genuinely self-employed (a gig worker) or a dependent employee. The court cases discussed frequently ruled in favor of employee status because of the role of platforms in assigning instructions to the workers and because of these platforms' control through supervisory, monitoring, and disciplinary power over gig workers. To establish clear guidelines, jurisdictions in the United States are taking steps to create tests to determine gig worker status in employment. Other developed countries have opted to classify gig workers under an intermediate employment status category, between employees and the self-employed. In the developing countries, the main constraint to SI coverage for workers is not so much the classification issue, but the high levels of informality in which most people work outside a standard employer-employee relationship, as will be discussed later.

How do gig workers classify themselves?

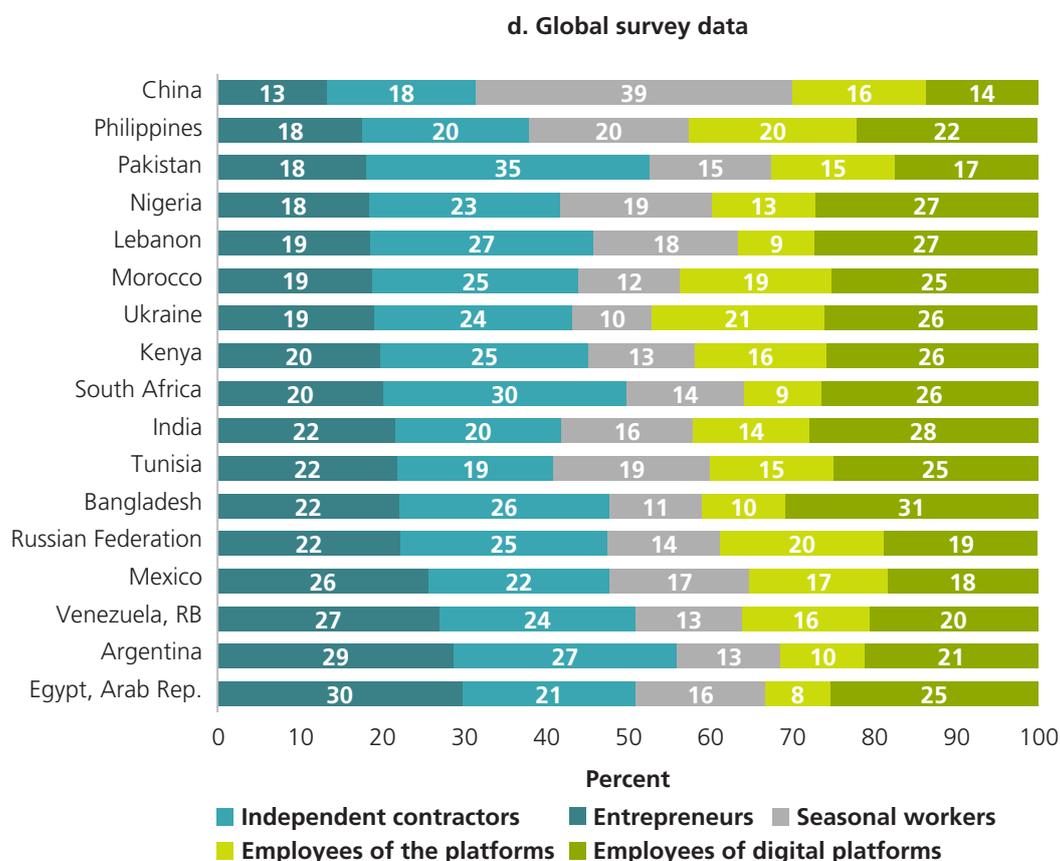
There does not appear to be a clear pattern in how gig workers self-classify (as illustrated in box 6.2). Freelancers on Workana and Truelancer were more likely to see themselves as self-employed (independent contractors or entrepreneurs) than as employees (employees of task posters or employees of platforms) (Figure 6.6; the self-employed and employee categories are shown in green and blue, respectively). Close to half of Workana freelancers in Colombia see themselves as independent contractors, while only 19 percent see themselves as employees of digital platforms. Across all five Workana countries with sufficient data, the status as self-employed (comprising independent contractors and entrepreneurs) is chosen over employee status (comprising employees of digital platforms and employees of task posters).

Responses by freelancers on the Microworkers platform show that not all freelancing work is the same. Figure 6.6, panel c, shows that respondents on Microworkers prefer to be labeled as employees of the platform or of task posters. In República Bolivariana de Venezuela, over 80 percent of Microworkers prefer the employee label, followed by 78 percent of workers in Algeria. The distinction may be due to the different nature of microwork compared to freelance gig work. Microworkers perform simpler tasks than traditional freelance gig workers do (for example, delivery workers and e-hailing drivers). Microtasks include work such as identifying and captioning images to nudge along AI operations, data entry, or simply clicking on ads to drive traffic (Jones 2021). Like other, similar platforms—such as Clickworker, which matches underemployed and jobless people with online piecework—Microworkers hosts contractors, often large tech companies, who outsource short data tasks like labeling images. Such tasks last a few seconds to a few minutes and are assigned to workers with few labor rights or secure hours (Jones 2021). According to Jones (2021), microwork is often so sporadic and poorly paid that it can hardly be called a job. Viewed in this light, it is not surprising that 70 percent of respondents on Microworkers prefer the employee label.

FIGURE 6.6: Question to gig workers: How do you classify your employment status?



(Continued)

FIGURE 6.6: (Continued)

Source: Study team analysis using platform survey data.

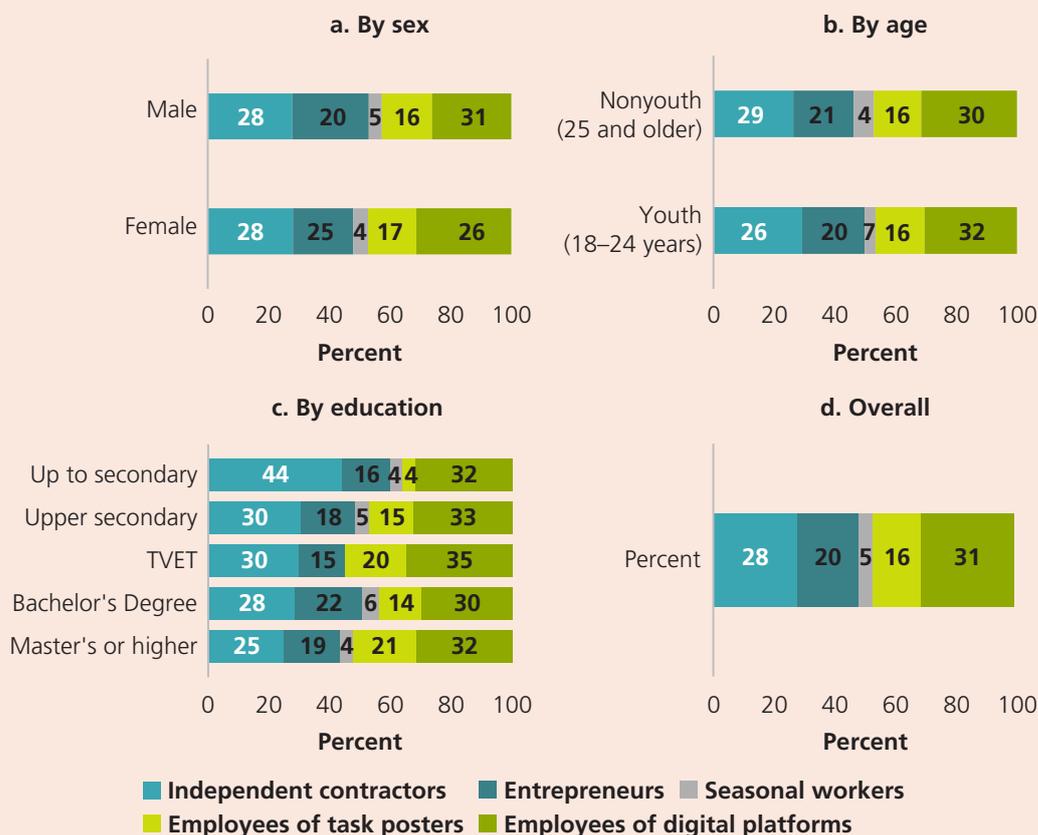
BOX 6.2: CLASSIFICATION OF PLATFORM WORKERS BY RESPONDENTS TO THE KP SURVEY, PAKISTAN

Figure B6.2.1 illustrates the heterogeneity within respondents to the Khyber Pakhtunwa (KP) survey. Men and women are just as likely to prefer the independent contractor label for gig workers, but women are 5 percentage points more likely to prefer the entrepreneur label instead. On the other hand, men are 5 percentage points more likely than women to prefer the label employee of digital platforms. There are no discernible differences by age (youth versus nonyouth). By education, as the self-reported level of highest education attained increases, preferences for independent contractor status decreases, making way for employee status (of either platforms or task posters). Respondents with a master's degree or higher are 19 percentage points less likely than respondents with up to secondary education to prefer the independent contractor description of gig workers.

(Continued)

BOX 6.2: [Continued]

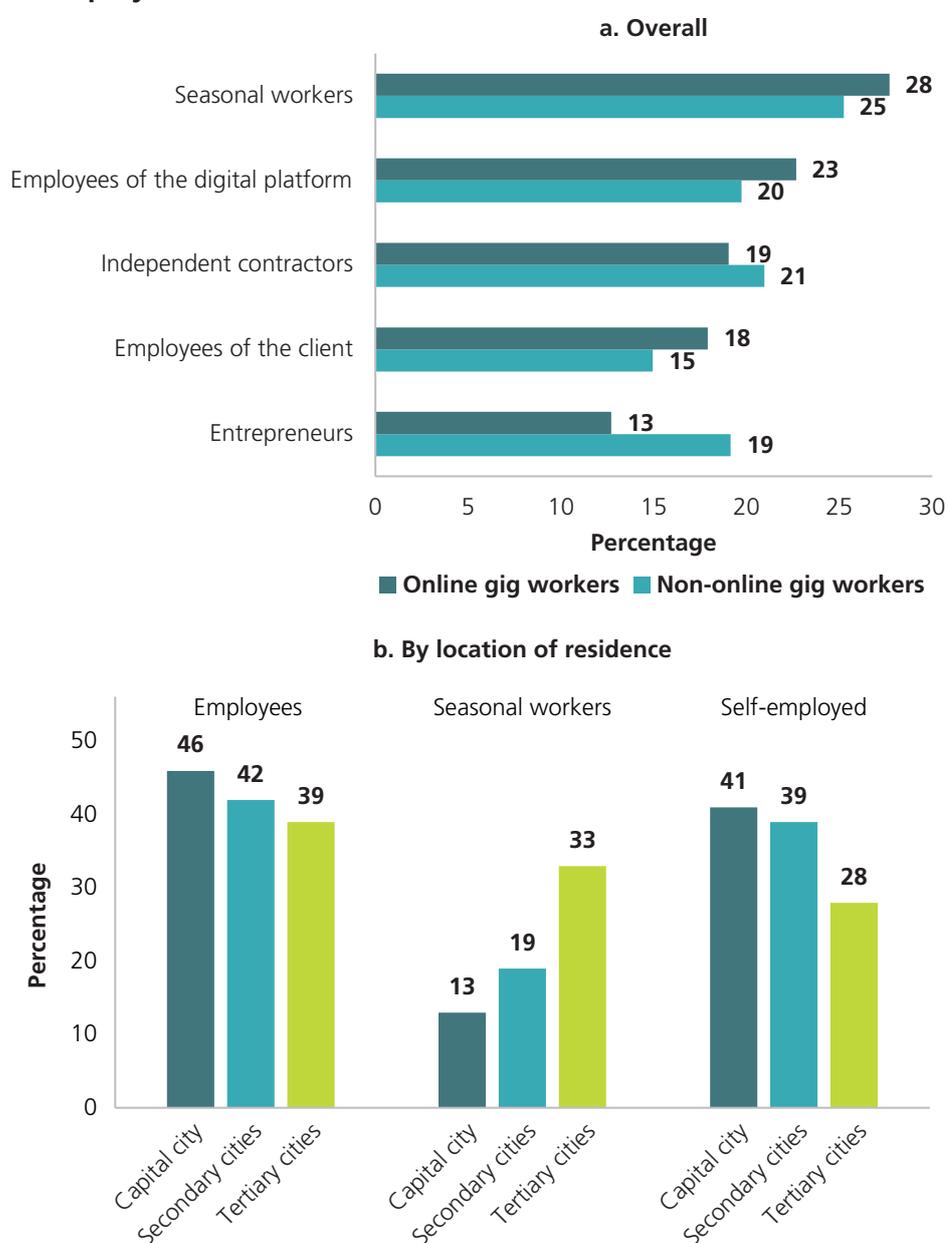
FIGURE B6.2.1: Responses to the KP survey



Source: Study team survey in Pakistan, 2022.
 Note: TVET = technical and vocational education and training.

And how do *non-gig* workers classify gig workers?

There are differences between how gig workers self-classify compared with how *non-gig* workers see gig workers' status in employment. Non-gig worker respondents to the study team's global survey were 4 percentage points more likely to say the most appropriate way to describe workers on digital platforms is as employees of the digital platforms. Nonetheless, the pooled category of self-employed dominates across gig workers and non-gig workers (Figure 6.7, panel a). A quarter of the gig workers consider themselves independent contractors, and more than one-fifth consider themselves entrepreneurs. About 53 percent think of themselves as employees of the digital platform or of the clients or as seasonal workers. Although the responses of gig workers and non-gig workers are not very different, more non-gig workers than gig workers describe gig workers as employees of gig platforms. The place of residence of online gig workers and their level of participation on digital platforms affect how gig workers define themselves. A higher percentage of respondents from capital cities than from other locations describe themselves as independent contractors (Figure 6.7, panel b). On the contrary, the share of gig workers who describe themselves as seasonal workers is highest in tertiary cities.

FIGURE 6.7: Non-gig workers' and gig workers' perceptions of gig worker status in employment

Source: Study team analysis using global survey.

Note: The figure in panel a compares the average percentage of informal employment between 2010 and 2015 with the same average between 2016 and 2021. Data are missing for several countries, notably China, which has shown a fast transformation over the past few decades.

For panels a and b: HIC = high-income countries; LIC = low-income countries LMIC = lower-middle-income countries; UMIC = upper-middle-income countries.

Are there differences in the characteristics of gig workers who self-classify as self-employed versus those who classify themselves as employees?

We conducted statistical tests of differences between self-employed (independent contractors and entrepreneurs) and employees (seasonal workers, employees of task posters, and employees of platforms). Table 6.3 illustrates that gig workers who classify as self-employed are on average younger, have less experience in the gig economy, and are more likely to have health and old-age insurance than other gig workers. There are no gender differences between preferred

classification types. By self-reported household income, gig workers who self-classify as employees appear to come from households with higher monthly incomes (Figure 6.11). We ran similar tests on results from the Kenya-specific platform Wowzi and found similar results. Among Kenyan freelancers, gig workers in precarious financial positions (those who are “regularly unable to make ends meet”) are significantly more likely to self-classify as self-employed. We also found that gig workers in Nairobi are significantly less likely than other Kenyan gig workers to self-classify as employees.¹⁴⁸ The analysis therefore suggests that access to SI among younger gig workers drives their preference to remain unattached to an employer.

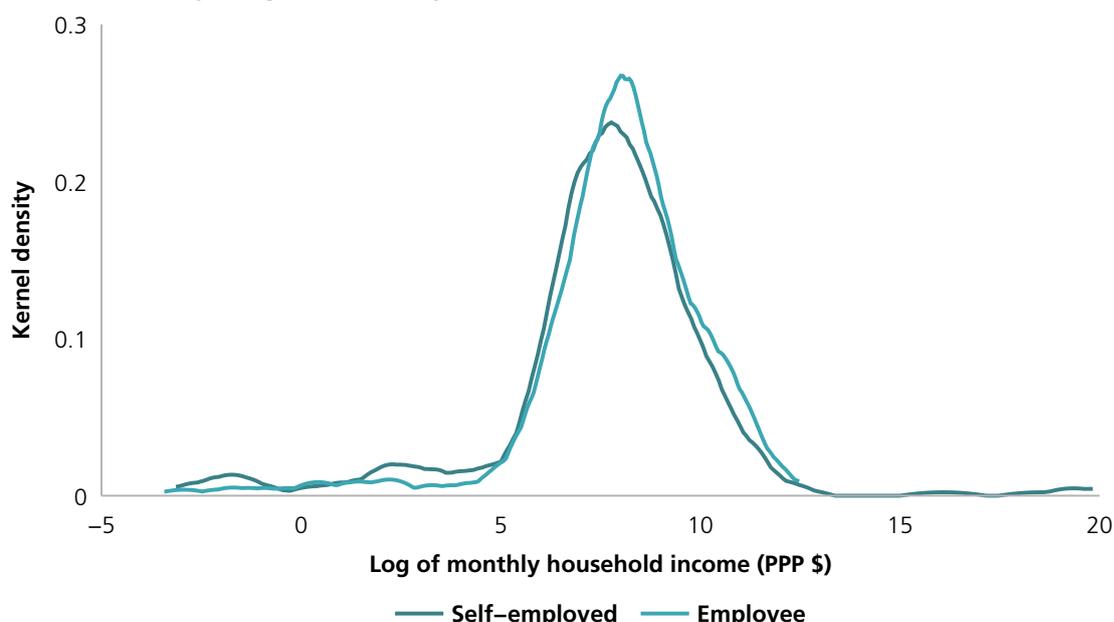
TABLE 6.3: Differences between gig workers who self-classify as self-employed versus those who classify as employees, global survey

Parameter	Mean (SD) result for gig workers			Difference (2-3) b/t
	All	Self-employed	Employee	
Age	30.36 (9.07)	29.32 (8.76)	31.56 (9.28)	-2.24**(-3.30)
Female	0.33 (0.47)	0.31 (0.46)	0.37 (0.48)	(0.07) (-1.85)
Married	0.42 (0.49)	0.42 (0.49)	0.41 (0.49)	0.01 (0.16)
More than 1 year of experience	0.56 (0.50)	0.52 (0.50)	0.61 (0.49)	-0.09*(-2.52)
25%+ monthly income from gig work	0.36 (0.48)	0.35 (0.48)	0.37 (0.48)	-0.01 (-0.40)
Regularly unable to make ends meet	0.48 (0.50)	0.51 (0.50)	0.45 (0.50)	0.06 (1.65)
Has health insurance	0.44 (0.50)	0.48 (0.50)	0.39 (0.49)	0.08* (2.22)
Has pension	0.39 (0.49)	0.49 (0.50)	0.28 (0.45)	0.21*** (5.99)
Total number of observations	746	376	345	721

Source = Study team.

Note: SD = standard deviation; b = coefficient; t = t statistic.

FIGURE 6.8: Distribution of monthly household income by preferred classification type, global survey



Source: Study team.

Note: Self-reported monthly household incomes were converted US dollars, purchasing power parity (PPP), using the conversion factor in the World Development Indicators (WDI). These were then converted to natural logs for analysis.

¹⁴⁸ Statistical test results for Kenya are available upon request.

In sum, countries, mostly developed, are at various stages of providing clarity on the question of gig worker status in employment. The classification of gig workers has implications for labor laws, taxes, and social welfare programs. While this does pose a challenge for gig workers to access SI, the labor market realities in developing countries (as outlined in the Overview) are characterized by high degrees of informality and diverse nonstandard forms of work with large populations not covered by labor regulations. In less developed countries, where informal self-employment is the standard, the more significant challenge to SI coverage is the general lack of programs for self-employed individuals or those in the informal sector. While at the country level there are no clear patterns in how gig workers self-classify, there is some evidence to suggest that welfare status and labor market experience may play a role. On average, gig workers who classify as self-employed are younger, have less experience in the gig economy, and are more likely to have health and old-age insurance. On the other hand, gig workers who self-classify as employees mostly come from households with higher monthly incomes. We also find that gig workers in precarious financial positions—namely, those who are regularly unable to make ends meet—are significantly more likely to self-classify as self-employed. The data therefore suggest a potential role for risk and vulnerability as potentially deterministic of the identification of the self-employed status.

Lack of systems to cover self-employed and informal workers, including gig workers

The bigger issue in the context of developing countries is undercoverage of SI for genuinely self-employed and informal workers. The previous section discussed the issue of “bogus” self-employment and reviewed possible tests to identify such infractions. However, this leaves the more important question of extending coverage to the genuinely self-employed gig workers. This section engages with that issue and the confounding challenge of informality.

The question on how to extend social protection coverage for self-employed workers is not new. It forms part of a larger discussion on social security access for all self-employed persons, gig workers or not. The question has already been explored in both developing- and developed-country contexts, yielding pointed policy recommendations, on which we build at the end of the chapter.¹⁴⁹ These actions have shown results. In Latin America, for example, between 2000 and 2013, pension coverage rates increased from 18 to 33 percent for own-account workers and contributing family workers. Health care coverage has similarly increased by more than 10 percentage points (ILO 2021, 11). However, the self-employed remain the least socially protected employment group, with coverage rates in Latin America between two and three times lower than the rates for salaried workers, depending on the type of protection (ILO 2021, 11).

A defining feature of self-employment in developing countries is that it is also frequently informal.¹⁵⁰ In these countries, the challenges accompanying the rise of new forms of work to some extent overlap with the larger challenge of informality (Figure 6.9) (Behrendt, Nguyen, and Rani 2019). About 90 percent of the labor force in low-income countries is doing informal work, and a very large share is self-employed. Workers in the informal economy are usually more susceptible to short-term shocks and the more catastrophic consequences of idiosyncratic shocks and covariate shocks (Guven et al. 2020). While the estimated gig worker population is small compared to the informal population, there are overlaps between these groups. Both are diverse

¹⁴⁹ See Packard et al. (2019) ; Durán-Valverde et al. (2013); Schoukens and Weber (2020); ILO (2020); OECD (2018); Jerg, O’Reilly, and Buschoff (2021).

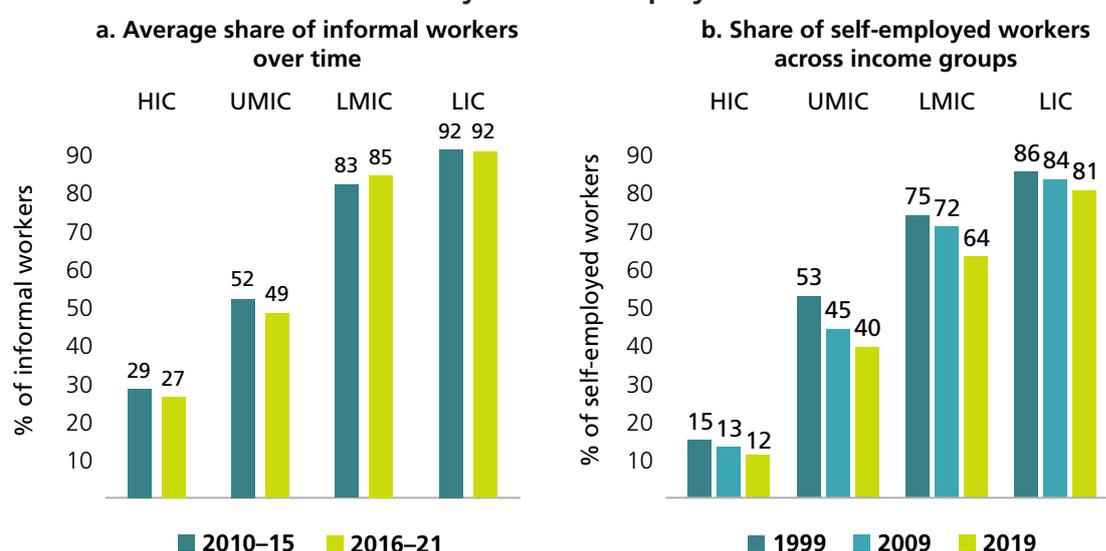
¹⁵⁰ The ILO defines informal employment as “working arrangements that are not subject to national labor legislation, income taxation or entitlement to social protection or certain other employment benefits.”

and fluid—people move in and out of jobs regularly, can hold several market engagements at the same time, and may hold jobs with characteristics of both economic formality and economic informality (Packard et al. 2019).

Gig workers, however, are more observable and hence easier for policy makers to identify, reach, and include in programs than informal workers, who often remain invisible.

This is especially because (a) gig workers have an identity on the platforms and (b) they use digital payments, leaving a digital trail to facilitate incremental formalization, if this is an objective of the government. Gig workers’ greater observability therefore makes platforms a possible direct entry point for policy makers trying to reach, regulate, and secure informal workers in broader social programs for informal workers. This observability was especially important during the COVID-19 pandemic, when governments tried to use digital means to make cash transfers to support vulnerable people.

FIGURE 6.9: Trends in informality and self-employment



Source: ILOSTAT.

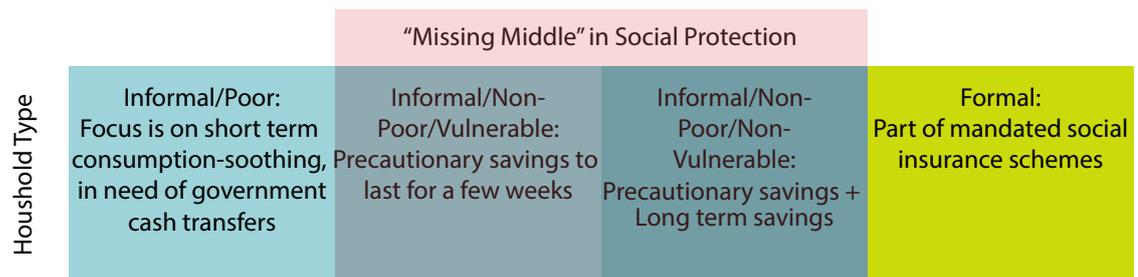
Note: The figure in panel a compares the average percentage of informal employment between 2010 and 2015 with the same average between 2016 and 2021. Data are missing for several countries, notably China, which has shown a fast transformation over the past few decades. For panels a and b: HIC = high-income countries; LIC = low-income countries; LMIC = lower-middle-income countries; UMIC = upper-middle-income countries.

Are gig workers in the “missing middle?”

Gig workers and other self-employed individuals typically fall into a missing middle when it comes to social protection. These workers are from nonpoor informal households, often not poor enough to be eligible for social safety net benefits and not well-off enough to be part of SI programs mandated for the formal sector (Figure 6.10) (Güven et al. 2020). Those authors present a simple yet powerful framework for understanding the missing middle in social protection. They use household surveys to assign households below the poverty line to the poor category at one end of a spectrum. At the other end are households that are not poor and that are part of the formal economy, the nonpoor formal households. The nonpoor informal households are not covered by traditional SI programs targeted at the small formal economy or by social assistance programs. These missed middle workers remain largely unobservable by government administrations. The authors argue that most social assistance programs focus on the extreme poor population in rural areas and penetrate less into urban areas, where gig workers are most likely to be found. Given this coverage dilemma,

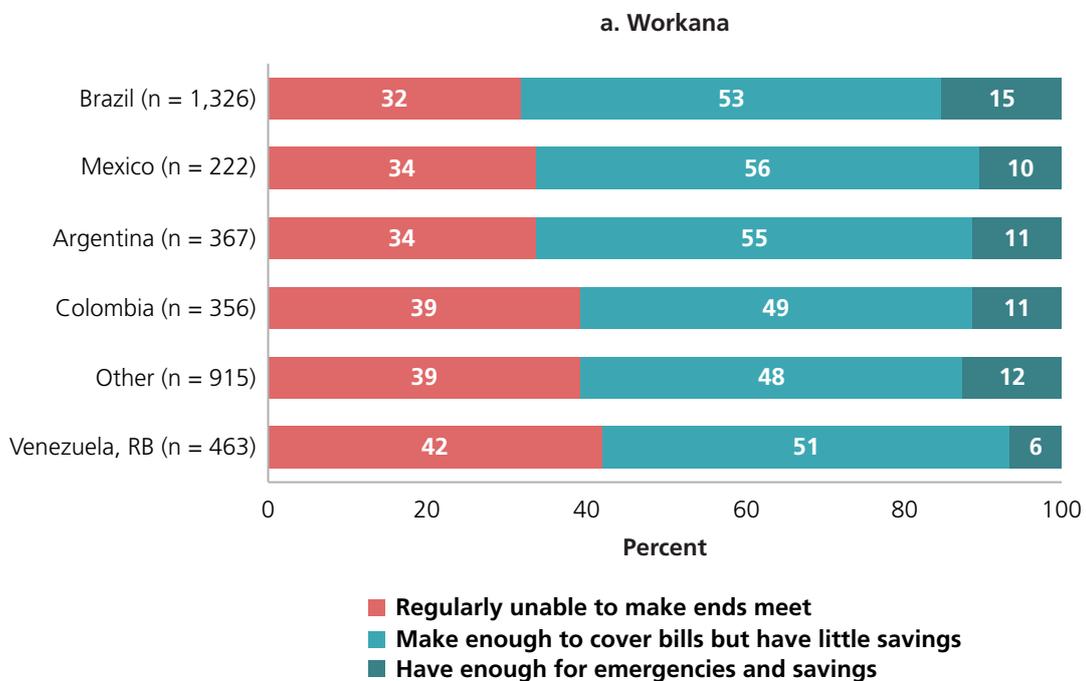
we examined where surveyed gig workers fall in the social protection typology (Figure 6.10). Given that we do not have household survey data for gig workers, we assess vulnerability on the precarity of one’s financial position—specifically, based on survey responses to the question “How would you best classify your financial position?” (Figure 6.11). Workers on Truelancer (Figure 6.11, panel b), who are from relatively lower-income countries, are likeliest to belong to “informal, poor” households needing short-term consumption-smoothing support, whereas those on Workana (Figure 6.11, panel a), in relatively higher-income Latin America and the Caribbean, are likely to belong to the “informal, non-poor, vulnerable” group.

FIGURE 6.10: Typology of households by social protection coverage



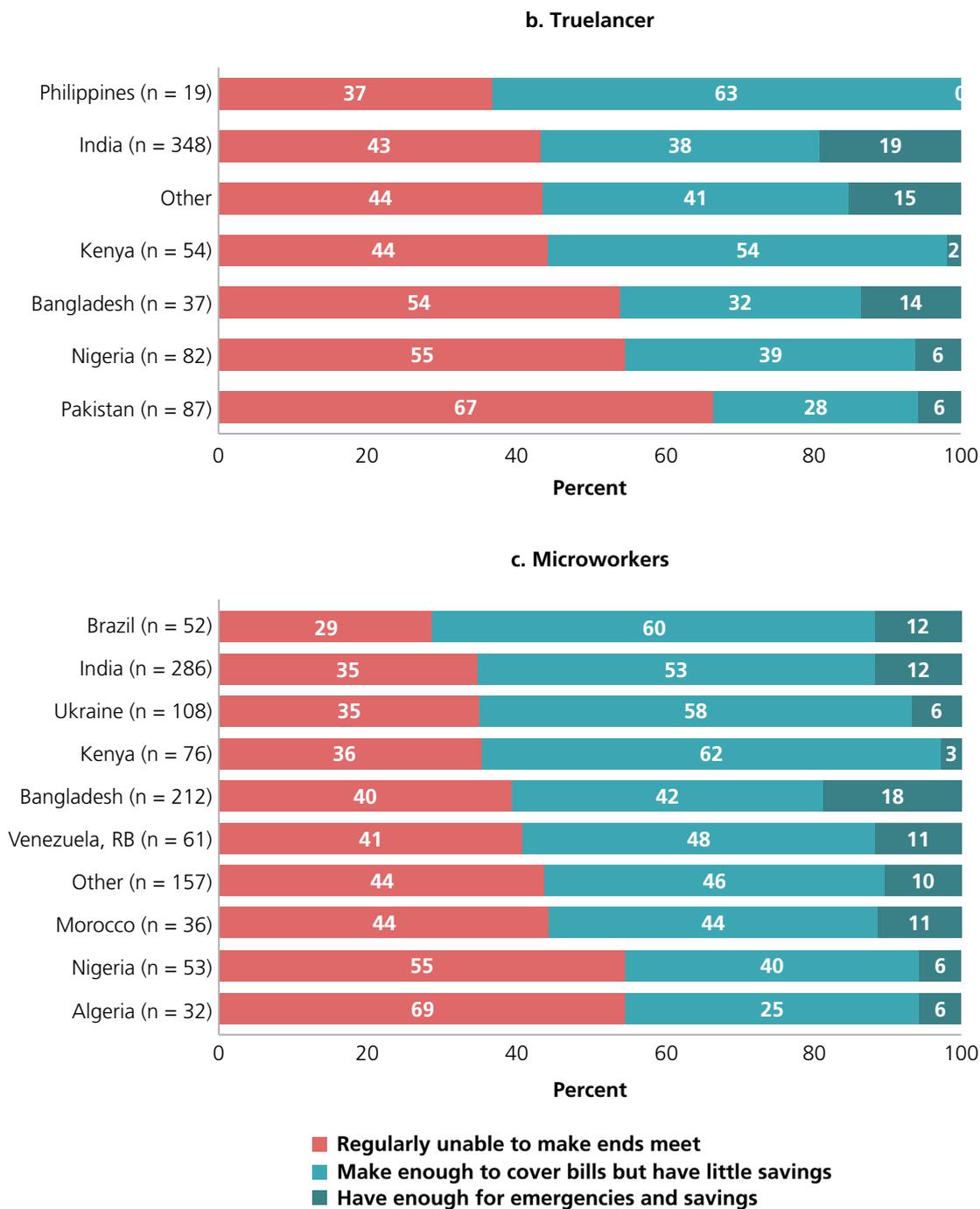
Source: Guven et al. 2020.

FIGURE 6.11: Question to gig workers: How would you best classify your financial position?



(Continued)

FIGURE 6.11: (Continued)



Source: Study team analysis using platform survey data.

Box 6.3 offers the case of Indonesia, which shows the challenge of the intersecting gig work and informality.

BOX 6.3: GIG WORKERS AND SOCIAL PROTECTION COVERAGE: INDONESIA

Indonesia began witnessing the exponential increase of tech-based enterprises that facilitate the sharing economy and gig work when Uber and Airbnb started operating there in early 2000. Within a few years' time, homegrown sharing economy platforms began offering ride-hailing services and online marketplaces. These start-ups have grown rapidly in terms of market size. A 2018 analysis shows that 4 of the top 10 Southeast Asian unicorns (companies that rapidly achieve market valuations of US\$1 billion or more) are in Indonesia (Varma and Bulton 2018). The size of the gig economy in Indonesia is estimated to reach US\$146 billion by 2025.^a

A recent survey conducted by the World Bank^b estimated that around 6 to 7 percent of informal workers in Indonesia are full-time gig workers, involved in short-term, nonpermanent types of work that involve tasks facilitated by digital platforms. The study also reveals that most gig workers in Indonesia are providing location-based services, mainly in urban settings (63 percent). Common tasks include transporting personal items (reported by 44 percent of gig workers), transporting people (35 percent), running errands such as grocery shopping service (28 percent), and logistic services (19 percent). Meanwhile, a small percentage of gig workers seem to be engaged in non-location-based work such as providing administrative assistance and data input (10 percent), creative and multimedia (6 percent), and other professional services (5 percent), as indicated by the platforms they use, which include Freelancer.com and Sampingan.co.id. Most of the gig workers said that they engage in platform work for its flexibility but at the same time, most of them work for more than 40 hours a week. Many also choose to do gig work as a side job to compensate for the income shock during COVID-19.

Indonesian gig workers have distinct characteristics compared with their conventional self-employed peers. Gig workers in Indonesia are generally younger and better educated than the informal self-employed, with most of them completing at least upper secondary education. Their financial capability is relatively high compared to that of non-gig informal workers, as indicated by ownership and usage of bank accounts (68 percent), understanding of financial and investment concepts (41 percent), and expressed confidence in performing financial tasks (64 percent). When it comes to income, gig workers earn 57 percent more than their non-gig, self-employed peers. In terms of savings, gig workers are able to set aside monthly savings, on average, twice as much as their self-employed peers. Most do so by participating in a general savings scheme.

(Continued)

BOX 6.3: [Continued]

Despite greater financial literacy, income, and propensity to save, gig workers in Indonesia are categorically vulnerable because most of them do not receive social assistance and are not covered for employment-related risks.

The study reveals that only 34 percent of gig workers have precautionary savings and around 60 percent of them are struggling to meet their financial obligations (such as a mortgage or other debt). Only 17 percent of gig workers benefit from the country's main social assistance programs, although the coverage is higher for subsidized health insurance. Meanwhile, participation in employment social security programs among gig workers is low even though the programs are de jure available for all workers without exception. Categorized as "nonsalaried workers," gig workers are eligible for three contributory social security programs: life insurance, work injury insurance, and old-age savings. However, in the absence of employers, the workers must register and pay their contributions themselves. Financial literacy and awareness of the importance of retirement savings do not seem to translate to greater participation in contributory programs. Only around 33 percent of gig workers are enrolled in any social security program, and the level of participation is even lower for retirement savings, at merely 17 percent.

The government of Indonesia has been struggling to significantly increase participation in employment social security among informal workers.

In 2017, Indonesia's social security administrator (BPJS Ketenagakerjaan) introduced PERISAI, an aggregator system modeled after Japan's Sharoushi program, which focuses on public and community outreach and eventually membership acquisition among informal workers. BPJS Ketenagakerjaan also facilitates donations from corporations as well as the general public to pay the social security contributions of vulnerable workers for a specific period under a program called GN-Lingkaran. Neither program, however, has seemed to boost the participation of informal workers. In 2020, there were only around 330,000 informal workers covered under PERISAI and 155,000 workers covered under GN-Lingkaran (BPJS Ketenagakerjaan 2020). The government of Indonesia also plans to subsidize social security contributions for 20 million workers by 2024.^c

Extending social protection coverage to gig workers would require raising awareness of the programs and innovative design.

A lack of knowledge of program benefits and eligibility and a perceived inability to pay the contribution are the two most-cited reasons for nonparticipation in social security programs. The existing information gaps urgently need to be addressed, and platforms can be engaged to help disseminate information on social security programs, eligibility criteria, and benefits. Some location-based platforms in Indonesia such as Gojek and Grab are already facilitating participation in social security programs by mandating deductions from the workers' e-wallets for work accidents and death benefits. Participation in the retirement savings plan, however, is still entirely voluntary. A simple choice experiment embedded

(Continued)

BOX 6.3: [Continued]

in the survey suggests that subsidization (either in the form of matching contributions or direct contribution subsidies) and allowing more frequent, smaller contributions would make the retirement plan more appealing to the gig workers and to informal workers in general.

Digital platforms can play a more active role in encouraging the participation of gig workers in social security programs. Offering some level of organization to the otherwise unorganized sector, digital platforms have the technological capacity to conduct massive outreach activities—even individually tailored framing and messaging—to encourage enrollment and contributions. Similarly, digital platforms could help roll out a gig worker–friendly social security design that could allow, for example, automatic enrollment, small yet frequent contribution deductions, and payment reminders. In the long run, the digital platforms, capitalizing on their financial technology capacity for innovation, could also set up a micro-pension program not only for gig workers but also for informal workers in general. Inevitably, these changes would require regulatory adjustments that necessitate a strong concerted effort from all relevant stakeholders involved in the design and implementation of social security in Indonesia.

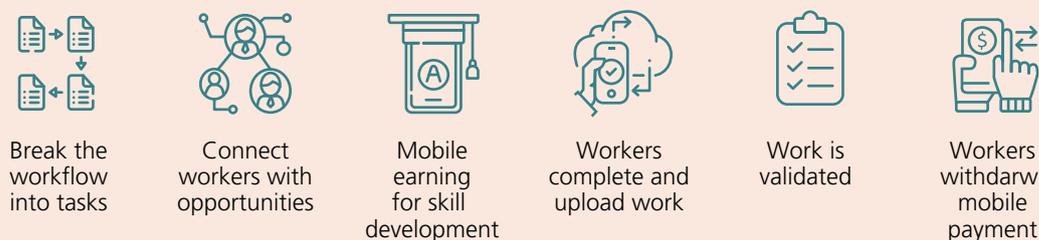
- a. United Nations Development Programme, “Who Benefits Indonesia’s Gig Economy? A More Inclusive Digital Transformation Is Needed,” UNDP blog, September 1, 2022, <https://www.undp.org/indonesia/blog/who-benefits-indonesias-gig-economy-more-inclusive-digital-transformation-needed>.
 - b. A survey regarding the participation of informal-sector workers in the old-age saving scheme was carried out by the World Bank in March and April 2022. A total of 4,525 responses were obtained from the country’s 34 provinces. A weighting protocol, using the National Labor Force Survey, was applied to create nationally representative data. The survey targeted mainly informal-sector workers, including self-employed workers, business owners without paid workers, unpaid workers, and employees of micro- and small enterprises in Indonesia.
 - c. Indonesia’s Medium Term Development Plan (RPJMN) 2019–2024.
- Source: Summary findings from a survey on informal workers in Indonesia (Meidina and Putri 2022).

The lack of social protection for gig workers is part of a broader issue of significant social protection coverage gaps in low-income countries. The World Bank’s Social Protection Compass calls for expansion of social protection with adequate support for the different risks faced throughout a person’s life cycle and across the income spectrum. In offering solutions to bridge this coverage gap, it will be important to account for the specific needs of groups who face barriers to access. One relevant intervention, given the context of digital gig work, is digital public works (DPW) programs. The novelty of DPWs as a social protection instrument is that they potentially offer short-term employment, in the style of traditional labor-intensive public works programs, while leveraging platforms that gig workers are already familiar with. Box 6.4 describes a planned DPW pilot in Sierra Leone under an approved World Bank operation. (Also see chapter 7 on another pilot in Kenya.) Program beneficiaries are provided with digital skills training, which they can use to further signal capabilities in the formal labor market.

BOX 6.4: DIGITAL PUBLIC WORKS PILOT IN SIERRA LEONE

The Sierra Leone Social Protection and Jobs (SPJ) team at World Bank is providing implementation support to the government in piloting a platform-based digital public works (DPW) program. A new subcomponent is proposed as additional financing to the PSSNYE Project^a that will provide youth in urban areas with short-term employment opportunities to collect and digitize information to be used to improve postdisaster needs assessment and emergency response in disaster-prone urban areas. The new subcomponent will target semiskilled youth, including women, and persons with disabilities. The DPW pilot is expected to reach 2,000 urban youth ages 18 to 35 with productive DPW opportunities. Specifically, youth in the program will be tasked with collecting data under two themes: (a) activities that increase the availability of data and information on climate disaster risk and (b) activities that map vulnerabilities and capacities in disaster-prone areas. Key vulnerabilities in disaster-prone areas include poor infrastructure, poor agricultural practices, poor drainage, poor sanitation, and lack of agricultural supplies. Examples of capacities to cope with these hazards include the availability of storage facilities, clearly marked evacuation routes, availability of shelter in the event of a disaster, and so forth. The Sierra Leone SPJ team is adopting the DPW workflow as presented in World Bank Group and GFDRR (2021).

FIGURE B6.4.1: DPW workflow



Source: World Bank Group and GFDRR 2021.

a. Sierra Leone PSSNYE First Additional Financing (P180035), <https://projects.worldbank.org/en/projects-operations/project-detail/P176789>.

6.6 WHAT ARE COUNTRIES DOING TO PROTECT INFORMAL AND SELF-EMPLOYED WORKERS?

In Sub-Saharan Africa, Kenya's National Social Security Fund (NSSF) launched Haba Haba in 2019 to expand social security coverage (pension, medical cover, loan facilities, and welfare) to include members in the informal sector. Individuals can dial a short code (*303#) on their mobile phones to register as an NSSF member and start making contributions. Benefit claims are also made through mobile interactions. Haba Haba gives members a chance to save a minimum of K Sh 25 a day, with the option of withdrawing 50 percent of their contribution after consistently contributing for a minimum of five years.¹⁵¹ Guven and Jain (2023) study Rwanda's Ejo Heza Long-Term Saving Scheme, which was designed as a voluntary defined-contribution

¹⁵¹ See <https://www.nssf.or.ke/haba-haba-na-nssf>.

program that caters to informal-sector workers. As of December 2022, the program had registered 2.9 million individuals—22 percent of the Rwandan population and 37 percent of the working-age population—many of whom are from low-income households. Informal-sector workers comprised 87 percent of savers, while 12 percent were from the formal sector.

The government of India’s 2020 Code on Social Security includes gig workers on the list of workers who are entitled to SI.¹⁵² The objective of the code is to amend and consolidate nine existing labor laws relating to social security, with the wider goal of extending social security benefits to all employees and workers regardless of whether they belong to the organized or unorganized sector, to include self-employed workers, home workers, wage workers, migrant workers, workers in the unorganized sector, gig workers, and platform workers in social security plans. As of August 2021, “unorganized workers,” including gig workers, may avail themselves of the eShram portal,¹⁵³ which facilitates their registration and will help build a comprehensive national database while enabling last-mile delivery of welfare programs.¹⁵⁴ Several SI programs in the eShram portal target unorganized workers by various subgroups (see Appendix J).

In 2010, Malaysia’s Employees Provident Fund (EPF) introduced the Skim Persaraan 1Malaysia (SP1M) program, a retirement savings program for self-employed persons.¹⁵⁵ The SP1M program, which was rebranded as i-Saraan in 2018, is a voluntary matching contribution plan through which EPF members who are self-employed and do not earn a regular income can make voluntary contributions toward retirement of up to RM60,000 per year. In 2010 to 2013, the government provided a matching contribution of 5 percent, subject to a maximum limit, which increased 10 percent in 2014 to 2017 and 15 percent in 2018. In addition, Malaysia’s Social Security Organization (SOCSO) offers employment injury insurance to self-employed individuals through the Self-Employment Social Security Scheme (SESSS). Registrations in i-Saraan and SESSS can be made either online on their respective portals or in person, making it convenient for workers to make online transfers directly through their digital banking accounts. During the COVID-19 pandemic, the government introduced a matching grant of up to RM 50 million for gig economy workers registered with MDEC as part of the PenjanaGig program in which the government provided a 70 percent matching contribution for a one-year subscription to Plan 2 of SESSS. Workers would therefore be required to pay only 30 percent of the total contribution. The initiative to provide SI coverage to self-employed workers was continued and strengthened in 2022.¹⁵⁶

In Latin America and the Caribbean, Colombia and Peru have created matching contribution programs that subsidize the pension contributions of middle- and low-income informal workers. Colombia implemented the Complementary Economic Benefits social security system (known as BEPS), a voluntary pension program for low-income workers who are not paying into the traditional system. BEPS provides a 20 percent subsidy on an individual’s accumulated contributions, thus reducing the minimum contribution and enabling workers earning less than minimum wage to contribute to the social security system (Melguizo 2015). Peru’s Social Pension System is a voluntary

¹⁵² The government of India, Code on Social Security, 2020, subsumes nine central labor laws: the Employees’ Compensation Act, 1923; the Employees’ State Insurance Act, 1948; the Employees’ Provident Funds and Miscellaneous Provisions Act, 1952; the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959; the Maternity Benefit Act, 1961; the Payment of Gratuity Act, 1972; the Cine Workers Welfare Fund Act, 1981; the Building and Other Construction Workers Welfare Cess Act, 1996; and the Unorganised Workers’ Social Security Act 2008.

¹⁵³ See e-SHRAM website, eshram.gov.in.

¹⁵⁴ “Unorganized Worker,” Ministry of Labor and Employment website, (accessed on June 27, 2022), <https://labour.gov.in/unorganized-workers>.

¹⁵⁵ EPF is mandatory for everyone characterized as an employee in a formal firm (that is, those with a contract of service), but i-Saraan is voluntary.

¹⁵⁶ In 2021, PenjanaGig was replaced by SPS Lindung, which provided a 100 percent subsidy for social insurance coverage to a more limited group of informally employed workers, excluding web-based platform workers.

program for workers in microenterprises (earning up to 1.5 times the minimum wage) and their owners who are not yet affiliated with the national pension system. This program provides for a progressive reduction of social contributions, matched by government contributions. These incentive plans increase the returns from contributing to the pension system and are directed especially to informal or marginally formal workers in the urban middle class (Melguizo 2015).

Uruguay's Monotax (Monotributo) mechanism is a simplified tax and contribution payment mechanism that facilitates registration and coverage for microenterprises and self-employed workers (ILO 2014). The workers registered under this regime are covered by the same benefits as salaried employees (except for unemployment protection). The level of contributions depends on the income category of the workers. While participation in the pension program is mandatory, the system allows for voluntary affiliation with the health insurance program. By using different contribution categories and allowing for gradual and progressive contribution payments, this approach seeks not only to simplify administrative procedures but also to tackle the issue of low contributory capacity (ILO 2014). Although the system needs a high degree of coordination between different social security institutions and tax collection authorities, it has contributed to protecting self-employed workers and workers in microenterprises, particularly women, leading to a significant increase in social security coverage (ILO 2014).

Small businesses that fall into the category of Monotax contributors can choose between paying a Monotax (unified contribution) on revenue generated by their activities (Monotributo) or paying the ordinary social security contributions and normal taxes (except for import taxes). Monotax contributions are collected by the Uruguayan Social Security Institute (BPS), and the share corresponding to tax payments is transferred by the BPS to the fiscal authority. The remaining fraction is used by the BPS to finance social security benefits for the members affiliated with the program and their families. Monotax members include one-person businesses, de facto nonfamily companies formed by a maximum of two partners with no employees, enterprises formed exclusively by family members (provided the number of partners is not more than three), and companies with no salaried workers, under the condition of having a small income. The microentrepreneurs who join the program are automatically entitled to the benefits of the contributory social security system (apart from unemployment protection).

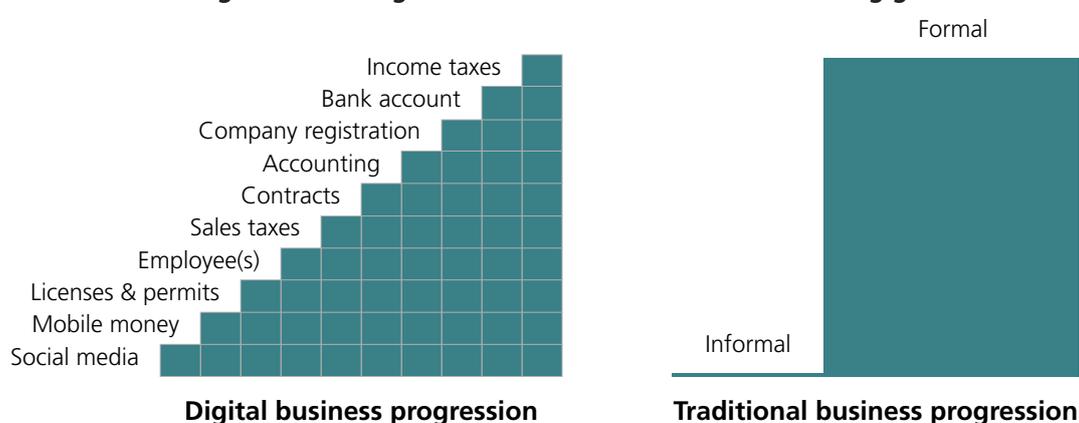
Contribution payments under the Monotax for pension insurance are gradually applied to new companies. The firms have three years to gradually meet the entire contribution rate. The Uruguay government has introduced specific measures to extend coverage to workers on taxi platforms (Freudenberg 2019). To obtain their license to operate, drivers using taxi apps must be registered with SI and tax authorities under the same conditions as employees. The apps allow drivers to register while automatically adding a social security contribution to the price of each ride and transferring it to the Uruguayan social security institution (Behrendt and Nguyen 2018; Behrendt, Nguyen, and Rani 2019).

Other countries in Latin America have adopted versions of the Monotax program. In Argentina, the Monotax has allowed for the subsidization of social security contributions for individual independent workers and microenterprises by incorporating low-income workers into pension and health benefits programs (ILO 2014). In Brazil, SIMPLES (a simplified taxation program designed for micro and small businesses) has significantly contributed to reducing the labor costs of microenterprises, promoting formalization of employment and growth (ILO 2014). The Brazilian government is also looking to extend coverage of its Monotax mechanism to drivers working on digital platforms, granting them access to sickness, maternity, and disability benefits as well as old-age pensions (La Salle and Cartoceti 2019). RISE (Régimen Impositivo Simplificado de Ecuador) includes a discount of 5 percent in social security contributions for each affiliated worker, applicable to taxpayers who are up-to-date with payments (ILO 2014).

Can the gig platforms be leveraged to extend coverage to the informal economy?

First, in contexts where policy makers are seeking to reach and extend coverage to the informal sector, the platform economy may facilitate such a pathway (Ng'weno and Porteus 2018). The digital platforms intermediate and allocate work and tasks and generate a digital record of transactions, documenting what was previously informal and unrecorded (Ayentimi, Abadi, and Burgess, 2022). Figure 6.12 illustrates this pathway. In Chile, electronic invoices between firms and the self-employed are used to obtain information about platform activities, primarily for tax purposes (see appendix L). The participation of the relatively better-off informal-sector gig workers could also be increased through knowledge, nonmonetary incentives, and use of digital technology to enhance user experience and build trust (for instance, by allowing real-time access to their balance and one-click contribution payments) (Guyen et al. 2020).

FIGURE 6.12: Digital technologies enable formalization of informal gig work



Source: Ng'weno and Porteous 2018.

Second, by capturing identifying information, gig-enabling platforms can also serve as intermediaries for social registries, which in turn link eligible individuals to existing social protection programs. Digitalized social registries can be a smart way to ensure expanded coverage with access to diverse social security benefits. Social registries are information systems that support outreach, intake, registration, and determination of eligibility for one or more social programs along the social protection delivery chain (Guyen, Jain, and Joubert 2021). Many countries offer myriad social programs, often with the risk of fragmentation. Social registries can serve as a common gateway for coordinating registration and eligibility processes for multiple social programs. They have both a social policy role, as inclusion systems, and an operational role, as information systems. These digital platforms support efficiency among program administrators by avoiding the collection of the same information for the same people in different programs. Applicants can also avoid the need to provide the same information in applying for several programs. Governments are in fact using social registries to not only provide social protection benefits but also go beyond these programs (Leite et al. 2017). Examples within social protection include cash transfers, social pensions, labor and employment benefits and services, social services, emergency assistance, and in-kind assistance programs (Guyen, Jain, and Joubert 2021).

In sum, resolving the classification question could help ensure associated employer-linked benefits for misclassified gig workers but it does not address the bigger issue of the under-coverage of genuinely self-employed gig workers. The framework of the missing middle can be applied to understand gig workers' relationship to social protection in developing-countries. Gig workers are often not poor enough to be eligible for social safety net benefits and not well-off enough to be part of SI programs mandated for the formal sector. We showed examples of country programs

that are rising to fill this coverage gap of the informal sector, including self-employed workers. The most recent example of Rwanda's Ejo Heza is particularly instructive, as it offers key success factors and lessons for other countries. These are discussed at length in Guven and Jain (2023), but selected drivers include (a) a sound legal basis for the program, (b) trust and political will, (c) identification of aggregators such as cooperatives that can serve as effective substitutes for employers for those in the informal sector, (d) fiscal incentives and tangible short-run benefits to encourage enrollment, (v) adaptability and flexibility in design, and (vi) efforts to leverage digital infrastructure, such as identification and payments systems.

Lack of collective bargaining among gig workers

Collective action by gig workers can be an important pathway to better working conditions for a geographically dispersed workforce. The limits to organizing stem from gig workers' employment status and geographical dispersion. Despite those challenges, people working through platforms are finding innovative ways to organize collectively—often facilitated by technology, new forms of collective bargaining, innovative business arrangements, and, recently, proposals for laws that remove barriers to collective action for the self-employed.

Like most self-employed workers, gig workers typically lack collective bargaining rights either because they tend to work informally or because such bargaining would entail a violation of competition law.¹⁵⁷ First, given that the self-employed are effectively classified as businesses (independent contractors), collective action by them is treated as the equivalent of a cartel agreement. Forming cartels is often illegal to protect consumers against a situation in which businesses collude to increase the price of a good or a service. Second, collective organization is challenging when the work is digital, sporadic, discontinuous, agile, and globally dispersed (ILO 2019).¹⁵⁸ On the supply side, the physical distance between gig workers is greater than otherwise experienced in traditional forms of work, with fragmentation and separation seen most among microworkers (Wood, Lehdonvirta, and Graham 2018). Third, on the demand side, workers engage with multiple globally dispersed clients and platforms, which makes it difficult for workers to identify targets for collective action (Wood, Lehdonvirta, and Graham 2018). The geographic dispersion is related to the peculiar nature of "platform topology" and poses a challenge to the effective mobilization and representation of gig workers (Wood, Lehdonvirta, and Graham 2018). Traditional forms of collective organization are often closely tied to local communities or workplaces, thus making organizing over platforms difficult, especially when operations are conducted across borders and in different national jurisdictions. Overall, the disparity and geographical dispersion of platform work, combined with the inability of individuals to influence their working environment and the absence of organizational infrastructure, erode gig workers' sense of institutional connectedness (Fitzgerald, Hardy, and Lucio 2012).

So, what opportunities exist for collective action?

As the platform economy evolves, the peculiar nature of platform topology itself has engendered new ways and structures for workers' representation and collectivization. Attempts to develop union-inspired structures and activities are beginning to mushroom across the gig economy, with initiatives predominating in all types of gig work (ILO 2019). Initiatives to support organized action follow.

¹⁵⁷ For examples, in the EU, [Article 101](#) of the Treaty on the Functioning of the European Union prohibits agreements between undertakings. In the United States, [the National Labor Relations Act](#), which regulates access to collective bargaining, explicitly excludes people employed as independent contractors. They are similarly excluded from Thailand's [Labour Relations Act](#) and similar acts in other countries.

¹⁵⁸ In addition, note that the definition of enterprise or undertaking varies across countries, and many jurisdictions allow for exemptions for horizontal agreements. As such, the issue of collective bargaining and antitrust might not be relevant for all jurisdictions.

- a. **Using crowd ratings and third-party ratings.** Using the very mechanism (of ratings) used by platforms to rate workers to report on the platforms themselves could be an effective way to incentivize platforms to protect workers. Third-party monitoring and ratings can be used to align platform incentives with those of workers and policy makers. An example is the work of Fairwork Foundation, which rates platforms on principles such as the extent to which a platform ensures fairness in pay, fair working conditions, representation, and more (see box 6.5). Including worker-friendly policies to gain higher ratings may create the right incentives for a platform, as it increases a platform's attractiveness to both new gig workers and new clients, who may also seek to address reputational risks involved in using a gig workforce.

BOX 6.5: USING REPUTATIONAL SCORING TO UPHOLD PRINCIPLES FOR FAIR PLATFORM WORK

To hold cloud work platforms accountable, Fairwork Foundation has created five principles of fairness for cloud workers along which platforms are assessed. The Fairwork project uses three approaches to effectively measure fairness: desk research, worker interviews and surveys, and interviews with platform management. This threefold methodological approach allows the claims made by the platform management to be cross-checked, while also providing the opportunity to collect evidence from multiple sources. Final scores based on all three forms of information gathering are collectively decided by the Fairwork team (table B6.5.1).

TABLE B6.5.1: Fair work principles for platform work

Principle	Description
1 Fair pay	Regardless of their employment classification, workers should earn a decent income in their home jurisdiction after work-related costs and active hours worked are accounted for. They should be paid on time and for all work completed.
2 Fair conditions	Platforms should have policies in place to protect workers from foundational risks arising from the processes of work and should take proactive measures to protect and promote the health and safety of workers.
3 Fair contracts	Terms and conditions should be transparent, concise, and always accessible to workers. The party contracting with the worker must be subject to local law and must be identified in the contract. Workers are notified of proposed changes in a reasonable time frame before changes come into effect. The contract must be free of clauses which unreasonably exclude liability on the part of the platform and which prevent workers from seeking redress for grievances. Contracts should be consistent with the terms of workers' engagement on the platform.
4 Fair management	There should be a documented due process for decisions affecting workers. Workers must have the ability to appeal decisions affecting them, such as disciplinary actions and deactivation, and must be informed of the reasons behind those decisions. The use of algorithms must be transparent and results in equitable outcomes for workers. There should be an identifiable and documented policy that ensures equity in the way workers are managed on a platform (for example, in hiring, disciplining, or firing).
5 Fair representation	Platforms should provide a documented process through which a worker's voice can be expressed. Whatsoever their employment classification, workers have the right to organize in collective bodies, and platforms should be prepared to cooperate and negotiate with them.

Source: Fairwork, "Principles," <https://fair.work/en/fw/principles/>.

- b. Using technology.** A unique feature of these structures of collectivization is the leveraging of technology to scale access and impact. One of the best known examples of this is Turkopticon, a website and browser plug-in that enables Amazon Mechanical Turk workers to submit information on clients, rate clients, and check a client's record before accepting a task (see box 6.6). Such forms of crowdsourcing information have developed an interesting ecosystem of "soft" collective bargaining.

BOX 6.6: TURKOPTICON

Amazon Mechanical Turk (AMT) is a website and service operated by Amazon as a meeting place for clients requesting help with large volumes of microtasks and for workers who want to do those tasks, usually for money. AMT brings stopgap, short-term jobs to people whose employment options are limited because of geography, mobility limitations, or economic conditions. Yet many workers still find themselves working in a system with little recourse when faced with wage theft or disciplining by the clients or Amazon. Amazon legally defines the workers as independent contractors; this means that they are not entitled to minimum wage or other employment benefits. Turkopticon came out of engagements with "Turkers" in 2008 to articulate a hypothetical Bill of Rights. Eight themes recurred: uncertainty about payment, unaccountable and seemingly arbitrary rejections (for example, nonpayment), fraudulent tasks, prohibitive time limits, pay delays, uncommunicative clients and administrators, costs of employer errors borne by workers, and low pay.

In response to their interactions with Turkers, cofounders Lilly Irani and Michael Silberman designed and built Turkopticon, a web application and browser add-on that augments the AMT interface with reviews written by Turkers. Turkopticon functions alongside crucial worker forums to bridge the worlds of workers and employers while the interface design keeps workers and employers at a convenient distance. AMT allows employers to automate requests for Turker data processing work. Turkopticon interrupts this dynamic of "human computation on-demand" by offering workers support for evaluating and possibly refusing work requests. As the platform has evolved, so has the plug-in: workers can now rate clients and look up client records to make an informed decision on accepting work. Since its founding in 2009, Turkopticon has become a staple worker tool, with over 55,000 registered users, 287,000 reviews of 42,000 employers, and a steady flow of 20,000 unique visitors per month.

Source: Irani and Silberman 2016.

- c. Using social media.** Self-initiated groups on Facebook, Reddit, WeChat, or WhatsApp are bringing gig workers—including those working on location and online—together from around the world.¹⁵⁹ Isolation and anonymity can be addressed through social media platforms that bring gig workers together to share information, develop a collective identity, and provide collective support (Anwar and Graham 2020; Ayentimi, Abadi, and Burgess 2022). One indication of the

¹⁵⁹ Caribou Digital (n.d.), "Association, Organization & Support," <https://www.platformlivelihoods.com/association-organization-support/>.

extent of social network use in this study's platform surveys is the extent to which surveyed gig workers use social media to share tasks. Among freelancers on Wowzi, 7.2 percent of respondents find other people to share work with through WhatsApp and Facebook.

- d. Partnership with existing unions.** Gig workers sometimes cooperate with existing unions to better their working conditions. For example, an agreement between Bzzt, which offers an Uber-like service with electric mopeds, and the Swedish Transport Workers' Union allows Bzzt drivers to be covered by the Taxi Agreement, which gives the workers access to the same standards as traditional taxi drivers (ILO 2019). Unlike in many platform companies, the drivers in Bzzt are now offered marginal part-time contracts. After pressure from the CGT¹⁶⁰ Uber Eats/Deliveroo Lyon trade union, Deliveroo France proposed to bear the expense of medical teleconsultations and to compensate a €25 fee for the purchase of protective equipment for its riders, along with a lump sum of €230 for a 14-day sick leave for riders who contracted COVID-19.¹⁶¹ In Chile, Fairwork finds that several gig worker organizations are increasingly engaged in strikes and campaigns, especially in the context of the effects of the COVID-19 pandemic. The Riders Unidos Ya organization presented two prominent lawsuits against PedidosYa,¹⁶² arguing that some members had been dismissed for organizing. These claims asked the courts to declare them employees (and thus provide them with legal protection). At the time of writing, both cases were being litigated before labor courts in Santiago. A number of similar cases and examples of self-organization have also been identified in Europe.¹⁶³ In another example, Box 6.7 describes the agreement between Hilfr and 3F.
- e. New “cooperative” models.** In addition to tech-enabled solutions and cooperation with unions, stakeholders increasingly consider new business arrangements—namely, platform cooperatives—as an option to address the precarity and economic dependence of gig workers (Bunders et al. 2022). The idea of platform cooperatives was introduced in the United States and resonated strongly with research critical of the platform economy (Acquier, Daudigeos, and Pinkse 2017; Gruszka 2017). Platform co-ops combine the online infrastructure of a platform to mediate social and economic interaction with the collective ownership and democratic governance of a cooperative enterprise (Kenney and Zysman 2016; Zamagni 2012). Platform co-ops have been most strongly advocated for as an alternative to investor-owned gig platforms. As owners of a platform co-op, gig workers can create the conditions for better pay and job security because they decide on commission rates and surplus value themselves. Legal issues concerning their self-employed status could be solved as well because, in principle, gig workers can either continue to do their work as self-employed workers (in a producer cooperative) or as employees (in a worker cooperative), depending on the form of cooperative that is chosen (for an overview of the types of cooperatives, including examples, see Table 6.4). Either way, the issues that arise in the regular platform economy about employment conditions and social protection benefits would be in the hands of the members of the platform co-op. Freelancers could be motivated to join co-ops also because of the additional services they provide, including help with filing taxes and acquiring social security benefits, training programs, mentorship programs, and other services (CECOP 2019).

¹⁶⁰ The General Confederation of Labor (French: Confédération Générale du Travail, CGT) is a national trade union center, founded in 1895 in the city of Limoges, France

¹⁶¹ The compensation applied only to workers who made at least €130 weekly during the previous four weeks. For more information, see European Trade Union Confederation (2020).

¹⁶² A Uruguayan multinational online delivery company belonging to Delivery Hero.

¹⁶³ For an overview, see annex 1 in Barcevičius et al. (2021).

BOX 6.7: HILFR AND 3F

Hilfr was founded in 2017 and started by connecting freelance cleaners with potential clients in Denmark. Unlike its competitors, Hilfr from the beginning decided to pay a so-called welfare supplement (DKr 20/US\$2.70 per hour as a compensation for the lack of social contributions) to all freelancers on top of their wages (Ilsøe 2019).

In 2018, Hilfr initiated negotiations with The United Federation of Danish Workers (3F), which represents workers within the cleaning sector, with the aim of developing orderly conditions in the platform economy. For Hilfr, this was a strategy to develop its business and differentiate itself in the market of cleaning platforms. For 3F, the aim was to lift workers' wages and working conditions. Simultaneously, negotiations took place with a tripartite commission, the Disruption Council (2017–19), which included all ministers, major unions, and employers' organizations in Denmark as well as a number of company representatives.

In April 2018, the negotiating parties were able to sign the first company agreement on a digital platform in Denmark.^{a,b} The agreement came into force and was a pilot program that the negotiating parties agreed to evaluate after a year. The collective agreement introduces a new category of workers—the so-called Super Hilfrs—in parallel with the existing freelance workers, so-called Freelance Hilfrs. Super Hilfrs are workers that opt for the status of employee rather than freelancer and will be covered by the company agreement. After working 100 hours, a Freelance Hilfr automatically becomes a Super Hilfr (unless he or she objects or chooses to become a Super Hilfr earlier). Super Hilfrs receive a minimum hourly wage of DKr 141 (about US\$19) and accrue rights to pensions, holiday entitlements, and sick pay. Freelance Hilfrs' hourly wage is typically DKr 130 (about US\$17.50), and they also receive a “welfare supplement” of DKr 20 (about US\$2.70) per hour. Both Freelance and Super Hilfrs can set their hourly wage higher on their individual profile on the platform.

All workers are covered by an insurance program that Hilfr holds via private insurance company Tryg. Tryg offers insurance solutions for several Danish-owned labor platforms, including coverage for liability and accidents. The social benefits such as pensions, paid holiday entitlements, and sick pay for the Super Hilfrs are at a somewhat lower level than in comparable sector-level agreements such as the collective agreement covering the industrial cleaning sector (Larsen, Mailand, and Schulten 2019). However, the Hilfr agreement stipulates explicitly that the agreement is designed as a staircase model, in which the levels are expected to be renegotiated in the future. The agreement also explicitly mentions that social benefits such as further training, paid maternity leave, and rules for shop stewards are planned to be discussed in future renegotiations (Ilsøe 2019).

(Continued)

BOX 6.7: [Continued]

A number of novel elements included in the Hilfr agreement are rare phenomena in the Danish collective bargaining system, including the following (Ilsøe 2019):

- Status as a Super Hilfr (optional). The individual platform worker may become a Super Hilfr—that is, an employee who is thus covered by the agreement.
- Super Hilfrs can set their own hourly wage at their own discretion, which is rather unusual for employees covered by collective agreement.
- Notice periods are shorter than in comparable collective agreements. The notice period for both worker and platform is 2 weeks within the first 6 months of employment as a Super Hilfr. Most other agreements typically operate with a pilot phase of three months.
- Disputes about interpretations and breach of the agreement can be solved only by arbitration. This is in sharp contrast to most other collective agreements in Denmark, in which disputes about breaches can be brought before the labor court.
- Regulations on digital data are included in the agreement. The agreement has sections on digital data, like profiles and ratings, to secure both workers' rights and company rights. For instance, deleting profiles on the platform is considered a dismissal that should happen only after a certain notice period given by the platform. Workers are also granted the rights to request the removal of violating language and pictures from their profiles and ratings.

a. [https://www.3f.dk/fagforening/fag/rengoeringsassistent-\(privatansat\)/overenskomsten-hilfr](https://www.3f.dk/fagforening/fag/rengoeringsassistent-(privatansat)/overenskomsten-hilfr).

TABLE 6.4: Cooperative types by platform ownership and member employment status

	Members are self-employed	Members are employees
Cooperative does not own platform	Producer cooperative that does not provide gig workers with labor rights and does not own a matchmaking platform (for example, https://decooperatie.org/)	Worker cooperative that does provide gig workers with labor rights but does not own a matchmaking platform (for example, https://smartbe.be/)
Cooperative owns platform	Producer cooperative that does not provide gig workers with labor rights but does own a matchmaking platform (for instance, https://taxiapp.uk.com/)	Worker cooperative that does provide gig workers with labor rights and does own a matchmaking platform (for example, see https://www.upandgo.coop/)

Source: Bunders et al 2022.

- f. Legislation.** Finally, legislators in various countries are reacting to the increased demand for collective bargaining rights among the solo self-employed by reducing legal barriers for self-organization. In the United States, at the federal level, the proposed Protecting the Right to Organize (PRO) Act (H.R. 20) adopts the ABC test for purposes of federal labor law, thus expanding the scope of who counts as an employee and who has access to collective bargaining rights. A previous version of this proposed act passed the House of Representatives in the 117th Congress but was stalled in the the US Senate. In the EU, the European Commission has drafted guidelines about collective agreements regarding the working conditions of solo self-employed people (EC 2021a). The draft guidelines clarify that competition law should not stand in the way of collective agreements for solo self-employed workers if they have difficulties in influencing their working conditions. In India, IFAT and AIGWU are leading efforts to extend social security to gig workers. In 2021, IFAT filed a public interest litigation (PIL) in the Supreme Court that seeks worker protections for delivery and app-based transport workers. IFAT's PIL was prompted by the inadequacy of relief measures extended to gig workers during the COVID-19 pandemic relative to other unorganized workers (Naraharisetty 2021).

In sum, although gig workers are better placed than other informal-sector workers to conduct collective bargaining, using low-cost digital means they are already familiar with, they face two challenges: (a) these workers must identify a compelling common cause that will sustain their interest in participating in collective efforts and (b) governments and collective bargaining organizations need to reform labor market governance institutions, including giving online gig workers a “seat at the table” since they have markedly different interests that deserve a voice. There is a need to continue to modernize institutions so that they acknowledge the emerging new forms of work.

6.7 ARE THERE OPPORTUNITIES FOR PRIVATE SECTOR-LED MODELS?

Public pressure and reputational effects. Some platforms have started providing protection for gig workers, at times following negotiations with worker associations. In 2018, Uber in Romania launched the Partner Protection program. Eligible partner drivers and couriers benefit from insurance in case of personal injury or illness. The insurance (provided by a third party with whom Uber has a partnership) includes coverage for medical expenses, death, permanent disability, hospitalization, and personal injury. All eligible drivers automatically receive insurance. Each driver can make a maximum of two claims in 12 months in case of illness and serious injury. In Italy, in 2021, Uber Eats introduced a protocol to protect the health and safety of its food delivery riders, with provision of free helmets and other safety devices, supply of COVID-19 protective equipment, and free training courses (Barcevičius et al. 2021, annex 1). In Singapore, Grab, a ride-hailing platform, has worked with the government by contributing to drivers' Medisave, the Singaporean national health insurance, commensurate with distance driven. To address the erratic nature of driver earnings, the project promoted innocuous saving by avoiding automatic debits during weeks with lower earnings (Gen and Gong 2021).

Offering additional benefits. Some companies help workers in nonstandard forms of employment and self-employed individuals set aside funds for taxes and save for retirement and investments. Catch¹⁶⁴—a United States-based company—targets individuals who do not receive health

¹⁶⁴ See <https://catch.co/>.

insurance coverage through employment. Catch observes that the employer-linked system of benefits is becoming less relevant as the nature of work changes and as people prefer more autonomy through independent work. Catch sees the labor market trends, including the Great Resignation,¹⁶⁵ as a boon for freelancing as more people opt out of traditional employment. The company targets individuals through partnerships with gig platforms like DoorDash and Upwork. About 50 percent of registered customers are acquired through these partnerships, and the rest are recruited through advertising, referrals, and other outreach efforts. Catch helps automate the tax reporting process for the freelancer by linking to the individual's bank account through Plaid and by issuing quarterly payments to the state governments and the Internal Revenue Service on behalf of the worker. The amount withheld varies on the basis of the individual's preferences but ranges from 12 to 35 percent of earnings. The firm also sells Affordable Care Act–approved health insurance plans for all the big insurance carriers, including BlueCross, Aetna, and Oscar, in 35 states. Catch automatically enrolls customers in tax credits that they qualify for. As a registered investment adviser with portfolio managers, Catch also helps customers save for long-term goals, including retirement. Catch does not charge fees for investments under \$10,000. When asked about the key enablers for gig economy solutions like Catch, the firm's representatives listed (a) an open banking system, (b) ability to automate through APIs to allow for connectivity, (c) the existence of insurance and savings products targeted at the individual, and (d) health insurance infrastructure with exhaustive marketplaces.

Innovative financial inclusion models. A range of actors are exploring for-profit models to offer financial services which serve many of the functions of benefits.¹⁶⁶ While actors in the gig economy have traditionally been poorly serviced by financial service providers offering products like insurance, loans, or savings, many actors such as Consultative Group to Assist the Poor (CGAP) have been exploring how to embed financial services into platforms (Murthy and Deshpande 2022). One of the big challenges is that many gig workers are multihoming, or simultaneously operating on multiple platforms (most Uber riders in Kenya, for example, are also on Bolt and/or Glovo or Little Rider). This means that any individual platform has visibility into only a fraction of a rider's income and thus is not actually well-equipped to offer such financial services or alternative credit scores. Any independent third-party financial service provider would also need to negotiate relationships on sensitive data with multiple gig work platforms in each market, which is hard to do and scale. The Jobtech Alliance¹⁶⁷ is piloting one alternative model, by facilitating a collaboration between Swedish-based data scraping platform Unveel and Kenyan financial service provider Power to offer a suite of financial services (earned wage access, insurance, loans, savings) for gig workers on major ride-hailing platforms. The collaboration involves Unveel scraping the data from a user's multiple ride-hailing app accounts and aggregating the data within the Power App (with permissions from users). Power can then offer a suite of services, starting with accident and health insurance (and then earned wage access) based on the users' income patterns across these multiple apps.

¹⁶⁵ US Bureau of Labor Statistics, Monthly Labor Review, July 2022, <https://www.bls.gov/opub/mlr/2022/article/the-great-resignation-in-perspective.htm>.

¹⁶⁶ The authors thank Christopher Maclay, Program Director, Jobtech Alliance at Mercy Corps, for his contribution of information for this paragraph.

¹⁶⁷ Jobtech Alliance is a collective of entrepreneurs, practitioners, funders, and policy makers collaborating to help build the tech job ecosystem in Africa. See <http://jobtechalliance.com>.

Behavioral nudges through platforms. Behavioral science offers additional ways to increase the number of people, including gig workers, who save for retirement. The IDB's Retirement Savings Laboratory seeks to understand how behavioral tools that promote pension savings can be successfully deployed at scale in Latin America and the Caribbean, a region characterized by a high degree of labor informality and a relatively low level of banking. The project does this through nudges to save, including automatic savings mechanisms on digital platforms. In Peru, through the Cabify app, drivers were invited to voluntarily save part of their earnings, leading 18 percent of them to sign up for an automatic savings debit (Azura et al. 2021).

Digital identity and accreditation. Facilitating the accreditation of freelancer identity and skills is another way to enable gig workers to establish creditworthiness and access financial services. The Bangladesh Freelancer Development Society (BDFS) works toward building an ecosystem that allows gig workers to plan for retirement, among other things. A key outcome of this effort was the creation of a government-issued Freelancer identity (ID) card.¹⁶⁸ In addition to serving as a form of identification, the ID card allows gig workers to receive accreditation by the government of Bangladesh of their freelance work and their online earnings. The ID has helped collect information on platform workers' earnings, job profiles, and more. As a result, the ID card system facilitated the provision of benefits to freelancers, including (a) cash incentives—support for freelancers during COVID-19, (b) enrollment into retirement programs, and (c) access to funding to expand operations.

Consumer contribution. Having final consumers contribute to the savings programs of gig workers offers one avenue to finance SI benefits for platform workers. Homely¹⁶⁹—a Mexico-based platform that matches cleaners to cleaning gigs— has established a plan with which each cleaning service contracted by the final consumer contributes a fixed quota to the social security of the workers. This is made possible by a pilot program launched by the Mexican Institute of Social Security (Instituto Mexicano del Seguro Social [IMSS])¹⁷⁰ to extend social security to domestic workers. In March 2021, the pilot was approved as a law by the Mexican Senate that established that domestic workers could access all IMSS insurance products. According to company executives, Homely became the first company in the gig economy industry to provide this benefit to gig workers on its platform. Since the implementation of the program, customers have been open to paying the related fee in order to guarantee extra benefits for the worker who is providing them with services (Cruz 2022).

Carefully calibrated financial products. In East Africa, some platforms have independently provided protections or partnered with different organizations to provide social protection to gig workers. For instance, through a pilot funded by the Mastercard Foundation, Kenyan firm Lynk, which connects customers with trusted domestic workers, carpenters, mechanics, and other skilled blue-collar professionals, offers soft loans repaid through deductions from platform earnings (Kibe 2019). Lynk partnered with MicroSave Consulting (MSC) to create insurance and microinsurance products for its gig workers. MSC designed a pay-as-you-go personal accident cover to protect gig workers in the event of accidents, disability, or death (Mercy Corps 2020). However, leaving the onus on companies has arguably left thousands of gig workers at risk and companies open to liability, a situation which

¹⁶⁸ See <https://freelancers.gov.bd/>.

¹⁶⁹ See <https://www.homely.mx/>.

¹⁷⁰ IMSS is a governmental organization that assists public health, pensions, and social security in Mexico, operating under the Secretariat of Health.

has come to light specifically as COVID-19 has significantly reduced demand across many digital gig platform models (for example, ride hailing) (Mercy Corps 2020).

In sum, gig work platforms are increasingly accompanied by innovative solutions for providing social protection, benefits, and financial inclusion for gig workers and self-employed workers in general. Some platforms are responding to public pressure and providing protection to gig workers. Some established insurance companies are developing insurance products for gig workers, and some start-ups are offering additional benefits and services such as tax reporting, health insurance plans, savings for retirement, and investments. Innovative financial inclusion models are also emerging, such as the Jobtech Alliance in Kenya, which is piloting a collaboration between data-scraping platform Unveel and financial service provider Power to offer a suite of financial services for gig workers on major ride-hailing platforms. Finally, behavioral nudges through platforms can also help increase the number of gig workers saving for retirement. A summary of some of the instruments being implemented by their risk-sharing objective appears in appendix L.

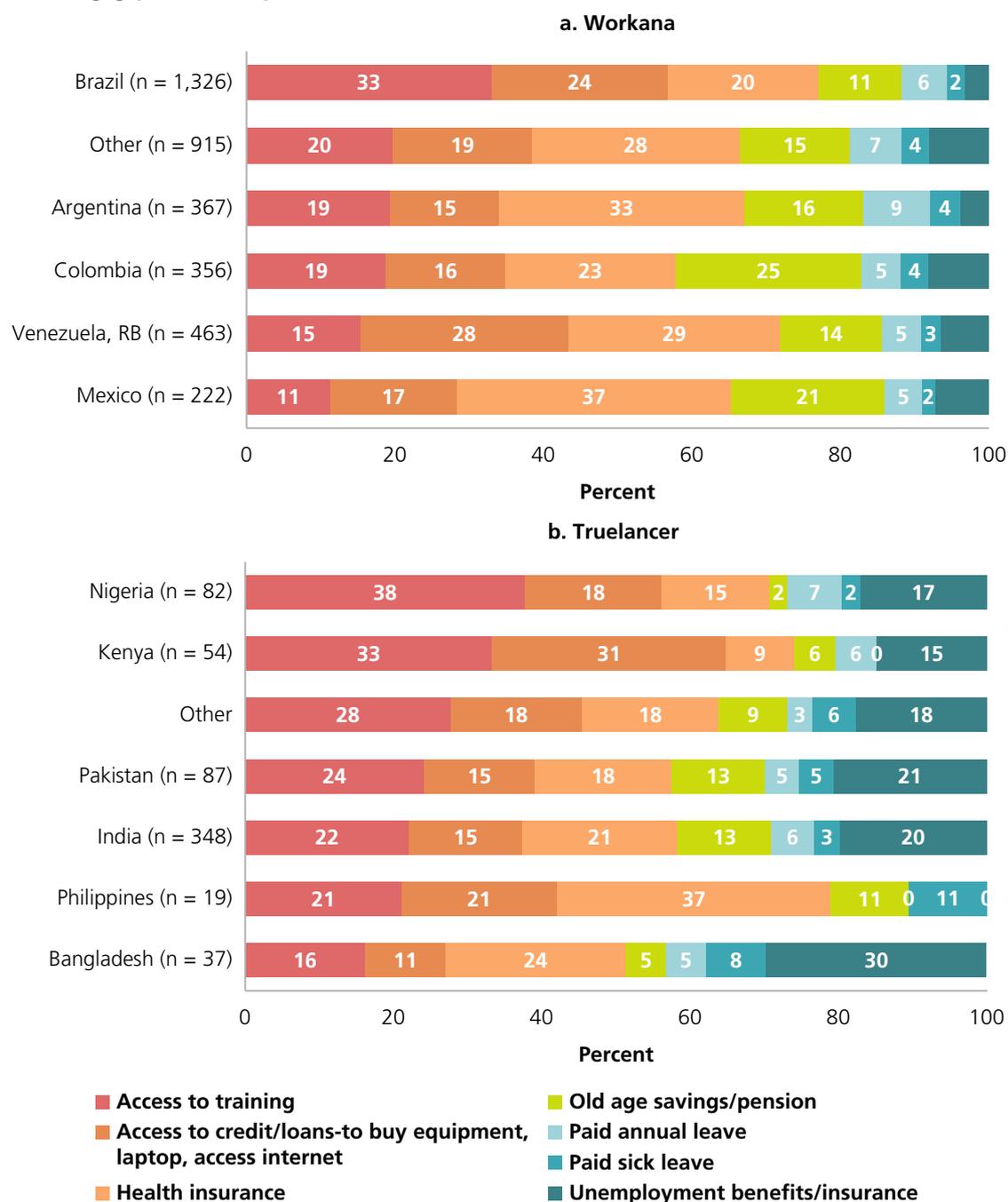
But what social benefits do gig workers want most?

Beyond traditional benefits that accompany formal employment, gig workers also desire access to training and access to credit or loans to buy equipment, such as laptops, and to access the internet. In 2019, CGAP interviewed 34 Kenya-based gig workers and found that access to capital (both start-up capital and working capital) was a challenge for youth on gig platforms (Kibe 2019). Furthermore, in 2021, CGAP surveyed gig workers in India, Indonesia, Kenya, Nigeria, and South Africa and made similar observations of the need for financial services among gig workers. CGAP's research points in a few directions:

- Short-term credit that is responsibly tied to predicted earnings and covers periodic liquidity gaps,
- Loans beyond small credit advances for larger expenses in education and upskilling that are based on scoring work data,
- Insurance for shocks that incorporates up-front cash payouts for small health or equipment expenses, and
- Automated savings features tied to workers' financial goals.

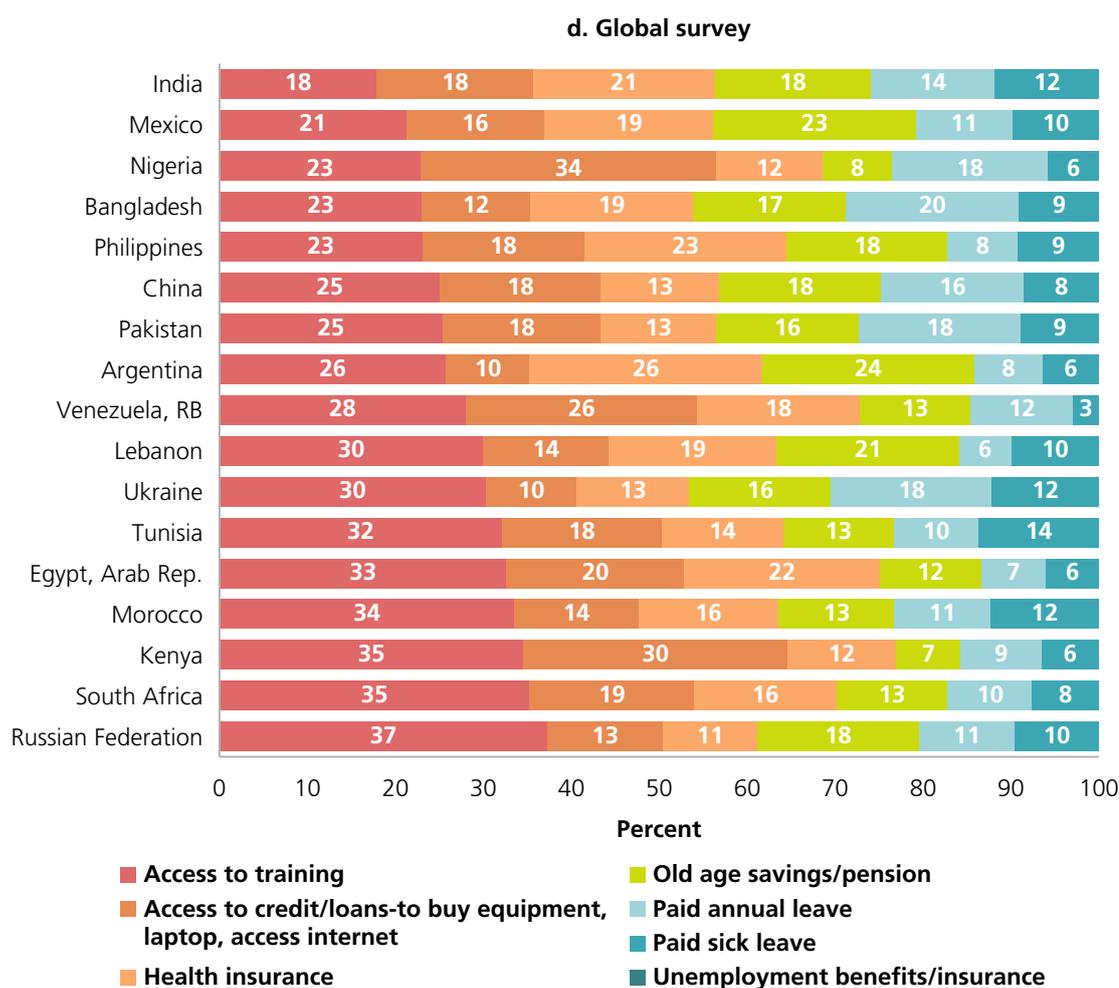
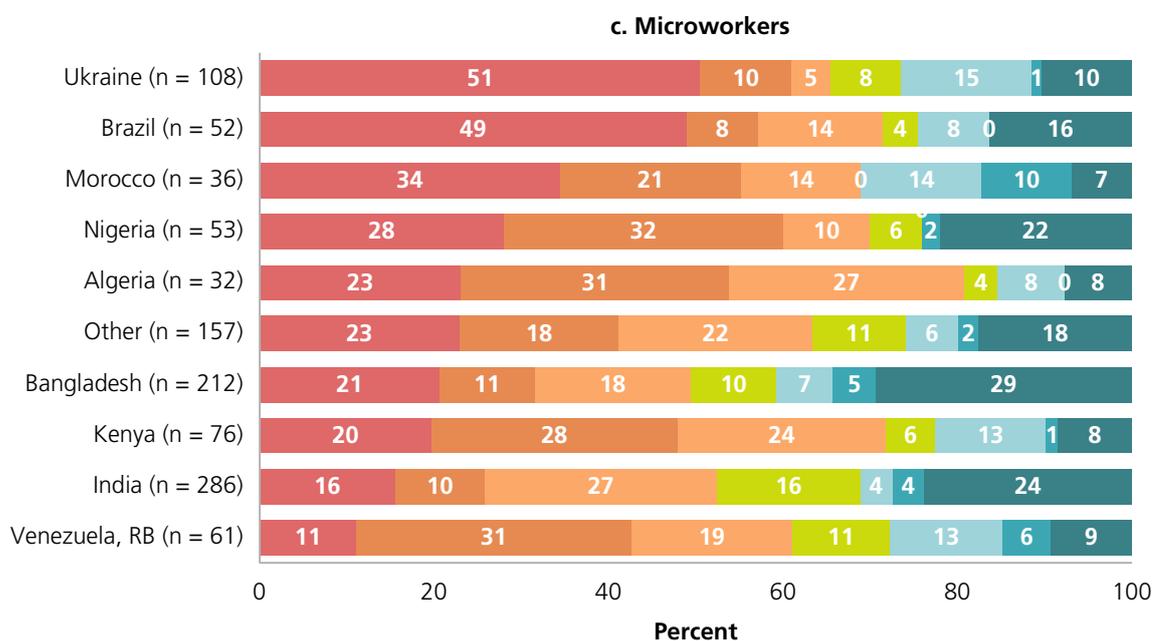
The study team's own surveys confirm that gig workers want more than simple traditional SI products. We asked gig workers to state the top benefit they would like to see their platforms provide. More than half of Brazil-located gig workers on Workana list access to training and access to credit or loans as a preferred benefit. Across Workana, only 5 percent report unemployment benefits or insurance as a top benefit. On Truelancer, Nigerian and Kenyan gig workers are most likely to list access to training as a top benefit they hope to get from gig platforms. Similar patterns emerged among respondents on Microworkers (Figure 6.13). Similarly, respondents in the study team's global survey were most likely to stake preferences for access to training and access to loans. There is therefore an opportunity for unconventional benefits to be designed for gig workers.

FIGURE 6.13: Question to gig workers: What is the top benefit you would like to see gig platforms provide?



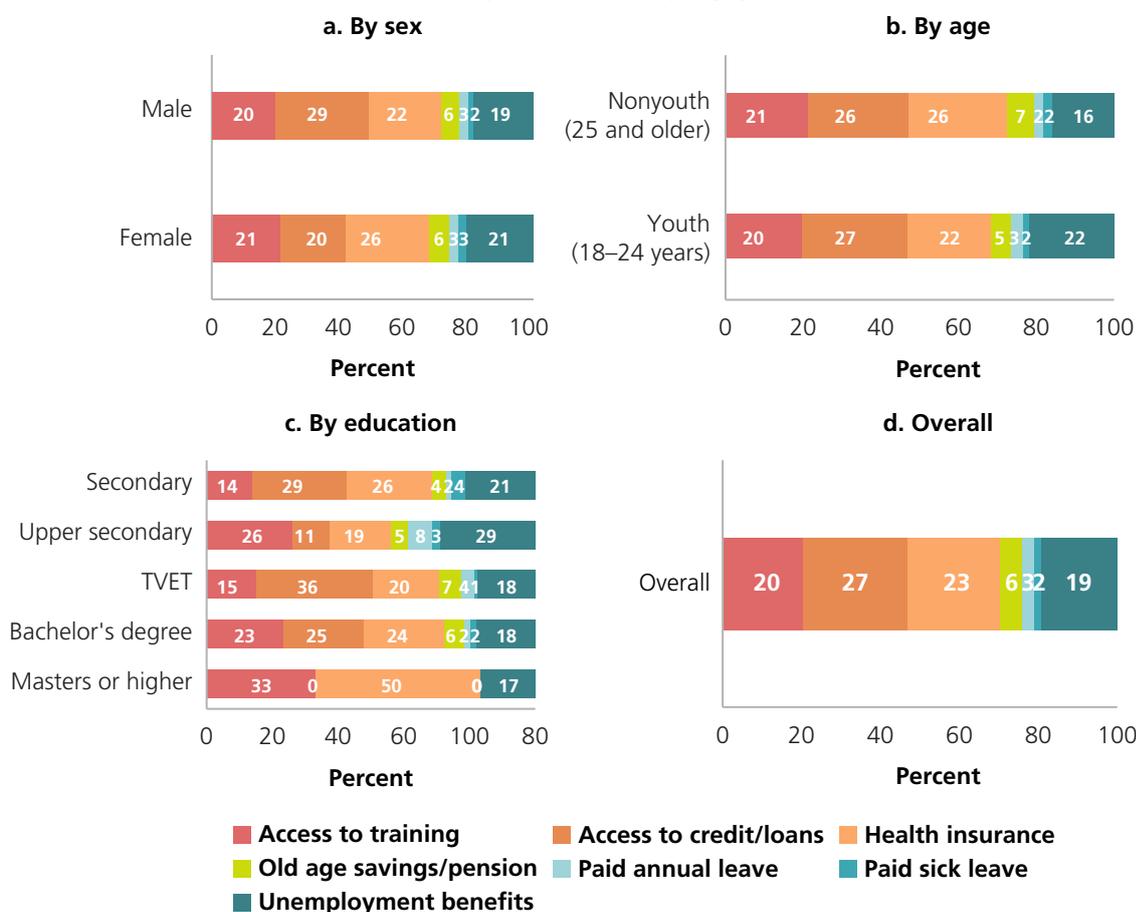
(Continued)

FIGURE 6.13: (Continued)



Source: Study team analysis using platform survey data.

FIGURE 6.14: Benefits preferred by Wowzi Kenya gig workers



Source: Study team analysis using platform survey data.

6.8 WHAT CAN WE DO? A DEVELOPING-COUNTRY DILEMMA

While the lack of clear classification on employment status creates ambiguity about the source of SI coverage for gig workers, this issue is less relevant for many developing countries where most workers are informal and often in low-productivity self-employment. Policies adopted in developed countries cannot be simply transplanted to developing countries. Some possible policy options for developing countries include the following:

- **Cover all workers, without segmenting.** Extend social protection coverage for all workers, especially informal and self-employed workers. The World Bank’s white paper on social protection coverage in the context of changing work proposes a comprehensive policy package of protection with a publicly financed, guaranteed-minimum risk-pooling mechanism at its core and additional layers of mandated, nudged, and wholly voluntary insurance (Packard et al. 2019).¹⁷¹ A more

¹⁷¹ It is worth noting that countries with universal social security schemes are also relatively richer and are largely classified as upper-middle income by the World Bank. The question of how to finance social protection floors is beyond the scope of this study. However, there is ongoing global debate around this topic, including at the United Nations. A 2021 report [United Nations 2021] recommends the establishment of a global fund for social protection as a means to close the financing gap faced by low-income countries to provide for social protection floors.

concerted effort to extend social protection coverage (including social assistance, SI, and active labor market programming) to self-employed workers in the informal sector is the more effective policy to ensure that gig workers are protected. Since gig workers in developing countries typically fall in the missing middle of social protection, government efforts to close the coverage gap for all informal and vulnerable workers will also benefit gig workers. By establishing a foundation floor, developing countries will avoid the risk of segmenting the labor market and adopting piecemeal policies for a diverse set of workers that are all outside labor regulation.

- **In the short run, innovate and experiment.** While the best way forward is universal social protection, in the short run governments should adopt a regulatory sandbox to test and experiment with different models that do not just regulate on paper but apply to the labor market realities of developing countries. For example, governments can experiment with behavioral interventions to encourage uptake of pensions and SI programs that are available to self-employed workers, and can leverage innovations in behavioral science to design microproducts that are best suited for the gig worker profile. They could explore models of possible partnership with digital platforms. By generating a digital record of transactions, gig platforms document information that was previously informal and unrecorded, thus offering the possibility of augmenting social registries through which safety net systems can be accessed by gig workers. Governments can also partner with platforms in outreach efforts to increase enrollment and contributions to government social security plans. Short-term SI programs such as savings plans could serve as a crucial entry point to link with workers and broaden scope gradually.
- **Collect data, track, and monitor.** Digital gig work is rapidly changing, and governments need to develop their capacity to collect the vast amounts of data being generated in order to systematically track and understand this new form of work. International efforts to collect data through labor force surveys are a step in the right direction.
- **Partner with digital work platforms on broader policy goals.** Governments can leverage platforms to work toward broader policy goals. For example,
 - **Expansion of social registries** in partnership with gig work platforms to facilitate gig worker access to social programs for which they are eligible. India's e-Shram portal illustrates how self-employed workers, including gig workers, can be included in a comprehensive national database to facilitate last-mile delivery of social protection programs for unorganized workers.¹⁷²
 - **Accreditation.** Facilitate accreditation of gig workers through, for example, ID cards, as is being developed in Bangladesh, to expand gig workers' employability beyond platform work.
 - **Training for low-skilled disadvantaged workers, women, and more.** Platforms and their partner service providers can work with governments to provide financial inclusion services and skills training.

¹⁷² There is potential for unintended consequences—being listed in a social registry with a status indicating some form of employment could automatically disqualify one from various social assistance benefits and services. This could become a strong deterrent from reporting to the government (even when there is no associated tax liability). Efforts to expand registries in partnership with platforms should therefore ensure clear messaging on eligibility criteria to various programs. Communication campaigns should endeavor to illustrate the benefits of social registries. For example, investments that many countries had made in their social registries before the COVID-19 pandemic significantly shortened the time needed to roll out their response packages (as happened in Brazil, Jordan, Morocco, Nigeria, Peru, Senegal, and Türkiye) (World Bank Group 2022).

- **Digital public works.** Leveraging the platform work model of digital gigs also offers an opportunity to augment the social protection toolbox through DPW programs that leverage digital platforms, providing income-earning opportunities while also building digital skills among the poor. This could be done on a pilot basis, given the nascent nature of DPW in development.
- **Support modern innovative models of collective bargaining.** To ensure that gig workers are protected, collective bargaining is very important to fill the regulatory vacuum that exists for such workers. New models of collective bargaining, including those that use third-party ratings, crowd ratings, and so forth, to align platform incentives with worker and policy incentives should be promoted.
- **For higher-capacity clients, clarify employment relationships.** Where capacity exists, take steps to clarify gig workers' status in employment by learning from countries like Chile. This issue is being considered in more depth by another team in the World Bank's SPJ Global Practice.

References

- Acquier, Aurélien, Thibault Daudigeos, and Jonatan Pinkse. 2017. "Promises and Paradoxes of the Sharing Economy: An Organizing Framework." *Technological Forecasting and Social Change* 125 (December): 1–10.
- Anwar, Mohammad A., and Mark Graham. 2020. "Between a Rock and a Hard Place: Freedom, Flexibility, Precarity and Vulnerability in the Gig Economy in Africa." *Competition and Change* 25 (2): 1–22.
- Ayentimi, Desmond Tutu, Hossein Ali Abadi, and John Burgess. 2022. "Decent Gig Work in Sub Sahara Africa?" *Journal of Industrial Relations* 65 (7): 1–14. DOI: 10.1177/00221856221111693.
- Azuara, Oliver, Mariano Bosch, Gustavo Caballero, Fabián Cofré, Stephanie González, Anne Hand, Lukas Keller, Catalina Rodríguez Tapia, María Teresa Silva Porto, and Fermín Vivanco. 2021. *Saving without Barriers: Lessons from the Retirement Savings Laboratory's Pilot Projects*. Washington, DC: Inter-American Development Bank. <https://publications.iadb.org/en/saving-without-barriers-lessons-retirement-savings-laboratorys-pilot-projects>.
- Barcevičius, E., V. Gineikytė-Kanclerė, L. Klimavičiūtė, and N. Ramos Martin. 2021. *Study to Support the Impact Assessment of an EU Initiative to Improve the Working Conditions in Platform Work*. Luxembourg: Publications Office of the European Union.
- Behrendt, Christina and Quynh Anh Nguyen. 2018. "Innovative approaches for ensuring universal social protection for the future of work." https://www.ilo.org/wcmsp5/groups/public/--dgreports/--cabinet/documents/publication/wcms_629864.pdf
- Behrendt, Christina, Quynh Anh Nguyen, and Uma Rani. 2019. *Social Protection Systems and the Future of Work: Ensuring Social Security for Digital Platform Workers*. Geneva: International Labor Organization. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/issr.12212>.
- Bijlsma, Michiel, Johannes Bonekamp, Casper van Ewijk, and Ferry Haaijen. 2018. "Funded Pensions and Economic Growth." *De Economist* 166: 337–62.
- BPJS Ketenagakerjaan. 2020. Annual Report 2020. *Adapting to Challenges, Strengthening Sustainable Innovations. 2020 Integrated Annual Report*. Jakarta. https://www.bpjsketenagakerjaan.go.id/assets/uploads/laporan_tahunan/BPJS_IR2020_LO15_Eng_Lowres.pdf.
- Bunders, Damion, J., Martin Arets, Koen Frenken, and Tine De Moor. 2022. "The feasibility of platform cooperatives in the gig economy." *Journal of Co-operative Organization and Management* 10 (1): 100–167. <https://doi.org/10.1016/j.jcom.2022.100167>.
- CECOP (European Confederation of Industrial and Service Cooperatives). 2019. "All for One. Response of worker-owned cooperatives to non-standard employment." Brussels. <https://cecop.coop/uploads/file/ExTB9Rdy731ZbXOzgF5Y7eYLjww28l6r0HsOPTXH.pdf>
- Chetty, Raj, and Amy Finkelstein. 2020. "Social Insurance: Connecting Theory to Data." In *Handbook of Public Economics*, vol. 5, edited by Alan J. Auerbach et al. Amsterdam: North Holland. <http://dx.doi.org/10.1016/B978-0-444-53759-1.00003-0>.
- Cruz Villafaña, Melina. 2022. "The Future of the Gig Economy." *Mexico Business News*, May 6, 2022. <https://mexicobusiness.news/professional-services/news/future-gig-economy>.
- Cylus, Jonathan, and Mauricio Avendano. 2017. "Receiving Unemployment Benefits May Have Positive Effects on the Health of the Unemployed." *Health Affairs* 36 (2): 289–96.

- De Stefano, Valerio, Ilda Durri, Charalampos Stylogiannis, and Mathias Wouters. 2021. "Platform Work and the Employment Relationship." ILO Working Paper 27, ILO, Geneva, March. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_777866.pdf.
- Durán-Valverde, Fabio, Jorge Flores Aguilar, José Francisco Ortiz Vindas, Daniel Muñoz Corea, Ana Carolina de Lima Vieira, and Lou Tessier. 2013. *Innovations in Extending Social Insurance Coverage to Independent Workers. Experiences from Brazil, Cape Verde, Colombia, Costa Rica, Ecuador, Philippines, France and Uruguay*. Geneva: International Labour Office. <https://www.social-protection.org/gimi/gess/gess/RessourcePDF.action?ressource.ressourceld=42119>.
- EC (European Commission). 2021. "Proposal for a Directive of the European Parliament and of the Council On Improving Working Conditions in Platform Work." Brussels, 9.12.2021. COM(2021) 762 final 2021/0414 (COD).
- Eurofound platform economy repository. <https://www.eurofound.europa.eu/data/platform-economy>.
- European Labor Authority. 2022. "EU Proposes Directive to Protect the Rights of Platform Workers." European Commission news, March 17, 2022. (accessed June 12, 2022), https://eures.ec.europa.eu/eu-proposes-directive-protect-rights-platform-workers-2022-03-17_en#:~:text=In%20December%202021%2C%20the%20European,presumed%20to%20be%20an%20employer.
- European Trade Union Confederation. 2020. "Red Card for Platform Abuses in the Covid-19 Crisis." August 4, 2020. <https://www.etuc.org/en/document/red-card-platform-abuses-covid-19-crisis>.
- Fairwork. 2021. "Fairwork Chile 2021 Ratings: Labour Standards in the Gig Economy." <https://fair.work/en/fw/publications/fairwork-chile-puntuaciones-2021/>.
- Fairwork. 2022. "Fairwork Policy Brief: New Regulation of Platform Work in Chile: A Missed Opportunity?" <https://fair.work/en/fw/publications/new-regulation-of-platform-work-in-chile-a-missed-opportunity/>.
- Fitzgerald, I., J. Hardy, and M. M. Lucio. 2012. "The Internet, Employment and Polish Migrant Workers: Communication, Activism and Competition in the New Organisational Spaces." *New Technology, Work and Employment* 27 (2): 93–105.
- Freudenberg, Christoph. 2019. "Rising platform work - Scope, insurance coverage and good practices among ISSA countries." ISSA World Security Forum Conference, International Social Security Association conference, Brussels, October 2019.
- Friedman, Gerald. 2014. "Workers without Employers: Shadow Corporations and the Rise of the Gig Economy." *Review of Keynesian Economics* 2 (2): 171–88.
- Frouin, J.-Y. 2020. *Réguler les plateformes numériques de travail*. Paris: Rapport au Premier Ministre.
- Ganong, Peter, Fiona Greig, Max Liebeskind, Pascal Noel, Daniel M. Sullivan, and Joseph S. Vavra. 2021. "Spending and Job Search Impacts of Expanded Unemployment Benefits: Evidence from Administrative Micro Data." Working Paper 2021-19, Becker Friedman Institute for Economics, University of Chicago, IL. URL <https://bfi.uchicago.edu/working-paper/spending-and-job-search-impacts-of-expanded-ui/>.
- Gen, Tan Z., and Rachel Gong. 2021. "Digital Platform Work: How Digital Access and Competencies Affect Job-Seeking." Khazanah Research Institute Discussion Paper 01/21, January 20, 2021.
- Gindling, Thomas, and David Locke Newhouse. 2012. "Self-Employment in the Developing World." World Bank Policy Research Working Paper 6201. World Bank, Washington, DC. <https://ssrn.com/abstract=2149389>

- Government of India. 2020. *The Code on Social Security, 2020*. <https://vvnli.gov.in/en/code-social-security-2020#:~:text=Social%20Security%2C%202020%3F-,Ans.,the%20organised%20or%20unorganised%20sector.>
- Gruszka, Katarzyna. 2017. "Framing the Collaborative Economy—Voices of Contestation." *Environmental Innovation and Societal Transitions* 23 (June): 92–104.
- Guyen, Melis, and Himanshi Jain. 2023. "The Promise of Ejo Heza: A Brighter Future for All Rwandans." World Bank, Washington, DC.
- Guyen, Melis, Himanshi Jain, Jehan Arulpragasam, and Iffath Sharif. 2020. "Social Insurance for the Informal Sector Can Be a Lifeline for Millions in Africa." World Bank blog, May 20, 2020. [https://blogs.worldbank.org/africacan/social-insurance-informal-sector-can-be-lifeline-millions-africa.](https://blogs.worldbank.org/africacan/social-insurance-informal-sector-can-be-lifeline-millions-africa)
- Guyen, Melis, Himanshi Jain, and Clement Joubert. 2021. "Social Protection for the Informal Economy: Operational Lessons for Developing Countries in Africa and Beyond." World Bank Group, Washington, DC.
- Hiessl, Christina. 2020. "The Classification of Platform Workers in Case Law: A Cross-European Comparative Analysis." *Comparative Labor Law and Policy Journal* 42 (2): 465–517.
- ILO (International Labour Organization). 2014. "Monotax- Promoting Formalization and Protection of Independent Workers." *Social Protection in Action: Building Social Protection Floors 02/2014*, ILO, Geneva.
- ILO (International Labour Organization). 2017. *World Social Protection Report: Universal social protection to achieve the Sustainable Development Goals 2017-2019*. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_604882.pdf.
- ILO (International Labour Organization). 2019. "Social Dialogue and the Governance of the Digital Platform Economy: Understanding Challenges, Shaping Opportunities." October 9, 2019. https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/organigramme/governance/dialogue/WCMS_723431/lang--en/index.htm.
- ILO (International Labour Organization). 2020. "Ensuring Better Social Protection for Self-Employed Workers." Paper prepared for the 2nd Meeting of the G20 Employment Working Group under Saudi Arabia's Presidency. April 8, 2020. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---ddg_p/documents/publication/wcms_742290.pdf.
- ILO (International Labor Organization). 2021a. "Extending Social Security to Workers in the Informal Economy: Lessons from International Experience." Second (revised) edition. <https://www.social-protection.org/gimi/RessourcePDF.action?id=55728>.
- Ilsøe, Anna. 2019. "The Hilfr Agreement: Negotiating the Platform Economy in Denmark." FAOS Research Paper 176, Employment Relations Research Centre, University of Copenhagen. https://faos.ku.dk/publikationer/forskningsnotater/rapporter-2019/Rapport_176_-_The_Hilfr_agreement.pdf_copy.
- Irani, Lilly, and M. Six Silberman. 2016. "Stories We Tell About Labor: Turkothon and the Trouble with 'Design.'" UC San Diego. Retrieved from <https://escholarship.org/uc/item/8nm273g3>.
- Jacobs, Ken and Michael Reich. 2020. "The Effects of Proposition 22 on Driver Earnings: Response to a Lyft-Funded Report by Dr. Christopher Thornberg." Center for Labor Research and Education Center on Wage and Employment Dynamics Institute for Research on Labor and Employment University of California, Berkeley. <https://laborcenter.berkeley.edu/wp-content/uploads/2020/08/Response-to-Thornberg.pdf>

- Jerg, Lukas, Jacqueline O'Reilly, and Karin Schulze Buschoff. 2021. "Adapting Social Protection to the Needs of Multiple Jobholders in Denmark, the United Kingdom and Germany." *Transfer: European Review of Labour and Research* 27 (2): 237–53. <https://doi.org/10.1177/1024258921991039>.
- Jones, Phil 2021. "Big Tech's Push for Automation Hides the Grim Reality of 'Microwork.'" *the Guardian*, October 27, 2021. <https://www.theguardian.com/commentisfree/2021/oct/27/big-techs-push-for-automation-hides-the-grim-reality-of-microwork>.
- Kazungu, Jacob S., and Edwine W. Barasa. 2017. "Examining Levels, Distribution and Correlates of Health Insurance Coverage in Kenya." *Tropical Medicine and International Health* 22 (9): 1175–85. <https://pubmed.ncbi.nlm.nih.gov/28627085/>.
- Kenney, Martin, and John Zysman. 2016. "The Rise of the Platform Economy." *Issues in Science and Technology* 32 (3):61–69. https://www.researchgate.net/publication/309483265_The_Rise_of_the_Platform_Economy.
- Kibe, Josephine. 2019. "How Are Kenya's Youth Experiencing the Gig Economy?" Consultative Group to Assist the Poor. <https://www.cgap.org/blog/how-are-kenyas-youth-experiencing-gig-economy>.
- Larsen, Trine P., Mikkel Mailand, and Thorsten Schulten. 2019. "Good Intentions Meet Harsh Realities: Social Dialogue and Precarious Work In Industrial Cleaning." *Economic and Industrial Democracy*. E-pub ahead of print. doi: 10.1177/0143831X19880265.
- La Salle, Dominique, and Greta Cartoceti. 2019. "Social Security for the Digital Age: Addressing the New Challenges and Opportunities for Social Security Systems." International Social Security Association, Geneva. <https://ww1.issa.int/sites/default/files/documents/events/2-Digital%20economy-264063.pdf>.
- Leite, Phillippe, Tina George, Changqing Sun, Theresa Jones, and Kathy Lindert. 2017. "Social Registries for Social Assistance and Beyond: A Guidance Note and Assessment Tool." World Bank, Washington, DC. <https://documents1.worldbank.org/curated/ar/698441502095248081/pdf/117971-REVISED-PUBLIC-Discussion-paper-1704.pdf>.
- Market Research Telecast. 2021. "Mexico Will Seek to Create Labor Regulations for the 'Gig' Economy." (accessed on June 12, 2022), marketresearchtelecast.com/mexico-will-seek-to-create-labor-regulations-for-the-gig-economy/134590/.
- Meidina, Ilsa, and Tanya Adi Putri. Forthcoming. "Summary Findings from a Survey on Informal Workers in Indonesia." Internal document, World Bank, Washington, DC.
- Melguizo, Angel. 2015. "Pensions, Informality, and the Emerging Middle Class." *IZA World of Labor* 2015. Article 169. doi: 10.15185/izawol.169. <https://wol.iza.org/articles/pensions-informality-and-emerging-middle-class>.
- Mercy Corps. 2020. "Operating Digital Gig Platforms in Different Regulatory Environments: A Comparative Assessment of Kenya, Tanzania, and Ethiopia." Mercy Corps, Nairobi, Kenya. <https://www.mercycorps.org/sites/default/files/2020-09/Youth-Impact-Labs-report-operating-digital-gig-platforms-different-regulatory-environments.pdf>.
- Murthy, Gayatri, with Rani Deshpande. 2022. *How Can Financial Services Support Platform Work? Insights from Five Emerging Markets*. Washington, DC: Consultative Group to Assist the Poor. https://www.cgap.org/sites/default/files/publications/2022_05_Focus_Note_Platforms.pdf.
- Myhill, Katie, James Richards, and Kate Sang. 2021. "Job Quality, Fair Work and Gig Work: The Lived Experience of Gig Workers." *International Journal of Human Resource Management* 32 (19): 4110–35.
- Naraharisetty, Rohitha. 2021. "Gigging to Survive: Gig and Delivery Workers Approach Supreme Court Seeking Social Security." *The Swaddle*. <https://theswaddle.com/gig-and-delivery-workers-approach-supreme-court-seeking-social-security/>.

- Ng'weno, A., and D. Porteous. 2018. "Let's Be Real: The Informal Sector and the Gig Economy Are the Future, and the Present, of Work in Africa." CGD Note, Center for Global Development, Washington, DC. <https://www.cgdev.org/publication/lets-be-real-informal-sector-and-gig-economy-are-future-and-present-work-africa>.
- Novitz, Tonia. 2020. "The Potential for International Regulation of Gig Economy Issues." *King's Law Journal* 31 (2): 275–86. <https://doi.org/10.1080/09615768.2020.1789442>.
- OECD (Organisation for Economic Co-operation and Development). 2018. "The Future of Social Protection: What Works for Non-Standard Workers?" Policy Brief on the Future of Work. <https://www.oecd.org/social/Future-of-social-protection.pdf>.
- Onduko, Enock M., Moses Gweyi, and Jeniffer Nyawira. 2015. "Analysis of the Determinants on Retirement Planning in Kenya: A Survey of Registered Pension Schemes in Nairobi." *Research Journal of Finance and Accounting* 6 (3). <https://core.ac.uk/reader/234630495>.
- Packard, Truman, Ugo Gentilini, Margaret Grosh, Philip O'Keefe, Robert Palacios, David Robalino, and Indhira Santos. 2019. *Protecting All: Risk Sharing for a Diverse and Diversifying World of Work*. Human Development Perspectives. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/32353>.
- Rhinehart, Lynn, Celine McNicholas, Margaret Poydock, and Ihna Mangundayao. 2021. "Misclassification, the ABC Test, and Employee Status: The California Experience and Its Relevance to Current Policy Debates." Economic Policy Institute, Washington, DC. <https://www.epi.org/publication/misclassification-the-abc-test-and-employee-status-the-california-experience-and-its-relevance-to-current-policy-debates/>.
- Rutkowski, Michal. 2018. "Reimagining Social Protection." *Finance and Development* 55 (4).
- Salazar, Marcela, and Josefina Riveaux. 2022. "Protecting Platform Workers' Health and Safety in Chile and Beyond." Lexology, April 28, 2022. <https://www.lexology.com/library/detail.aspx?g=9a044808-525d-4d1b-8465-b4b2d1ecca12>.
- Schoukens, Paul, and Enzo Weber. 2020. "Unemployment Insurance for the Self-Employed: A Way Forward Post-Corona." EISS (European Institute of Social Security) Research Paper. https://eiss.be/onewebmedia/EISS_Research%20paper%202020.pdf.
- United Nations. 2021. "Call for Reactions: Proposal for a Global Fund for Social Protection." <https://www.ohchr.org/en/calls-for-input/2020/call-reactions-proposal-global-fund-social-protection>.
- Varma, Suvir, and Alex Boulton. 2018. "Southeast Asia Churns Out Billion-Dollar Start-Ups: Venture Capital and Private Equity Investment Has Soared to Record Levels." Bain & Company, December 20. <https://www.bain.com/insights/southeast-asia-churns-out-billion-dollar-start-ups-snap-chart/>
- Winkler, Hernan, Elizabeth Ruppert Bulmer, and Hilma Mote. 2017. "Expanding Social Insurance Coverage to Informal Workers." Jobs Working Paper Issue 6, World Bank, Washington, DC.
- Wood, A., V. Lehdonvirta, and M. Graham. 2018. "Workers of the Internet Unite? Online Freelancer Organisation among Remote Gig Economy Workers in Six Asian and African Countries." *New Technology, Work and Employment* 33 (2): 95–112. <https://doi.org/10.1111/ntwe.12112>.
- World Bank Group. 2022. *Charting a Course towards Universal Social Protection: Resilience, Equity, and Opportunity for All*. Washington, DC: World Bank Group. <https://openknowledge.worldbank.org/handle/10986/38031>.
- World Bank Group and GFDRR (Global Facility for Disaster Reduction and Recovery). 2021. *Digital Works for Urban Resilience—Supporting African Youth: Rapid Pilot Phase Final Report*. Washington, DC: World Bank Group.
- Zamagni, Vera Negri. 2012. "Interpreting the Roles and Economic Importance of Cooperative Enterprises in a Historical Perspective." *Journal of Entrepreneurial and Organizational Diversity* 1 (1): 21–36.

CHAPTER 7

Designing Programs: Tips for Operational Teams

7.1 INTRODUCTION

The COVID-19 pandemic has increased interest from client governments that are seeking policy and technical support from the World Bank Group on new ways to stimulate digital jobs. The need is especially critical for low-skilled, vulnerable youth, often with limited schooling and in countries with limited opportunities in formal private sector jobs, jobs for women, and people with disabilities who face mobility constraints. Online gig platforms constitute a growing source of work opportunities for developing countries. Programs enabling vulnerable populations to access these online gig jobs can support social and economic inclusion in a rapidly changing world of work and contribute to closing the digital divide among and within countries. Such programs could be used as short-term instruments and need to be designed along with adequate measures to address the risks associated with online gig work, which can further exacerbate social and economic inclusion divides (these are detailed further in this chapter).

7.2 METHODOLOGY

This chapter gathers operational lessons from programs led by multilateral organizations and other private and nongovernmental organizations (NGOs) to provide some practical tips for practitioners like World Bank task team leaders (Table 7.1). Since there is very little formal evidence on impact, the insights of this chapter are based on consultations with project team members of several organizations, including the World Bank, nonprofits, government officials, and stakeholders in charge of the design, implementation, and evaluation of such programs (list in appendix N).

TABLE 7.1: Design and implementation phases of a typical online gig jobs project

1. Developing a strategy for online gig jobs programs	<ul style="list-style-type: none"> • Clarify motivation. Is the aim to accelerate digital adoption, address lack of domestic jobs, or respond to a crisis like COVID-19? • Assess readiness. What are the local supply and demand challenges, and what is the competitive advantage of the region or country? • Consult ecosystem stakeholders. Involve them during implementation as trainers, job providers, and so on. • Identify a champion government agency to initiate, sustain, and scale the program. • Partner with online gig platforms to identify niche segments of demand. • Develop a phased strategy, starting with a pilot.
2. Developing a pipeline of trained online gig workers	<ul style="list-style-type: none"> • Define a target group of beneficiaries. Identify demographic target, which will determine what type of online tasks are relevant, and then assess the need for access to devices and the internet. • Design a well-defined preassessment and scoring strategy to build trust with participants. • Design a clear and transparent communication strategy to increase awareness about the program and the potential of gig work using appropriate methods, including traditional media, social media, workshops and events, and partnering with local organizations.
3. Designing and delivering training programs	<ul style="list-style-type: none"> • Consider three types of skills when training for online gig jobs: technical, social-emotional, and freelancing skills. • Identify whether short-term or longer-term training would be suitable depending on target skills, whether for microwork, freelancing, or other work. • Provide hands-on training, which is essential for new online gig workers.
4. Increasing access to infrastructure and payment options	<ul style="list-style-type: none"> • Increase access to infrastructure. Leverage existing public infrastructure to lower costs; provide access to the internet using data stipends, partnership with the private sector, and innovative methods. • Increase access to payment options. Explore appropriate payment options from P2P payment channels, mobile money accounts, bank accounts, cash transfers, and cryptocurrency.
5. Linking program beneficiaries with demand/opportunities	<ul style="list-style-type: none"> • Work closely with platforms to link beneficiaries with opportunities. • Stimulate local demand for online gig work. • Explore DPW.

Source: Study team elaboration based on consultations.

Note: DPW = digital public works; P2P = peer-to-peer.

7.3 DEVELOPING A STRATEGY FOR ONLINE GIG JOBS PROGRAMS

7.3.1 Clarify motivation

Different motivating factors lead teams to develop online gig work programs at the country or regional level. Among the projects examined for this study, motivations included (a) insufficient availability of decent local jobs, (b) lack of local economic opportunities due to domestic fragility and conflict, (c) response to COVID-19, and (d) other reasons such as the need to develop digital skills among youth to prepare them for the job market and hence address youth unemployment.

High levels of unemployment, especially among youth, and insufficient availability of good-quality domestic jobs are strong motivating factors for governments to explore the potential of online gig work. In countries with these situations, there is often a skilled workforce which could benefit from employment in the international job market. For example, for a small country like Kosovo (with a population of 1.8 million¹⁷³), developing a targeted approach to access international demand through international gig platforms was considered a good solution to address the lack of local jobs and to increase the labor force participation of young women. This led to the development of the World Bank–supported Kosovo Women in Online Work (WOW) pilot (2015–16)¹⁷⁴ targeting young, unemployed women with university-level education from two rural areas in Kosovo, Gjakova and Lipjan. A total of 100 young women who were struggling to find their first jobs enrolled in a digital skills training program to prepare them for online freelancing work. Within three months of completing the program, these women were earning twice the average national hourly wage in Kosovo (Solutions for Youth Employment 2018). The success of the WOW pilot prepared the groundwork for the activities to be extended to the rest of the municipalities under World Bank’s Kosovo Digital Economy (KODE) project (2019–23).¹⁷⁵

Online gig jobs programs can be especially valuable in fragile environments because of weak local demand and a nonexistent private sector. For example, in their planning phase, World Bank’s team working on the pilot Click-On Kaduna in Nigeria (2018–19)¹⁷⁶ concluded that the only way to create jobs in the fragile political context of Kaduna is to provide youth with access to international markets through digital platforms. The project team provided training for unemployed and underemployed youth in Kaduna State to pursue digital jobs, including online freelancing and digital entrepreneurship.

Over the past two years, online gig jobs have become part of a possible solution for dealing with the effects of COVID-19. For example, in the case of EFE (Education for Employment—Jordan),¹⁷⁷ a skills training and placement organization in the Middle East and North Africa region, COVID-19 disrupted many of its vocational skills training programs—such as car mechanics or electrical installation—which relied heavily on in-person training. As a result, EFE pivoted to a new track of online freelancing. After doing a market assessment, the organization identified five needed skill tracks, including digital marketing, social media, data analytics, software development, and mobile application development. EFE saw a high level of uptake from youth trainees and high placement rates following the program and has continued to focus on this stream, even as programs are now back in person.

¹⁷³ According to World Bank data, [Population, total—Kosovo](#).

¹⁷⁴ See <https://www.worldbank.org/en/country/kosovo/brief/kosovo-wow>.

¹⁷⁵ World Bank project P164188.

¹⁷⁶ Click-On Kaduna in Nigeria (P159231).

¹⁷⁷ See <https://efejordan.org>.

Another motivating reason often is for countries to accelerate digital adoption or transformation and to develop twenty-first-century skills. For example, the World Bank's pilot in Kenya, Digital Public Works for Urban Resilience (DPWUR 2022)¹⁷⁸ employed a public works model to provide workers with a short-term income generation opportunity and the chance to develop digital skills and signal skills relevant to longer-term employment, while also creating critical urban data sets for government use. Such programs are often a smart way to build vital digital skills while also allowing low-income workers to earn an income.

Policy makers could develop a public platform or database that could support skills acquisition for the online gig economy. In traditional labor market programs, governments support skills development by funding training programs and institutions, offering vouchers, and so on. In contrast, such policy support for the online gig economy is scarce. The government could provide access to free, jurisdiction-specific training on issues related to the administrative aspects of working as a freelancer, such as taxes, business registration, and finance management (CEDEFOP 2020). Emerging research also suggests that data from online gig work platforms could contribute to the development of sustainable reskilling strategies by providing insights into in-demand skills (Stephany 2021; Stephany, Teutloff, and Lehdonvirta 2022).

7.3.2 Assess regional/local readiness

Making an assessment at the strategy-setting stage, perhaps through an identification mission, can help determine the local supply and demand challenges, the competitive advantage of a country, and what the desired project components should include. Teams can use existing labor market studies and conduct stakeholder consultations to think through their strategy. For example, the WOW pilot in Kosovo was built on findings from the World Bank's 2012 study on gender disparities after the team concluded that the following factors proved sufficient grounds to test the use of online work to connect young women with growing digital employment opportunities: (a) available talent with an intermediate-level fluency in English, (b) increasing access to broadband infrastructure and internet-enabled devices, (c) availability of online payment systems, (d) lack of any specific prohibitive regulations, and (e) cultural demands for flexible work arrangements.

7.3.3 Consult ecosystem stakeholders

Stakeholder consultations can also prove to be valuable at the ideation stage. The stakeholders can connect with important ecosystem players who can help during the implementation of the program. For example, at the idea generation stage of the development of eRezeki¹⁷⁹—a digital gig work platform developed and hosted by the Malaysia Digital Economy Corporation (MDEC), a government agency tasked with the development of the digital economy in Malaysia—MDEC proactively attended international events, such as the Crowd Conference and Crowd Business Model Summit in San Francisco, and sought input directly from gig work platforms. Government, academia, subject matter experts from the private sector, and local platforms also directly contributed to the development of eRezeki in 2015, through their participation in a special interest group. This group oversaw the implementation of the eRezeki pilot.

¹⁷⁸ World Bank's Digital Public Works for Urban Resilience pilot (P179314)

¹⁷⁹ See <https://mdec.my/erezeki>.

7.3.4 Identify a champion

Identifying a champion implementing agency within the government is critical. Some programs mentioned in this report, like the eRezeki initiative in Malaysia and the Ajira Digital Skills Program in Kenya,¹⁸⁰ were developed by governments. Other programs, which were initiated by development organizations, nonprofits, and the private sector, aligned themselves with existing government priorities to help find the right kind of support (funding, regulatory, or infrastructure) to initiate, sustain, and scale. World Bank–led projects studied for this report involved collaboration with various ministries and anchor institutions (Table 7.2).

TABLE 7.2: Partnering government institutions of World Bank programs

World Bank project	Country	Partnering government institution(s)	Method or reason for partnering
WOW pilot	Kosovo	Ministry of Economic Development	Direct request. The pilot was the result of a request from the Ministry of Economic Development of Kosovo to train unemployed and underemployed young women living in rural municipalities.
Click-On Kaduna pilot	Nigeria	Kaduna state government, Kaduna ICT hub	Alignment with public policy. This project was built on the Kaduna State Development Plan 2016–2020 (Ministry of Budget and Planning 2016). This plan defined ICT-related industries as a sector with significant potential for driving regional economic growth and new opportunities for youth in Nigeria to enter the virtual economy and earn an income by performing paid tasks in a growing global gig economy.
Digital Jobs for Khyber Pakhtunkhwa^a	Pakistan	Khyber Pakhtunkhwa Information Technology Board	Implementation support. Khyber Pakhtunkhwa Information Technology Board is a public sector autonomous organization and was the implementation partner for the provincial program. The project was the result of a multi-year programmatic advisory (technical assistance) program which was instrumental in positioning the province of Khyber Pakhtunkhwa as an emerging tech hub. ^b
Leveraging ICT (LICT) for Growth, Employment and the Governance Project^c	Bangladesh	Ministry of Posts, Telecommunication and Information Technology, Bangladesh Computer Council	Access to e-skill courses. The Bangladesh Computer Council is a statutory and autonomous government that aids in the use of information technology and the formulation of related policy. In this project, it provided six e-skill courses for target beneficiaries.

Source: Study team compilation.

Note: ICT = information and communications technology.

a. See <https://projects.worldbank.org/en/projects-operations/project-detail/P165684>.

b. The project has integrated a wide range of supply- and demand-side activities to increase private sector investment and promote youth employment in the region. This has involved skills training focused on youth and women, the development of coworking spaces and physical infrastructure to attract private sector information technology and business process outsourcing companies, and catalytic investments in start-ups and the regulatory environment for business.

c. See <https://projects.worldbank.org/en/projects-operations/project-detail/P122201>.

¹⁸⁰ See <https://ajiradigital.go.ke/#/index>.

Other projects, led by the private sector or nonprofits, have also worked closely with government to pilot projects and influence public policy in the long run. For example, Project Karya,¹⁸¹ a program designed by Microsoft Research India¹⁸² to make digital work more accessible to rural communities in India, works closely with the largest public works program in India, Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA)¹⁸³ and other government of India initiatives such as the Digitize India Platform¹⁸⁴ and Digital India Mission.¹⁸⁵ Project Karya aimed to expand these opportunities to rural communities, providing diversity to the speech data set¹⁸⁶ and providing income opportunities. Similarly, IREX Center for Applied Learning and Impact (a global nonprofit working on youth issues), Kazi Remote (an impact sourcing transcription service provider in Kenya), and the Kenya Ministry of ICT, Innovation and Youth Affairs collaborated on a pilot initiative in Kenya in 2022, Skills for Virtual Gigs,¹⁸⁷ which focused on equipping youth with the skills they need to succeed in virtual gigs and leverage their new skills for future professional opportunities.

7.3.5 Identify niche segments in global demand

Partnering with online gig platforms at the outset can help teams assess overall trends in the demand for gig work. Identifying demand for online gig work is very different from assessing demand for traditional skills placement programs, since gig work is not steady or continuous and is less predictable. To overcome this challenge, a few government-led programs such as eRezeki in Malaysia and Ajira digital program in Kenya partnered with several platforms (these interventions are detailed further in section 7.4 on linking program beneficiaries with demand) to better understand trends in demand for gig work. The digital freelancing program offered by Generation,¹⁸⁸ a global nonprofit working in Kenya, structured placement partnerships with platforms that would take their students and give them their first jobs after the Generation training program. They identified microwork in Kenya as a niche area and made regional platforms like remotaks.com¹⁸⁹ (which does image annotation, categorization, and such) and go transcript.com,¹⁹⁰ their program partners. For new freelancers to start right away on a global platform like Upwork can be daunting; they lack a rating history, are unclear on how to bid strategically for tasks, do not understand incentives created by platforms, or lack confidence to negotiate with clients. Similarly, Mastercard Foundation in Ghana will be launching its global talent outsourcing work in 2023. The project is developing partnerships with global gig platforms like Upwork and Fiverr to get data on in-demand roles so that the training program the foundation designs is targeted toward sectors and tasks for which demand is high.¹⁹¹

Partnering with platforms in the design phase can also help address biases such as “geofencing.” Consultations with programs have revealed that clients on platforms aren’t always open to

¹⁸¹ See <https://www.microsoft.com/en-us/research/project/project-karya/>.

¹⁸² See <https://www.microsoft.com/en-us/research/lab/microsoft-research-india/>.

¹⁸³ A majority of MNREGA workers belong to the most disadvantaged sections of Indian society. In fact, a recent study noted that around 85 percent of MNREGA beneficiaries belonged to families below the poverty line.

¹⁸⁴ The Digitize India Platform is a crowdsourcing platform that allows various government agencies to digitize public documents. See Department of Electronics and Information Technology, Government of India, 2015, <https://digitizeindia.gov.in/>.

¹⁸⁵ The Digital India Mission advocates for speech data collection in all major Indian languages and allocates funding for construction of a corpus for these languages.

¹⁸⁶ For example, the Digital India Mission has mandated digitization of all government documents. Such documents are often handwritten in one of India’s more than 120 local languages, making them unsuitable for off-the-shelf optical character recognition (OCR) technology and thus a good match for the skills of local populations.

¹⁸⁷ See <https://www.irex.org/project/skills-virtual-gigs>.

¹⁸⁸ See: <https://www.generation.org>.

¹⁸⁹ See: <https://www.remotasks.com/en>.

¹⁹⁰ See: <https://gotranscript.com>.

¹⁹¹ Based on consultations with Mastercard Ghana team.

freelancers from the developing world. Platforms allow users to create accounts, but freelancers from developing countries often are not able to view all the opportunities, and their profiles do not show up high in search results. There is evidence that a considerable number of workers have experienced discrimination in accessing work or high-paying tasks, particularly women and workers in developing countries (ILO 2021). This situation is called geofencing in online work. Mastercard Foundation, in its work in Ghana, is advocating with global platforms like Upwork and Fiverr to come up with more-inclusive strategies and to consider adding badges to profiles of their trainees to give them a supportive advantage.¹⁹² The lack of social security coverage is a major concern for workers on online gig platforms, as was covered in chapter 6. Some other common issues that workers experience on platforms include the struggle to find sufficient work due to the unavailability of enough well-paid jobs, high levels of competition and high commission fees, and unjustified rejection of, or nonpayment for, completed tasks.

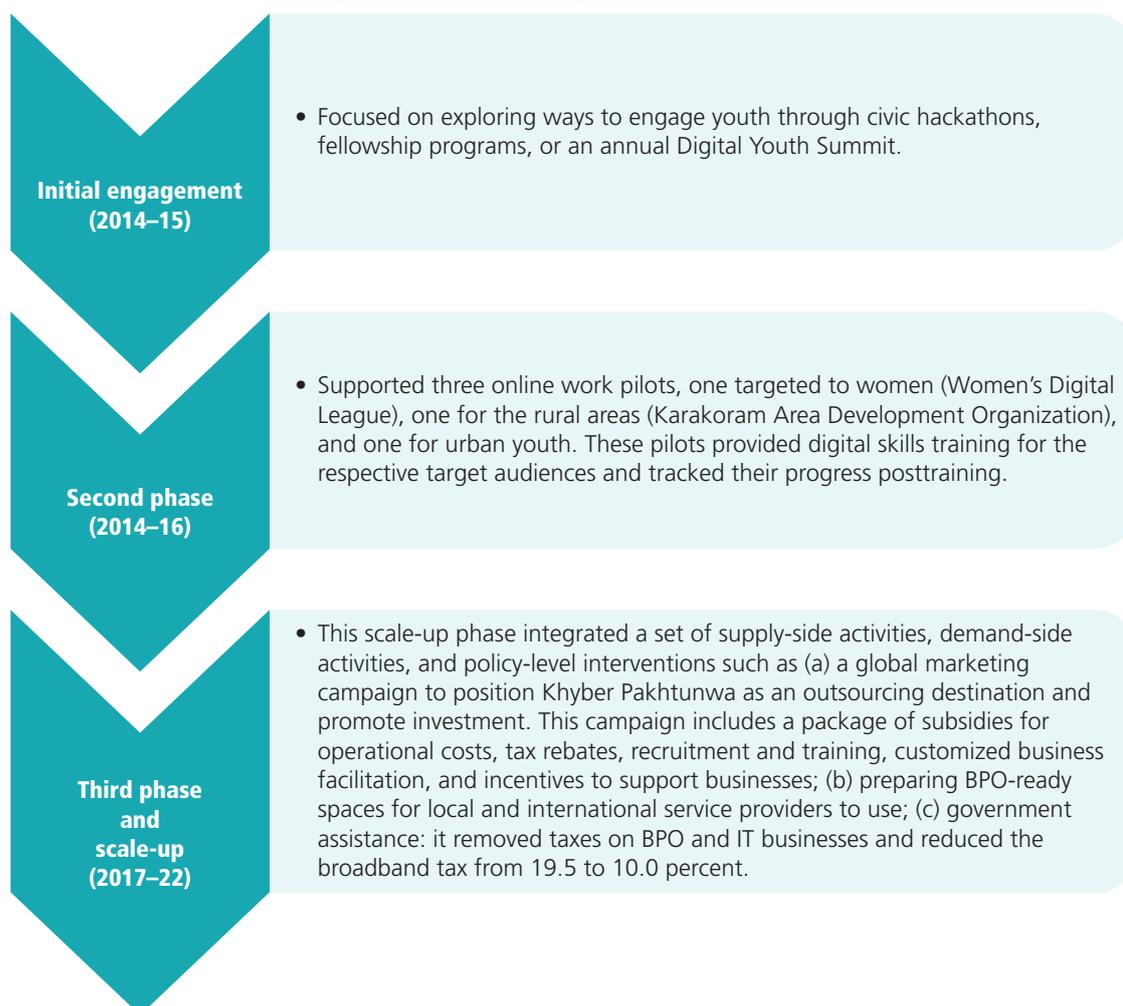
Partnering with platforms can also build sustainability in programs, as the intervention can continue through the platform and help more beneficiaries, even after the program period has ended. In *Mastering the World of Online Freelancing*, an International Finance Corporation (IFC)-led program that targeted digital inclusion of women freelancers from Jordan and Lebanon (IFC 2022), the team partnered with an existing online talent marketplace, Ureed.com,¹⁹³ to make sure a tailored training trajectory was fully embedded within and supported by the online platform as an integral part of its offering. Even though the project has ended, the portal to the training courses is available on Ureed.com, and the platform offers the training program to all freelancers with profiles on the site to help them build skills and boost their chances of employment.

7.3.6 Develop a phased strategy, starting with a pilot

Pilots help identify areas of comparative strength and weakness in the initial phases and target the appropriate regulations, demand, and so on in subsequent phases. Many of the programs started as short-term pilots that targeted a few types of online jobs, such as microtasks, which are relevant in a developing-country context with low skill levels or limited geographical area. As they become more familiar with workers and local and international contexts, teams can diversify into different tasks and increase the scale. For example, World Bank's Khyber Pakhtunkhwa (2018–22) project (Khan 2018), a provincial program focused on supporting regulations, institutions, and capabilities to promote online jobs, used a multiphase funnel approach; it started with small pilots to test its hypothesis and slowly scaled up the activities to develop an integrated model linking supply-side activities, such as training, with demand-side activities, such as promoting investment, as detailed in Figure 7.1.

¹⁹² Based on virtual consultations with Mastercard Ghana team.

¹⁹³ See <https://ureed.com/>.

FIGURE 7.1: Developing a phased strategy

Source: Based on consultations with government team involved in implementing the KP project in Pakistan.

Note: BPO = business process outsourcing; IT = information technology.

7.4 DEVELOPING A PIPELINE OF TRAINED ONLINE GIG WORKERS

7.4.1 Define a target group of beneficiaries

Teams must first define a clear target group of beneficiaries for the program before designing outreach, skilling, and other related activities. This in turn is dependent on various factors.

- **Target demographic group:** whether the project plans to target a specific group such as women, poor youth, refugees, unemployed or underemployed jobseekers, or school dropouts or university or technical and vocational education and training (TVET) graduates. For example, some programs, such as Malaysia’s eRezeki, were designed to provide economic opportunities to people from low-income households—namely, the bottom 40 percent (the B40).¹⁹⁴ In contrast, World Bank’s WOW pilot in Kosovo targeted young college-educated women. The Bulgaria-headquartered data

¹⁹⁴ In the Eleventh Malaysia Plan 2016–20, eRezeki was listed as one of the strategies through which the income and wealth of B40 households were to be lifted.

annotation company Humans in the Loop¹⁹⁵ targets refugees, internally displaced people, and conflict-affected locations in Afghanistan, Democratic Republic of Congo, Iraq, Lebanon, Portugal, the Syrian Arab Republic, Türkiye, Ukraine, and Yemen.

- **Type of online work:** for example, freelancing, microwork, or a range of tasks. The type of online work is influenced by the skill levels of the target beneficiaries. While most development programs want to remain inclusive, they also need to ensure that candidates who have a greater chance of succeeding in such opportunities are selected. Thus, in addition to identifying technical skills and qualifications, programs need to find desirable behavioral mindsets in candidates. For example, while selecting candidates for its transcription training program, Generation in Kenya focuses on attitudes and skills such as growth mindset, persistence, personal responsibility, communication skills, attention to detail, proactiveness, and adaptability.
- **Access to devices and internet:** Many of the pilot programs involved in the consultations that had limited budgets and infrastructure required beneficiaries to own a laptop and have internet access. Teams need to be careful when adopting such an approach, because they risk that low-income populations will miss out on opportunities if they don't have access to devices. The section on infrastructure shares ways in which programs can provide access to devices and increase the availability of opportunities for vulnerable populations.

7.4.2 Design a well-defined preassessment and scoring strategy

Developing and communicating clear participation criteria are key for building trust between the program and participants. For example, in its pilot in 2020, World Bank's Skilling Up Mashreq initiative¹⁹⁶ in Jordan and Lebanon established point-based vetting criteria to identify eligible applicants.¹⁹⁷ These scoring criteria were used to favor recent graduates with no previous work experience, from families with a limited source of income, and locations in rural areas. The shortlisted candidates who met the initial screening criteria were invited to an interview before a final selection was made. In contrast, the WOW pilot recruitment process in Kosovo comprised three online screening tests and a phone interview conducted in English. The online tests assessed the participants' skills in English, logic (IQ), and basic understanding of HTML (Solutions for Youth Employment 2018). In addition, program teams stressed the importance of maintaining transparency in communicating the selection criteria, timelines, deadlines, and the results.

7.4.3 Design a clear and transparent communication strategy

Teams need to pay careful attention to designing an outreach strategy at all stages of the program. To increase uptake of programs and reduce misconceptions, teams must develop an appropriate communications strategy to increase awareness about specific programs being offered and share information about online gig jobs. Because online gig jobs are still new in many countries, there is a lack of knowledge about what it takes to succeed in this sector. Legal frameworks to accommodate online gig work are not in place. Sometimes online gig work carries the stigma that it is not a "real" job. Also, there is "training fatigue" among vulnerable target groups, which can reduce participation. Programs should manage expectations and clarify that in some cases gig work may not be a stable source of income, and it may not always be easy to bid for a job in the early stages. In addition, there

¹⁹⁵ See <https://humansintheloop.org/>.

¹⁹⁶ In partnership with the [Hsoub Academy](#), an e-learning provider in the Middle East and North Africa region.

¹⁹⁷ Criteria included whether the candidate is currently unemployed; is living in Jordan or Lebanon; is between 18 and 24 years old; is Jordanian, Lebanese, or a refugee; has access to a computer with internet; and can dedicate a minimum of 30 hours a week for six months.

are risks and uncertainties associated with gig work, such as low wages and employer pressure, which should be shared with beneficiaries. Female beneficiaries especially should be made aware of issues like employer harassment, online gender-based violence (Solutions for Youth Employment 2022) in the form of bullying or cyberstalking, and more. Programs can prevent these risks by incorporating gender equality workshops into the training curriculum, creating safe online spaces, and increasing awareness through hackathons, for example.

Depending on the demographic profile being targeted, the communications strategy should include a variety of methods, such as the following:

- **Use of traditional media and promotional materials** such as signage, radio campaigns, and marketing collateral. Promotional messages should communicate clear objectives and goals, as well as sufficient details about the curriculum and, if applicable, they should be presented in national languages to maximize impact. Doing so may help programs reach vulnerable populations with lower education levels and digital and language competencies, as well as members of marginalized groups such as people with disabilities (Solutions for Youth Employment 2018).

Such strategies are most effective in low-resource and remote areas. For example, Kenya Ajira Digital Program—a government initiative driven by the Ministry of ICT, Innovations and Youth Affairs to empower over 1 million young people to access digital job opportunities—uses its standardized branding to promote its training centers, Ajira Youth Empowerment Centers, at the subcounty level (Figure 7.2). These include wall signage, double-sided road signs, banners, and T-shirts.

FIGURE 7.2: Standardized branding of Kenya Ajira Digital Program



Source: Kenya Ajira Digital Program.

- **Advertising on social media sites** such as Facebook and Instagram. While targeting participants in urban areas who speak English for higher-skill-level task, social media campaigns can be useful. Most established and budding freelancers are already on these social media sites looking for gig jobs, and new freelancers can connect, build networks, and start looking for gig work opportunities through the sites.
- **Workshops and community events** can be effective in raising awareness about online gig jobs programs through demonstrations and live activities. The Digital Jobs in Khyber Pakhtunkhwa project designed two-day civic hackathons, with the objectives to build open collaboration and bring together youth, private sector, and platform partners; identify civic issues that could be addressed through ICT-based solutions; and develop and cocreate innovative concepts to these solutions. The hackathon invited government departments to submit “problem statements” for

the event, and participants were challenged to provide and cocreate solutions to those issues with the departments. Also, the pilot of Click-On Kaduna in Nigeria organized one-day training workshops to introduce larger audiences to the gig economy, leveraging the experiences of local successful freelancers and assisting participants in setting up their profiles on various online gig platforms. The workshops also were used to identify talent in the Click-On Kaduna pilot. Of 1,000 participants, 150 (50 percent women) were selected for the second phase.

- **Partnering with local- and community-level organizations and educational hubs can help create awareness.** Collaborating with well-established, trusted community organizations or educational organizations in the target areas generates good results since these institutions know their target audience, have a trust relationship with them already, and can make recommendations that will be taken seriously. For this reason, Ajira Kenya Digital Program partners with local universities and TVET centers to establish Ajira clubs to create awareness about opportunities in online gig work. To date, the program has established 74 clubs in higher-education institutions in Kenya. Many families overprotect their vulnerable youth (such as young women and youth with disabilities), limiting their independence and leading to less access to jobs. This attitude prevents them from reaching their full potential. Community-based structures are often influential and are in a good position to help reach such groups and encourage them to participate. Similarly, EFE Jordan's online freelancing program, which targets primarily university students, focused its activities on university hubs in Jordan—in Amman, Irbid, and Zarka—and supplemented its outreach with social media since the target demographic was likely to speak English and to have access to internet and social media apps.

In India, because Project Karya targets vulnerable and rural populations, a locally led outreach strategy was especially important. All field engagements under Project Karya were conducted through a local nonprofit organization, Rural Caravan; leaders from Amale and other villages were also involved.¹⁹⁸ Pre-COVID-19, the engagement was done in person. During the pandemic, these interactions were conducted remotely, predominantly over phone calls and WhatsApp. These champions helped ensure that participants understood the scope and benefits of the engagement. More specifically, the organization conveyed that participation was completely voluntary, that participants could quit at any time, and that the pilot would run for only two weeks and was not a permanent earning opportunity (Chopra et al. 2019). This transparency in communicating the scope of the pilot also helped build trust between beneficiaries and the project implementers.

7.5 DESIGNING AND DELIVERING TRAINING PROGRAMS

7.5.1 Consider three types of skills when training for online gig jobs

For successful participation and earning in the gig economy, target beneficiaries need to have digital skills, more specifically online gig jobs skills. Online gig jobs skills exist on a continuum, ranging from basic skills (necessary for microwork platforms with simpler repetitive tasks) to intermediate to advanced skills (necessary for freelancing platforms with more-complex larger projects). In addition to technical skills, social-emotional skills are very important.

Teams need to consider the three key types of skills when designing a skill development program for online gig jobs: technical, social-emotional, and freelancing. *Technical skills* are task specific, such as tagging of images, segmentation for data annotation microwork or front-end development, and web application development for advanced freelancing tasks. Important *social-emotional*

¹⁹⁸ Based on consultations with the Project Karya team.

skills in online gig jobs include professional communication skills, business communication, ability to create a personal branding statement, interaction with clients, confidence building and development of personal motivation, stress management, cultural awareness, and, in some cases, knowledge of ethical artificial intelligence. *Freelancing skills* training for online gig workers refers to foundational knowledge of online gig work platforms, creating a personal profile and portfolio for online freelancing opportunities, proposing and negotiating with clients, ensuring quality and timely delivery, receiving payments, and building long-term relationships with clients. These are skills required to navigate the unique environment of online gig work, in terms of mastering platform user interfaces, optimizing one's profile to appear frequently in search results, reading the market to pitch and price one's services appropriately, and other similar skills. Some skills are also necessary for operating as a self-employed person more generally, such as registering as a business and dealing with finances and taxation as required. Table 7.3 highlights some key technical, social-emotional, and freelancing skills targeted by a sample of programs consulted for this report.

Social-emotional skills—such as teamwork, empathy, conflict resolution, and relationship management—are as essential for the success of gig workers as technical skills. Many projects focused as much as 30 percent of the curriculum on ensuring that beneficiaries developed the right “soft skills.” This emphasis of the programmatic approach was found to be consistent with the team's findings in surveys of platform workers (see chapter 4), who listed communication skills and time management as critical, alongside other social-emotional skills such as self-confidence; this observation holds true across education levels and gender.

Offering mentoring in addition to training has proved to be effective. Several programs emphasize the critical role of mentors in the initial period to guide new workers in freelancing skills. This includes mentoring new workers on creating a good online profile; proposing, engaging, and negotiating with clients for their first jobs; delivering in time and quality; building a strong online reputation; and motivating the trainees as self-employed workers to sustain their jobs and income. Freelancers interviewed highlighted that mentoring and hand-holding in the initial phase were crucial for their successful onboarding on platforms.

Peer groups can play a key role in supporting and motivating online gig workers. Successful programs include forming workers into peer groups which meet regularly, in physical or virtual format, to offer each other technical, social-emotional, and other forms of support. Such programs also promote competition among the peer groups or beneficiaries by giving recognition and/or rewards to top performers in terms of income generation, online rankings, number of new clients, and more, to increase their drive and motivation.

7.5.2 Identify whether short-term or longer-term training is needed

Teams can develop shorter skills training programs which are more suitable for basic to intermediate technical skills; however, a longer time frame may be required for training in advanced skills. Short-term trainings for specific types of work are a possible quick win to rapidly increase participation and help workers access more gig job opportunities (Box 7.1). Short-term training programs tend to be effective when members of the beneficiary group have a smaller set of skills, are also often vulnerable and poor, and thus require a quicker transition to income earning to keep the beneficiaries committed and engaged. These trainings could target less skilled gig tasks such as data entry and image tagging. Teams should also think innovatively of creating an upskilling plan in such cases so as to not make limiting assumptions about the capabilities of vulnerable populations.

TABLE 7.3: Sample curricula

Program (country)	Target skill level(s)	Skills component		Freelancing	Duration of training	Self-learning or instructor led
		Technical	Social-emotional			
Hsoub Academy (Jordan and Lebanon)	Advanced	40 percent— Computer science, front-end development, PHP web application development, Java Script application development. Also includes project-based components.	30 percent—Role modeling, mentorship, interview skills, client relationship development, interpersonal and professional skills	30 percent—Provision of job opportunities and experience through Hsoub platforms (called demand generation; part of the curriculum)	6–9 months	Both
Ajira (Kenya) (27 modules)	Basic, cross-cutting, and advanced modules	27 modules including: data management/entry, transcription, virtual assistance, digital marketing, content writing ^a	Entrepreneurship module, financial literacy module, soft skills module, leadership module, customer service module, legal framework for starting a business	Introduction to online and digitally enabled work module, online work safety and data protection, computer-digital literacy module, personal digital profile creation, Ajira digital business outsourcing guide module	2 days virtual training with 1 month mentor-ship, 5 days physical training with 2 weeks mentor-ship	Both
eRezeki (Malaysia)	Basic	eRezeki includes tasks that do not require any specialized skill; all Malaysians age 18 and older are eligible for registration and onboarding training program.		Registering with digital platforms, receiving digital payments such as through PayPal, and performing tasks	Self-paced	Self-learning
	Advanced	Eligibility for GLOW is limited to those with existing computer skills; English language proficiency; specialized skills needed to perform digital work, such as web and mobile development, graphic design, and software testing		Knowledge on starting a profile, understanding of the workflow, managing and improving performance, and financial management	Self-paced	Self-learning
Humans in the Loop (Middle East and North Africa)	Basic_ intermediate (microwork)	5 modules on data annotation: data collection from online sources, tagging images, different ways in which images can be tagged (bounding boxes, polygons, semantic segmentations)	Ethical AI training: what is AI, candidate's role on the AI pipeline	Module on working online, creating a CV, and so forth	5 days for technical training; other training can be completed in a few hours	Both

(Continued)

TABLE 7.3: (Continued)

Program (country)	Target skill level(s)	Skills component		Social-emotional	Freelancing	Duration of training	Self-learning or instructor led
		Technical					
Ureed (Jordan, Lebanon)	Intermediate	2 technical modules: computer-assisted translation tools and content writing		Combined approach to social-emotional and online work skills; 3 modules on increasing online presence (building profile, managing time, and so on), competing as a freelancer (pricing, negotiation, pitching ideas), and managing client relationships (communicating effectively, asking for and integrating feedback)		Approximately 12.5 hours to complete 5 modules	Self-learning
WOW Pilot (Kosovo)	Advanced	Basic application of HTML and CSS3, as well as responsive web design, web development tools, Java Script and jQuery, website optimization, and advanced Java Script		Professional communication skills, business communication, creating personal branding statement, interaction with clients, confidence building and developing personal motivation, stress management, and cultural awareness	Foundational knowledge of online freelancing marketplaces; how to write an effective cover letter and create a personal profile and portfolio for online freelancing opportunities	300 hours	Both
EFE Jordan (Jordan)	Basic, intermediate, advanced	Digital marketing, social media, data analytics, software development, mobile app development; 4–6 weeks		Soft skills training: 1–2 weeks (EFE's own in-house curriculum)	Module on online freelancing: 1–2 weeks	2 months	Both
Click-On Kaduna (Nigeria)		Programming and technology, digital marketing		Soft skills boot camp: emphasis on communication and presentation skills		6 months	Instructor led

Source: Study team.

Note: AI = artificial intelligence; CV = curriculum vitae.

a. **Ajira Digital Program's 27 training modules** include data management/entry, transcription, virtual assistance, digital marketing and e-commerce, content writing, assistive technologies, blue collar, basic app development, basic computer programming, basic graphic design, data analysis using Excel, financial markets and trading, introduction to AI, introduction to cyber security, and introduction to web development.

BOX 7.1: USING SHORTER SKILLS TRAINING PROGRAMS FOR LOWER-SKILL TASKS

Project Karya in rural India is a good example of how short trainings (about 30 minutes per day) focused on the basics are sufficient to let gig workers, especially those with very rudimentary skills, start online gig work. In the text training program, Project Karya team demonstrated to all participants how to type a name on the phone once, and in less than five minutes, each participant was typing their name on a smartphone, even though in many cases, it was the first time the participants had used a smartphone. A few months later, Project Karya team returned to train the pilot participants on how to use a smartphone and the Project Karya app. The training lasted for 30 minutes on the first day, teaching participants how to locate the application on the phone and type words. There was no separate in-person training phase apart from these 30 minutes, and participants learned how to type while doing the work.

7.5.3 Hands-on training for new online gig workers is critical

Most project teams stressed the importance of including a hands-on component in the training program that showed beneficiaries how to create a profile, bid for their first tasks, and get their first payment. Trainers need to help beneficiaries build a good online reputation, maintain their competitiveness, and move up the value chain of tasks for increased earnings and career development. Sometimes new freelancers without a rating history cannot easily establish themselves on global freelancing platforms like Upwork or Fiverr. For this reason, projects like Generation Kenya are partnering with smaller regional firms such as Remotasks.com (which does image annotation, categorization, and more) and GoTranscript.com as a way to build and ramp up experience for youths. To ease the transition of new freelancers on online gig platforms, the project is also supplementing this work by developing a cadre of superagents to mentor its young beneficiaries (Box 7.2). Teams also need to build awareness on dealing with harassment, unfair pressure from clients, and so on in the training modules themselves.

BOX 7.2: USING THE SUPERAGENT MODEL TO CONNECT YOUNG FREELANCERS WITH ONLINE GIG JOBS

Generation Kenya is using an innovative superagent model to mentor and train new freelancers in Kenya. It has two goals for its learners under the superagent mentorship program: to make finding first clients easier and getting feedback or ratings on their work.

(Continued)

BOX 7.2: [Continued]

The program identifies one superagent to mentor every 8 to 10 beneficiaries. Superagents are established freelancers who have worked for two to three years and have built an online gig work business. They have a considerable amount of work and are ready to distribute it to others who work under their supervision, mostly new freelancers who are just starting out and lack experience. The superagents act as a resource for work for new freelancers as they build their online portfolio on freelancing platforms. While this process has been happening informally (through Facebook [Meta] and Instagram), Generation Kenya is trying to streamline this by giving monetary incentives to superagents for supporting its graduates. The project is using a blended approach for sourcing superagents. They project leaders are identifying superagents through (a) platforms like Upwork, (b) informal networks of freelancers, and (c) local associations of freelancers like OPWAK that have a database of experienced freelancers.

Superagents help freelancers set up their account and provide guidance on best practices for sending a bid, writing a cover letter, interacting with a client, and finishing a job. Superagents also provide apprenticeship (by subcontracting part of the work they have gotten from various clients) and mentoring on best practices. One of the challenges for new freelancers is getting good ratings and building a reputation because clients use the profile of a freelancer to make hiring decisions. Superagents thus also provide a star rating, which the freelancers need for future jobs. The superagent mentoring model lasts about 12 weeks.

7.6 INCREASING ACCESS TO INFRASTRUCTURE AND PAYMENT OPTIONS

7.6.1 Increase access to infrastructure

A potential gig worker requires, at minimum, access to three things: reliable internet connection (mobile or fixed broadband), an internet-enabled device (smartphone, tablet, or computer,) and a reliable energy source (electricity).

Teams should try to leverage public resources or venues such as public universities or government-owned telecenters, for example, to maximize use of existing infrastructure and help lower the entry barriers for the less privileged. For example, the eRezeki project of the Malaysia Digital Economy Corporation (MDEC) has appropriated more than 2,000 telecenters (Wakil eRezeki) to provide free access to computers and the internet for beneficiaries (Box 7.3). A similar approach has been used by Ajira Digital Program, by the Ministry of ICT, Kenya, which has worked with members of Parliament at the subcounty level to develop Youth Empowerment Centers or “innovation hubs” by using existing, unused public infrastructures such as government training centers. A total of 106 such centers have been set up at the subnational level to provide youth beneficiaries with internet connectivity, computers, training, and mentorship to enable them to work in the online gig economy (Box 7.4).

BOX 7.3: LEVERAGING TELECENTERS INTO INCOME GENERATION CENTERS FOR ONLINE WORK: EREZEKI IN MALAYSIA

eRezeki income generation centers, referred to as Wakil eRezeki, were set up to facilitate training and performing microtasks by beneficiaries. MDEC leveraged existing government telecenters to promote and onboard workers to eRezeki. These centers were particularly important to reach out to Malaysians from rural areas, who are more likely than city dwellers to be part of the B40 target group (bottom 40 percent of income distribution) and less likely to have the needed equipment and internet connectivity at home.

The idea for the centers resulted from a consultancy project with Crowdsourcing.org, which suggested that MDEC pursue a hub-and-spoke model, particularly for digital microtasks. Government-owned telecenters were partially repurposed to set up Wakil eRezeki centers. Over 200 of these centers were originally opened in the year 2000 to provide digital and internet access and connectivity, with the view of bridging the digital divide. MDEC thus developed a collaboration model with these telecenters, using some of their computers for training for eRezeki. In addition, MDEC established six centers that it fully funds as Wakil eRezeki.

Despite the positive aspects of Wakil eRezeki, it has been found to be underused and faces issues of financial unsustainability. Through site visits, as well as interviews with key stakeholders, Frost and Sullivan (2020) found that Wakil eRezeki centers appear to be underutilized, especially in recent years. These stakeholders mentioned that Wakil eRezeki was previously used as an important channel to advocate for the program. However, promotion and training have been scaled down significantly since 2018. Discussions with MDEC revealed that there are some issues in running the repurposed telecenters, one of which is that the metrics to assess their performance did not accurately capture the success of the centers in promoting eRezeki. MDEC also mentioned that the six centers fully funded by MDEC had to be discontinued, as they were not financially self-sufficient.

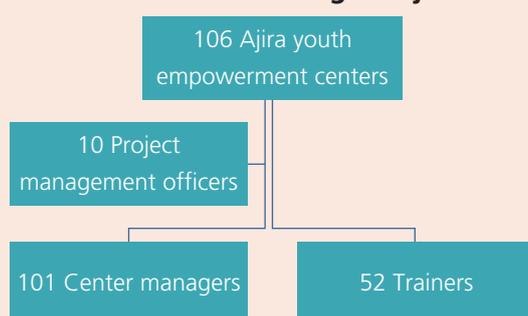
There are many advantages of having a physical infrastructure and venue. An evaluation by Frost and Sullivan (2020) of the eRezeki centers in Malaysia found that having a physical venue or coworking space allowed project beneficiaries a quiet place to do their job and provided them access to better equipment (or any equipment) than they otherwise would have, and they found it cheaper to work from a center. Such centers can also be important tools for reaching out to rural youth and increasing the participation of young women, who face disproportionate household and caregiving responsibilities (Solutions for Youth Employment 2018). Depending on the cultural context of their location, adjustments may need to be made to improve women's access to such centers. For example, in the Digital Jobs for Khyber Pakhtunkhwa project, Durshal coworking spaces gave the options of female-only hours or separate work sections. Similarly, the WOW Team in Kosovo ensured that each training location should be easily accessible by public transport and in a safe, well-lit location.

BOX 7.4: LEVERAGING SUBCOUNTY INFRASTRUCTURE FOR AJIRA YOUTH EMPOWERMENT CENTERS IN KENYA

From a pilot done in 2017, the Ministry of ICT identified youth's lack of access to infrastructure, devices, and the internet as key barriers to digital jobs and online work. For the second phase of the project, which started in 2019, the Ministry of ICT, Innovation and Youth Affairs partnered with the Mastercard Foundation Young Africa Works initiative to scale the Ajira Digital Program activities and enable over 2 million Kenyans to access dignified work through digital platforms. The program implementation partners for the scale-up program are Kenya Private Sector Alliance (KEPSA) and eMobilis, a social enterprise in Kenya, tasked with operationalizing Ajira Youth Empowerment Centers (also called community innovation hubs) and institutionalizing Ajira Digital Clubs and Curriculum in Higher Learning Institutions (universities and TVET). Members of Parliament were approached by the Ministry of ICT to set up these innovation hubs in each of their constituencies using existing, unused public infrastructure at the subcounty level. Now there are 106 such centers to provide youth beneficiaries connectivity, computers, training, and mentorship to enable them to work in the online gig economy. Each center has a manager tasked with running trainings, mentorship, community outreach, and daily activities, including opening and closing the center and managing the center equipment. The center managers serve as a link between Ajira, stakeholders, and the community; keep a record of beneficiaries (trainees); and mobilize the youth to participate in the program. They are key to accessing well-trained online workers.

Staff structure for these centers is as illustrated in figure B7.4.1:

FIGURE B7.4.1: Staffing of Ajira Youth Empowerment Centers



Access to the internet is critical

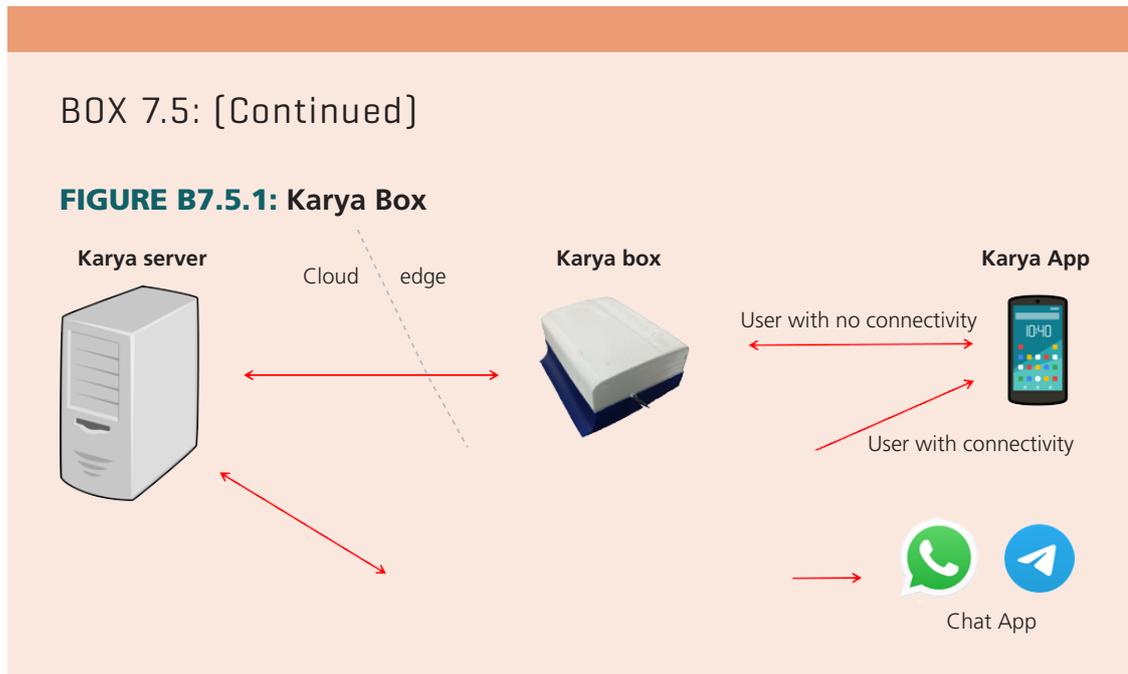
If teams are not able to provide a physical workspace, they should at least provide access to devices and the internet. Some projects use periodic donation drives and partnerships with charities to provide free-of-cost equipment to the most disadvantaged program participants. Others, such as Project Karya, try to either provide devices to participants free of charge (Box 7.5) or provide financial support so that participants can use subsidized loans to purchase equipment they may need. Because of the costs involved and concerns about device ownership after the program period ends, loans are not a commonly used approach.

BOX 7.5: PROVIDING DEVICES AND INTERNET CONNECTIVITY TO BENEFICIARIES IN LOW-RESOURCE SETTINGS: PROJECT KARYA CASE STUDY, INDIA

In Project Karya, most of the study participants didn't have access to a mobile phone, smartphone, or computer. Therefore, a key element for the project's success was to identify the best channels for providing the appropriate infrastructure for the study participants. Project Karya provided inexpensive Android smartphones that cost less than US\$50 to some of the study participants. For text transcription activities, 20 smartphones were provided. For speech data activities, Project Karya also provided earphones (with a microphone) to participants for the duration of the study to ensure better audio quality. Participants who received the devices had to sign a letter of understanding saying that they didn't need to pay anything for receiving the smartphone or pay any amount if the phone was damaged, under the condition of returning the phone by the end of the study. If the phone was in its original condition, then the participant received the payment for the work done. If the smartphone was broken or lost, then the participant didn't receive the payment, in lieu of paying for the smartphone.

The project target village of Amale (Maharashtra, India) had no cellular data connectivity. Since data collection had to be offline, an application to enable files to be stored offline and retrieved later was designed. In addition, Project Karya designed the so-called Karya Box, a 4G dongle-facilitated connectivity enabler placed in rural areas with low internet coverage. The Karya Box can be a physical box or a virtual machine hosted in the cloud that allows participants to complete their work offline. Once the task was completed, the participant just had to come closer to the Karya Box location and upload the work completed. The Karya Box periodically interacted with the main server and uploaded all tasks to the main server, where the Project Karya team could access the data and analyze it. Project Karya has so far deployed one physical Karya Box in Amale, which ran for six months without needing any replacement, and eight virtual Karya Boxes. Moving forward, the Project Karya team is thinking about running the Karya Box code base on a smartphone. A reasonably powerful smartphone will provide Project Karya with all the requirements for the Karya Box, including security.

(Continued)



A low-cost, effective way to provide internet access has been to provide data stipends. For example, to better target women participants from remote areas in its Virtual Digital Work series webinars, Ajira Digital Program provided them with data bundles (of about US\$8 per month) to aid connectivity and increase participation. Some governments have also taken up an active role in improving digital and allied infrastructure, thus enabling more access to online gig work. For example, the Indian government has policies to increase rural access to electricity and the internet, including large-scale subsidization of the grid connection fee for base-of-the-pyramid households (Kuek et al. 2015). This improved access has contributed to the growth of the rural business process outsourcing (BPO) industry and is also enabling a young, rural microwork industry to develop. Investments in last-mile electricity and connectivity have allowed rural university-educated workers in India to freelance online (Kuek et al. 2015). Digital Jobs for Khyber Pakhtunkhwa developed a partnership with Jazz, Pakistan's largest private sector telecommunications company, which supported the government of Khyber Pakhtunkhwa in improving internet connectivity in the target province.

7.6.2 Increase access to payment options

Access to safe and reliable means of payments has been a constraint in several countries.

Online gig workers can often claim and receive international payments through various channels, including peer-to-peer (P2P) payment channels like PayPal or Payoneer, mobile money accounts, bank accounts, and others. Direct bank-to-bank transfers are often limited by high costs as well as by international antiterrorism and money-laundering regulations (Kuek et al. 2015). There are limitations on the use of P2P payment channels as well. For example, to receive payments through PayPal, workers must have an active bank account. If they do not, alternative platforms such as Payoneer can allow workers to be paid. Payoneer transfers earnings onto a prepaid debit card that can be used as a debit card in shops or at ATMs to withdraw cash, which allows payments to disadvantaged populations, such as young people and women who do not have formal bank accounts. While mobile money

can be useful, say in an African context with a strong M-Pesa presence,¹⁹⁹ paying workers this way would still require setting up payment models that include an intermediary company to receive international transfers through PayPal (or other online payment methods) and then transfer the money locally through mobile money services. This is a significant barrier for workers to start online work. It also creates a perception of complexity for first-time online gig workers,²⁰⁰ which can be a further deterrent. Some online gig work platforms like Workana adapt payment methods to local preferences and currencies and are thus able to circumvent the payment barriers seen with international platforms such as PayPal.²⁰¹ In addition to international P2P channels like PayPal, Workana also allows workers to receive payments through local payment solutions such as Mercado Libre (Brazil, Mexico)²⁰² and Red Compra (Chile) as well as voucher cash payments in countries using Efecty (Colombia)²⁰³ or OXXO (Mexico).²⁰⁴

To reduce the perception of complexity and clarify costs associated with payments to program beneficiaries, teams can provide special training on receiving online payments through commonly used P2P channels like PayPal and Payoneer. Projects like WOW (Kosovo) and LICT Bangladesh helped their beneficiaries register with Payoneer, while Gaza Emergency Cash for Work and Self-Employment²⁰⁵ developed a partnership with PayPal to register its project beneficiaries on the platform. Usually, these channels apply a processing rate, which ranges from 1.9 to 3.5 percent of each transaction, plus a fixed fee ranging from 5 to 49 cents (Grigg 2022). When using a P2P channel, once payment arrives, recipients can accept it to their local bank account or their mobile account or withdraw it at any ATM (for example, using a Payoneer card). The Gaza Emergency Cash project also worked with local financial institutions so that youth could safely transfer and withdraw their online earnings.²⁰⁶ For the pilot cohort of the WOW project, many graduates had their payments routed via Albanian banks. This is because Kosovo was not recognized as a separate country on the platform, so most graduates had to register their accounts as if they were working from Albania.²⁰⁷ The program is now exploring the possibility of routing online gig jobs payments through mobile money accounts for its second phase.²⁰⁸ During interviews with freelancers, the study team learned that in order to find a workaround some workers open PayPal or Payoneer accounts in countries from which they source work, usually in Europe or North America, through relatives or friends who live in these locations.²⁰⁹ This approach is clearly unsustainable and a significant barrier for local gig workers, especially those who don't have a relative or friend in a country where P2P payment channels operate properly. This approach also presents issues related to tax evasion and a lack of social protection benefits with.

¹⁹⁹ M-Pesa operates in seven African countries—in addition to Kenya, it's active in Democratic Republic of Congo, Ghana, Lesotho, Mozambique, South Africa, and Tanzania—with over 52 million active users.

²⁰⁰ From virtual consultations.

²⁰¹ From virtual consultations.

²⁰² See <https://investor.mercadolibre.com/investor-relations>.

²⁰³ See <https://www.efecty.com.co/web/>.

²⁰⁴ See <https://www.oxxo.com/>.

²⁰⁵ World Bank project P167726.

²⁰⁶ PayPal is preferred by most of the international gig jobs platforms.

²⁰⁷ Based on consultations with government of Kosovo team members in charge of the WOW pilot design, implementation, monitoring, and evaluation.

²⁰⁸ Project Appraisal Document (PAD) for Kosovo Digital Economy (KODE), <https://documents1.worldbank.org/curated/en/249951531020771941/pdf/Kosovo-KODE-PAD-06132018.pdf>.

²⁰⁹ Based on project consultations.

Teams can also use other payment solutions for vulnerable areas where P2P solutions cannot be used because, for example, war or conflict, rural access issues, and international policies restrict foreign currency transfer. When working with refugees or rural youth, programs need to adapt approaches to help beneficiaries receive payment for their work, such as using postal money transfers and e-wallets. EFE Jordan, which worked with Syrian refugees who could not open local bank accounts, helped the refugees register for e-wallets (like Western Union) instead. With this approach, associated charges for the sender can be up to 3 percent (Lee 2023), which is high. Humans in the Loop has been paying its workers in Syria by transferring money to Turkish bank accounts through which the money is then relayed to Northern Syria by postal money order.

Direct cash transfers can also be used by teams where the local financial institutional network is limited, though there are major due diligence concerns with this approach. For example, in Project Karya, because of the rural location of the participants and a lack of internet and telephone coverage, payments had to be made either through a bank account or directly in cash. According to the assessment done by Project Karya, most of the project participants had a bank account or had an immediate family member who had a bank account. In areas with no banks or ATMs, cash payments were offered. Before COVID-19, the project team visited the villages in person and distributed the cash. During the pandemic, cash payments by the team were replaced by payments through local partners on the ground. The last step in the process entailed the Project Karya team speaking to the participants over the registered Karya phone to ensure that the payments had been received.²¹⁰ Similarly, in Afghanistan, Humans in the Loop makes bank transfers to local NGO partners, who then provide cash to the beneficiaries for work done. For due diligence and transparency, they do periodic worker surveys to identify any payment-related issues and fix them in consultation with the local NGOs.

Some teams have explored innovative emerging tech solutions like cryptocurrency. Traditional cross-border payments require fees in which a minimum value threshold is required to make the transfer cost-effective. In the case of individual freelancers and microworkers, with smaller payments, this can seem prohibitive. In addition, there are multiple steps in payment release, often involving intermediaries. Cryptocurrency can be used by online gig jobs projects to simplify the transaction process (Box 7.6). Cryptocurrency is a store of digital value traded online through a network of computers that has the power, through blockchain technology, to objectively verify and record unique transactions. It is designed so that no single person or authority can control the financial records (Mercy Corps Ventures 2022). In some studies, cryptocurrency has reduced remittance costs by 57 percent (Mercy Corps Ventures 2022). This is an emerging area and has to be accompanied by appropriate regulations within the national systems before it can be widely used.

²¹⁰ Based on consultations with Microsoft Research India team members in charge of Project Karya design, implementation, monitoring, and evaluation.

BOX 7.6: USING STABLECOINS FOR DIGITAL MICROWORK IN KENYA

Stablecoins are a form of cryptocurrency which remains stable in value (unlike Bitcoin and Ethereum, which are speculative). They work for peer-to-peer transactions, cross-border payments, and savings and do not require an intermediary for transactions. They can be linked to smart contracts—self-executing contracts that use blockchain technology to carry out agreements once terms are met, without the need for a human intermediary—making payments related to completing a job, such as a microwork task, automatic.

In a pilot led by Mercy Corps Ventures in 2022, 200 youth were trained in microwork tasks provided by Appen (an artificial intelligence [AI] training data firm). The tasks included image labeling, receipt transcription, and product categorization that contributed to AI training data for private companies. The participants were also trained in using cryptocurrency and in how to cash out earnings using M-Pesa. On completion of tasks, participants could decide whether to keep their money in a mobile crypto wallet (Valora) or off-ramp their earnings to their M-Pesa accounts. An evaluation of the pilot found that stablecoins reduce the costs and frictions of sending and receiving cross-border micropayments from up to 28.8 percent for a US\$5 transaction to 2.02 percent flat rate and that they increase take-home earning potential.

Source: Mercy Corps Ventures 2022.

7.7 LINKING PROGRAM BENEFICIARIES WITH DEMAND AND OPPORTUNITIES

7.7.1 Work closely with platforms to link beneficiaries with task opportunities

In order to link program beneficiaries to international online gig opportunities, teams can explore direct partnership agreements with platforms. These agreements can be structured in a comprehensive way to include platforms' involvement in project outreach and curriculum design as well as to collect beneficiary data to monitor the project's impact.

Platforms can provide project beneficiaries with “preferential” profiles to increase their visibility. While online platforms cannot directly give work opportunities to program beneficiaries, they are often able to highlight beneficiaries of such partnerships on their platforms—through badges and certificates of completion—which can give the beneficiaries an edge when they bid for online jobs. This is especially helpful for young, first-time, online gig workers who lack work history on online gig jobs platforms. For example, the state government of Selangor in Malaysia has developed a partnership with online gig jobs platform Workana. The program (Selangor Freelance Initiative²¹¹)

²¹¹ See <https://selangor.workana.com>.

aims to provide better job opportunities to residents in that state. Workana provides training courses to teach people how to work as independent talent and to work remotely. The training focuses on soft skills such as how to deal with clients and how to manage projects. The participants in this program receive a cash incentive for training, a profile on the platform, and a “free” five-star rating on a project to kick-start their presence on the platform.

- **Teams can also work through an *intermediary approach***²¹² to encourage international or local online gig work platforms to begin operations in the country. Such intermediaries could address demand issues by consolidating jobs through online platforms and increasing awareness of local workers, as was done by the eRezeki initiative in Malaysia (Box 7.7). In the case of eRezeki, collaboration with platforms is based on a list of qualifying criteria, overseen by a committee that validates, approves, and delists platforms. Platforms either are approached by MDEC on the basis of its in-house research or are recommended by other ministries and agencies. Upon receiving a letter of intent from the platform seeking to become partners of the program, the project team conducts a due diligence process, including meeting with the new platform to verify information provided by the platform. Upon completion of all due diligence, the application is presented at the Crowdsourcing Committee, chaired by the Ministry of Communications and Multimedia. For international platforms that have no presence or physical office in Malaysia, MDEC will seek their buy-in and commitment to enter a formal partnership via a memorandum of understanding, collaboration agreement, nondisclosure agreement, or other means. This approach could help address several core issues that are relatively difficult to manage from the strategic perspective, such as the lack of international payment services, little computer and internet access, lack of social protection, and more. These intermediaries could receive payments on behalf of online gig workers and distribute them via cash, checks, or local fund transfer mechanisms and provide the necessary working facilities. Intermediaries could also formalize the labor, since they could contract with these workers, offer local labor rights and social protection, and bring workers into the formal taxation structure.
- **Programs could also work with online gig work platforms**, making the platforms accessible and targeting disabled freelancers in their campaigns. Incorporating user-friendly terminologies, designing interfaces using accessibility guidelines (Box 7.8), and adding filters to select accessible tasks can help make online platforms more inclusive. BSpeak is an accessible crowdsourcing marketplace that enables blind users in developing regions, like India, to earn money by transcribing audio files through speech (Vashistha, Sethi, and Anderson 2018). Blind users can navigate BSpeak using TalkBack²¹³—Android’s built-in screen reader software—that reads aloud screen content on touch and swipe gestures. BSpeak demonstrates that a simple user interface, voice input, and untimed tasks could make a crowdsourcing marketplace more accessible for low-income people with visual disabilities in resource-constrained settings.

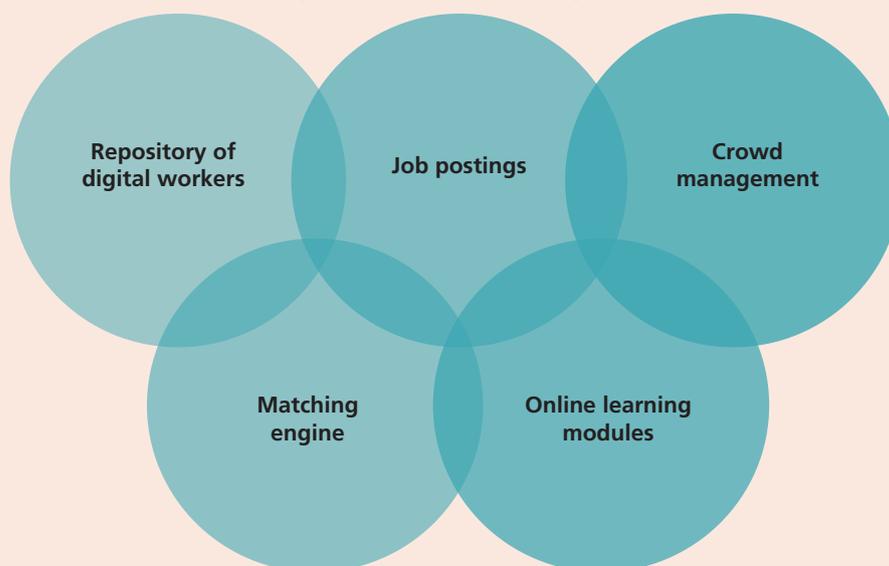
²¹² Sometimes referred to as the “walled-garden” approach.

²¹³ See https://support.google.com/accessibility/android/answer/6151827?hl=en&ref_topic=3529932.

BOX 7.7: USING THE INTERMEDIARY MODEL

eRezeki is a digital platform developed and hosted by MDEC, a government agency tasked with the development of the digital economy in Malaysia. It was launched in 2015 with the objective of providing opportunities for people to earn additional income by working online, with a focus on those in the bottom 40 percent of the income distribution (B40). In its pilot phase, the primary focus of eRezeki was on providing access to digital microtasks, following the example of Amazon Mechanical Turk. However, later in 2015 eRezeki expanded to also provide access to location-based and freelance work. At inception, given its focus on the B40 community, eRezeki was placed under the purview of the Ministry of Women, Family and Community Development, the ministry mandated to support social welfare in Malaysia.

FIGURE B7.7.1: Components of eRezeki platform



There are five components to eRezeki (figure B7.7.1). eRezeki is a platform through which all Malaysians age 18 and older can register, through which they will gain access to training that will support them in onboarding to the different platforms. The tasks are not listed directly on eRezeki, and members must register themselves and onboard to the different platforms, with support from MDEC, including through its eRezeki centers, referred to as Wakil eRezeki. The eRezeki initiative uses a walled-garden approach to pull specific tasks from online platforms and push them to targeted workers. The expansion of eRezeki was gradual, building on inputs obtained throughout the implementation of the project. In particular, the pilot project was instrumental in informing the feasibility of eRezeki before scaling up. The pilot project was narrowly focused on facilitating access to microtasks for the B40. The feasibility of extending eRezeki to include other digital work was analyzed while the pilot was being implemented. The pilot was also evaluated. Through these steps and the lessons learned through the pilot, eRezeki further developed to include location-based and freelance work. The need for training tailored more specifically for freelance work was also later identified, culminating in the development of another program, GLOW.

BOX 7.8: INCLUSIVE DESIGN APPROACH IN PLATFORMS

The design approach used in the development of online platforms must also be responsive to the users' specific types of disabilities and consider aspects such as digital literacy and attitudes toward technology. Mainstream gig platforms advertise job roles for which a youth with disabilities may qualify, but the text is so detailed that the person thinks that they may not qualify. The content has to be in simpler language instead of long sentences and complex jargon.

In designing disability-sensitive online platforms, several aspects need to be considered, including the following:

User interface design: Text should be easy to read and well spaced, ideally in large font; navigation should be clearly and consistently signposted throughout a page; white space should be utilized to make text, images, and links easy to locate; color palettes should be carefully considered to accommodate users with color blindness.

Alternative text: All images should have accompanying captions and hover-over descriptions to explain the content for users with visual impairments; all video content should have accompanying captions.

Alternative audio: Audio versions of text content should be recorded to accompany the text for use by people with speech disabilities; accompanying audio descriptions of videos should be produced, describing the content for users with visual disabilities.

7.7.2 Stimulate local demand for online gig work

Interviews with online gig platforms show that there is a growing demand from local private sector companies and small and medium enterprises (SMEs) for online gig workers.²¹⁴ To stimulate local demand for online gig jobs, teams need to work in tandem with local businesses to create awareness and also create a vibrant ecosystem of local platforms that can provide services at competitive rates (Box 7.9). Programs need to work on building the capacity of local SMEs and other businesses for them to see the benefits of digital methods, including the use of platforms to access talent. These businesses do not have the resources to employ permanent employees. They are looking for efficient solutions. Although there are concerns that programs to generate local in-country demand may lead to the redistribution of some jobs in the short term (for example, from within a firm), in the long term it can help in creating additional jobs. For example, SMEs can use online gig work platforms to hire low-cost graphic designers to create a logo, whereas previously they would simply not have had any corporate branding.

²¹⁴ This aspect was dealt with in further detail in chapter 5 of this report.

BOX 7.9: STIMULATING LOCAL DEMAND FOR GIG JOBS: KEPSA

Kenya's Ajira Digital Program tasked Kenya Private Sector Alliance (KEPSA), a limited-liability membership organization that works with over 1 million Kenyan businesses and associations, with stimulating public and private sector demand for gig jobs, international and local. Because of the COVID-19 pandemic, many Kenyan local private sector companies and government agencies have been pivoting to online digital work. Research on local businesses led by KEPSA in 2021 concluded that at least 20 percent of tasks such as accounting, advertising, human resources, and customer care are being or can be outsourced by the local Kenyan private sector. At the same time, there have been reduced earnings and increased competition for digital work on large international platforms. To match local supply to this demand, KEPSA is working with over 120 local digital platforms to understand where they require support and to develop tailored technical assistance that helps digital platforms to grow. KEPSA is providing acceleration and incubation support to sustain and grow digital platforms through review of the technology used, market linkages, and financial management systems and talent acquisition.

7.7.3 Explore digital public works

Teams can also explore digital public works (DPW) to create income generation opportunities for low-income households, develop digital skills among the vulnerable, and at the same time build critical national digital assets. There is a broader push for transparency and e-governance in many countries. As a result, many governments are digitizing records and putting them online. There are also growing opportunities for telehealth for public hospitals,²¹⁵ transcription of public health information and government communications,²¹⁶ and digital cultural preservation (Box 7.10).

Online gig work could deliver benefits for governments by providing digitization and analysis of data quickly, cheaply, and flexibly. World Bank's [Digital Works for Urban Resilience: Supporting African Youth](#) project used digital technology to maintain public works in more efficient, cost-effective, and gender-inclusive ways. For example, one pilot program in Freetown, Sierra Leone, used satellite images to identify trees in urban areas to monitor the changing canopy, while another, in Bamako, Mali, identified places where trash was accumulating to improve the design of solid waste management services. The remote, asynchronous nature of the work allowed people, especially women, to participate at times that suited their family schedules or other commitments.²¹⁷ Similarly, in Kenya, the pilot program worked with 300 youth to collect data on buildings, water points, and solid waste (Figure 7.3; Box 7.11).

²¹⁵ Microworkers can use mobile phones and digital platforms to transcribe handwritten medical records, tag medical images (such as MRIs and X-rays), and support contact tracing and data entry.

²¹⁶ Microworkers can use mobile phones to transcribe short lines of audio text (for example, COVID-19 updates) into SMS messages that can be shared broadly.

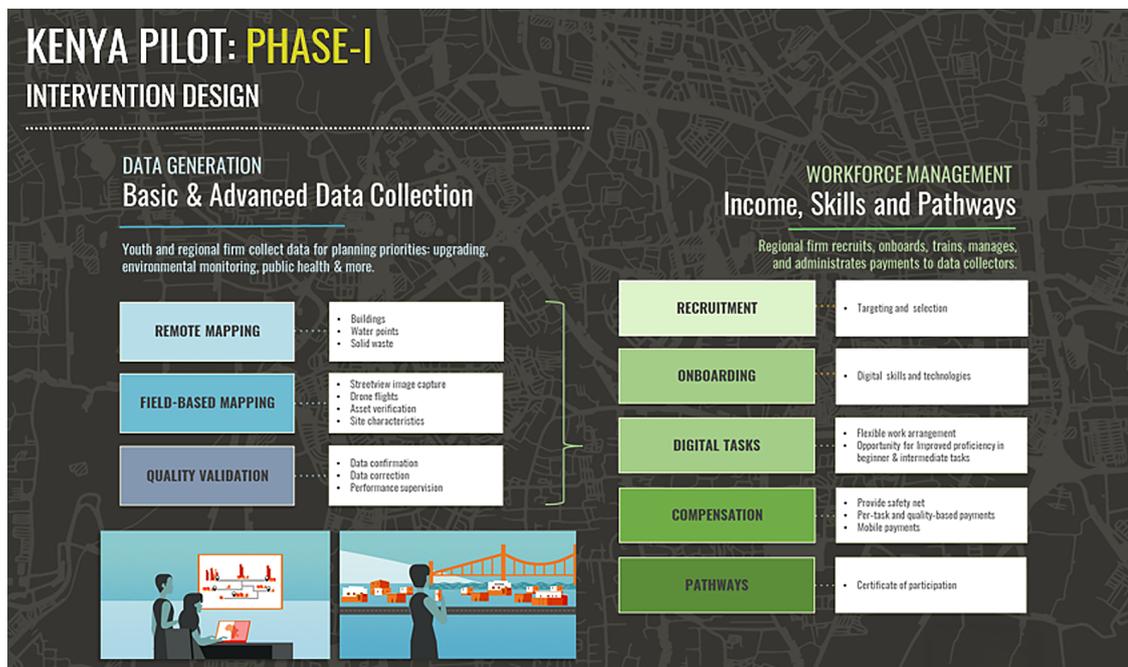
²¹⁷ See chapter 6 for a case study on DPW and linkages to social insurance.

BOX 7.10: DIGITAL CULTURAL PRESERVATION IN KENYA: DIGITAL DATA DIVIDE

Digital Divide Data^a (DDD) is working with the National Museums of Kenya (NMK) to digitize and archive records and collections on the cloud. NMK is the custodian of Kenya’s natural and cultural heritage. With over 10 million artifacts, fossils, and specimens, its collections represent the longest record of human evolution in the world. DDD is enabling digital preservation by creating a cloud-based digital archive and collections management system for one of the world’s largest archaeology and paleontology collections. For years, NMK sought to preserve these rare and important collections through digital preservation to mitigate the risk of losing valuable information and records due to decay and the passage of time. DDD is enabling NMK to achieve this objective by creating an entire digital records management, collections, and archiving system on the Amazon Web Services (AWS) cloud. The DDD team is also digitizing the collections, including undertaking 3D imaging, photometry, geotagging, and geospatial analysis and training the NMK teams. Additionally, DDD is creating a virtual museum experience for the public, while providing access to the rarest materials and artifacts for the research and academic community.

a. See <https://projects.worldbank.org/en/projects-operations/project-detail/P122201>.

FIGURE 7.3: Digital Public Works in Kenya



Source: World Bank.

BOX 7.11: TESTING AN ALTERNATE APPROACH TO DIGITAL PUBLIC WORKS, KENYA

World Bank's Kenya Digital Public Works for Urban Resilience (DPWUR) is one of seven pilot projects^a that used digital technology to test a new data- and technology-driven workflow to modernize public works. Phase I of the pilot started in May 2022 with a total of 300 youth across three urban informal settlements in Nairobi (Kahawa Soweto, KCC Settlement, and Embakasi Village). The youth performed a range of tasks, including remote and field-based digital tasks.

Remote tasks. (a) *Image classification/feature recognition*: answering simple questions about an aerial or street photo or distinguishing objects within it; (b) *Image segmentation*: outlining or tracing of an object from an image onto a map; (c) *Feature attribution*: documenting characteristics of a feature; (d) *Validation/quality assurance*: confirmation or correction of data that have been created by a human or machine; (e) *Data analysis*: using data to provide insights to practitioners and decision-makers.

Field-based tasks. (a) *Street view image capture*: taking of georeferenced photos from the ground; (b) *Asset verification/simple surveying*: assessing inventories or activities on-site, possibly including some level of human-to-human engagement; (c) *Feature attribution*: documenting characteristics of a feature; (iv) *Surveys*: questions for feedback from city-dwellers—what parts of the neighborhood are important, and so on

The objectives of the pilot were (a) to produce public goods and also provide a social safety net for local communities; (b) to support skills development (through onboarding training and on the job as workers doing digital tasks); and (c) to transfer skills (through certification of participation in the program) for longer-term income generation and economic inclusion.

Candidate recruitment. Candidates were selected randomly on the basis of their area of settlement; the program had a target of 300 participants, 100 per settlement. The program adopted an open recruitment model, with minimum eligibility criteria. Screening was done by asking youth to fill in a registration questionnaire that allowed validation of eligibility. The only criterion that was enforced was the exclusion of unipersonal households with outlier levels of income (0.5 percent of income or above K Sh 14,000). Community leaders were specifically asked to help identify potential candidates who fulfilled the requirements.

Task participation. Local information technology consulting firm Spatial Collective provided technical assistance on digital skilling and oversaw activities on the ground. Spatial Collective grouped youth according to different types of tasks, through a mix of workers' preference, screening, and trial and error. Most workers were initially assigned to relatively lower-skill tasks. Initially the youth participated in tasks such as focus groups, terrestrial imaging, building digitization, mapping points of interest, and interview recording transcriptions. In the later phase, other youth participated in socioeconomic surveys of the settlement populations. At least 18 percent of participants worked in multiple types of activities, which showed evidence of both willingness and ability to transition between tasks of different levels of difficulty.

(Continued)

BOX 7.11: [Continued]

Compensation structure to incentivize skill development. Participants were required to work a minimum of an output equivalent to 4 hours of work. They were given the option of supplying a maximum of 10-hour-equivalent output. The equivalent to the first 8 hours was remunerated at a base pay rate; overtime was remunerated a lower rate, and there was a quality bonus paid as a lump sum. Since participants got paid more the more tasks they completed and for good-quality work, they had incentives to complete tasks fast and well.

Key results:

- The quality of the data were more than satisfactory, with the majority of participants receiving a quality bonus for their performance, with 80 to 100 percent accuracy.
- Participants reported on their levels of satisfaction on a scale of 1 to 10, where 10 was highly satisfied. The average was above 9 for the following aspects of DPW: adequate guidance of the project, proper communication channels, likelihood of recommending to a friend, DPW will make it easier to find a job.
- Participation was diverse, with 65 percent women participants and 13 percent persons with disabilities.

a. See World Bank (2021).

Given security and data concerns, governments may prefer to use local platforms for government-related tasks. Large government contracts can also bring sustainability to small and upcoming local platforms. DPW can also showcase the potential of online gig jobs and help kick-start local and regional private sector demand in emerging markets. For example, KEPSA has developed a pilot in Kenya with the judiciary for digitization and transcription of its records. A local BPO firm has been enlisted as the project management agency and their staff are placed within the judiciary to manage the work process and management of records. Through this pilot, KEPSA is developing a blueprint that will allow governments to scale this effort in other departments, such as management of land records, medical transcription, online consultations, management of primary health, hospitality space, and construction. KEPSA estimates that if all government departments were to digitize, they would contribute to about 40 percent of the total demand for digital work.²¹⁸ Program teams can work with government to make their procurement processes simpler and their security requirements more transparent, enabling online platform firms to bid for public sector jobs.

Local governments can also explore working with online gig work platforms on various policy objectives. The energy transition is one such example. As climate change mitigation policies are increasingly adopted, phasing out of carbon-intensive industries such as coal will have a significant impact on labor markets and result in job displacement and limited economic opportunities for many communities. Online gig work can be a means of reskilling and upskilling workers who lose their jobs due to business shutdowns (see Box 7.12). Online gig work platforms can provide access to a new job market and opportunities to learn on the job for communities affected by the energy transition. Partnerships between online gig work platforms and local governments as well as industry can be particularly beneficial to provide targeted support for communities in need.

²¹⁸ Based on virtual consultations.

BOX 7.12: ONLINE GIG WORK AS AN OPPORTUNITY FOR DISPLACED WORKERS IN THE CONTEXT OF THE ENERGY TRANSITION

Energy transition policies to mitigate the impact of climate change will have a significant impact on labor markets, displacing substantial numbers of workers.

The closure of coal mines is just one example of the challenges brought by the energy transition, which has a significant impact on the labor market. As greener sources of energy are prioritized, mono-industry communities built around coal mines and plants, for instance, will bear the brunt of the transition and will be in dire need of reskilling opportunities and alternative occupations. The impacts will be widespread, affecting economies in Africa, Asia, and Eastern Europe (World Bank Group 2018).

Governments and industry stakeholders alike will need to develop reskilling and training programs targeted at displaced workers and communities affected by the energy transition. Reskilling and upskilling programs with a specific focus on digital skills and new technologies can open up new work opportunities and diversify local economies (IEA 2022). Emerging examples of such initiatives can help governments in developing countries craft actions to mitigate the negative impact of the energy transition. In the US, the IT and software development startup Bit Source was founded in 2014 after the collapse of the coal industry in Eastern Kentucky with the goal to provide former coal miners with new job opportunities. They also relied on support from the government to develop their company in the early stages. Bit Source trained 11 former miners in coding, with funding from a grant from the US Department of Labor (Field 2017).^a

Investment in digital skills training can stimulate economic opportunities for communities that face a variety of challenges and lack economic opportunities in their local markets. In June 2022, Ukraine launched the IT Generation pilot project^b in cooperation with educational technology companies with the aim to provide training in information technology (IT) skills free of charge to Ukrainians over age 21 who are not receiving a formal education and who have no qualification and experience in IT. The project is implemented with support from US Agency for International Development (USAID) and United Nations Development Programme (UNDP).

Online gig work can be an integral part of reskilling and upskilling strategies and can provide work opportunities for communities affected by the loss of jobs. For instance, the South African-based platform M4JAM collaborated with a mining company to diversify the economic opportunities for a community completely dependent on the mining industry (McCann 2021). To promote the benefits of online gig work, M4JAM offered exclusive access to online work opportunities to members of the community with the goal of promoting development of a new branch of economic activity independent of the mining industry.

a. For more details: Bit Source, <https://bitsourceky.com/about/>.

b. For more details: Ministry of Digital Transformation of Ukraine, IT Generation, <https://it-generation.gov.ua/>.

References

- CEDEFOP (European Centre for the Development of Vocational Training). 2020. "Developing and Matching Skills in the Online Platform Economy." CEDEFOP, Thessaloniki, Greece. DOI:10.2801/588297.
- Chopra, Manu, Indrani Medhi Thies, Joyojeet Pal, Colin Scott, William Thies, and Vivek Seshadri. 2019. "Exploring Crowdsourced Work in Low-Resource Settings." In *CHI '19: Proceedings of the CHI Conference on Human Factors in Computing Systems*, 1–13. New York: ACM.
- Field, A. 2017. "Turning Coal Miners into Coders—and Preventing A Brain Drain." *Forbes*, January 30, 2017. <https://www.forbes.com/sites/annefield/2017/01/30/turning-coal-miners-into-coders-and-preventing-a-brain-drain>.
- Frost & Sullivan. 2020. "A Study on the Impact of the eRezeki Programme to Targeted Communities in Malaysia. Final Report." Commissioned by Malaysia Digital Economy Corporation.
- Grigg, Billie Anne. 2022. "PayPal Fees and Rates List for Small Businesses." nerdwallet.com.
- IEA (International Energy Agency). 2022. "Skills Development and Inclusivity for Clean Energy Transitions." <https://www.iea.org/reports/skills-development-and-inclusivity-for-clean-energy-transitions>.
- IFC (International Finance Corporation). 2022. "Lessons Learned on the Inclusion of Women in the Digital Economy in Jordan and Lebanon: Recommendations for Increasing Women's Participation." IFC, Washington, DC. https://www.ifc.org/wps/wcm/connect/76d62460-acd9-4bb9-970a-bc3090d054c4/Ureed+Lesson+Learned+Publication_Feb+22_FINAL.pdf?MOD=AJPERES&CVID=nYxvj9g.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work*. Online Labour Observatory. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_771749.pdf.
- Khan, M. Shahbaz. 2018. "Digital Jobs in Khyber Pakhtunkhwa—Procurement Plan (English)." Pakistan, South Asia, project P165684. World Bank Group, Washington, DC. <http://documents.worldbank.org/curated/en/592901543605981979/Pakistan-SOUTH-ASIA-P165684-Digital-Jobs-in-Khyber-Pakhtunkhwa-Procurement-Plan>.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. "The Global Opportunity Online Outsourcing." World Bank, Washington, DC. <http://hdl.handle.net/10986/22284>.
- Lee, Shen. 2023. "What Type of Fees Do eWallets Charge?" eWhallet.com.
- McCann, G. 2021. "Community Connect Connects Public Projects with Public Needs." <https://www.linkedin.com/pulse/community-connect-connects-public-projects-needs-garth-mc-cann/>.
- Mercy Corps Ventures. 2022. "The Potential of Cryptocurrency for Kenya's Youth: Pilot Insights on Stablecoin Micropayments for Digital Workers." Mercy Corps Ventures, Portland, OR. https://www.mercycorps.org/sites/default/files/2022-02/MCV-Pilot-Insights-Report_Stablecoin-and-Digital-Microwork-in-Kenya-Web.pdf.
- Ministry of Budget and Planning (2016). *Kaduna State Development Plan 2016–2020: Delivering on Jobs, Social Justice and Prosperity*. Kaduna: Nigeria.

- Solutions for Youth Employment. 2018. *Digital Jobs for Youth: Young Women in the Digital Economy*. Washington, DC: World Bank.
- Solutions for Youth Employment. 2022. "Online Violence against Young Female Workers." S4ye.org.
- Stephany, Fabian. 2021. "One Size Does Not Fit All: Constructing Complementary Digital Re-Skilling Strategies Using Online Labour Market Data." *Big Data & Society* 8 (1). <https://doi.org/10.1177/20539517211003120>.
- Stephany, Fabian, Ole Teutloff, and Vili Lehdonvirta. 2022. "What Is the Price of a Skill? Revealing the Complementary Value of Skills." arXiv preprint arXiv:2210.01535.
- Vashistha, Aditya, Pooja Sethi, and Richard Anderson. 2018. "BSpeak: An Accessible Voice-Based Crowdsourcing Marketplace for Low-Income Blind People. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1–13. World Bank Group. 2018. "Managing Coal Mine Closure: Achieving a Just Transition for All." <https://openknowledge.worldbank.org/handle/10986/31020>.
- World Bank. 2021. "Digital Works for Urban Resilience: Supporting African Youth—Rapid Pilot Phase." Final Report. World Bank, Washington, DC. <https://documents1.worldbank.org/curated/en/099830012142142800/pdf/P171990044fb250f10b66502ebf997d2a1b.pdf>.
- World Bank Group. 2018. "Managing Coal Mine Closure: Achieving a Just Transition for All." <https://openknowledge.worldbank.org/handle/10986/31020>.

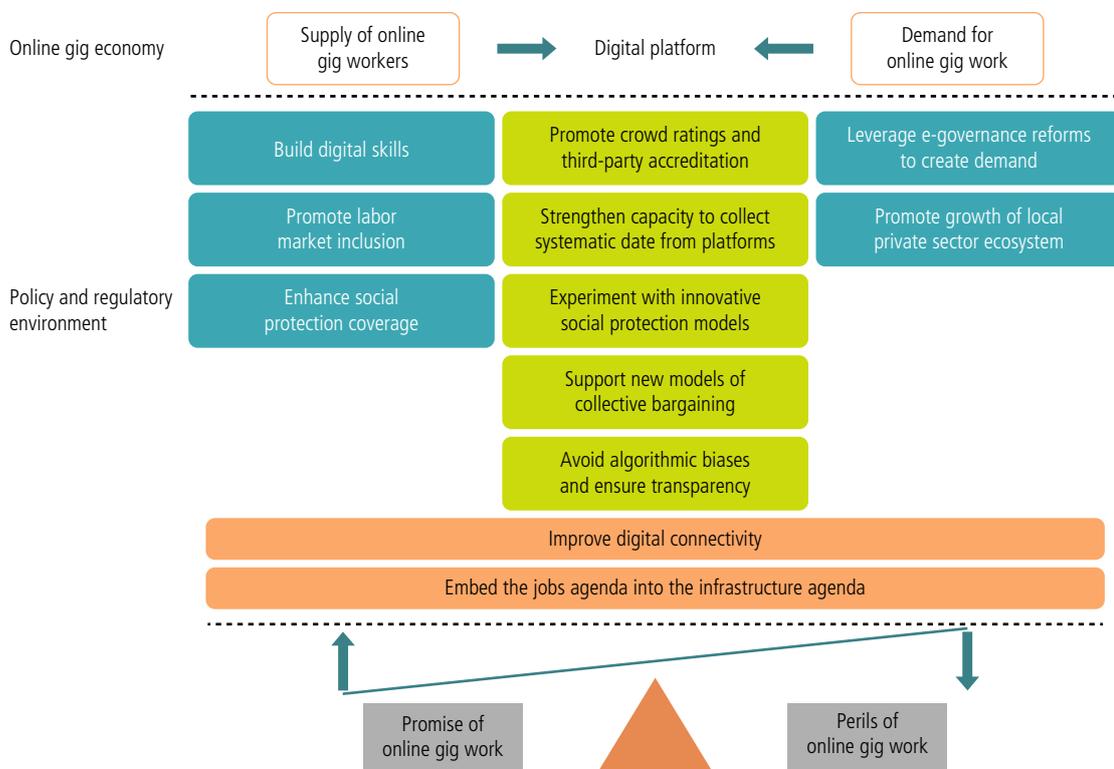
CHAPTER 8

What Can We Do?

Policy Recommendations

Online gig work is a rapidly increasing new form of work that poses tough challenges and trade-offs for policy makers. On the upside, it brings opportunities for income generation, especially in developing countries, where most people work in low-productivity, low-quality, often informal jobs. Gig work provides locational and temporal flexibility for vulnerable groups such as women, youth, migrants, and people with disabilities. These jobs could be a stepping stone to better-quality jobs for young or low-skilled workers by helping them learn critical digital skills and close the digital divide. Such jobs also enable companies to flexibly adjust their workforce in response to changes in market demand, to increase their productivity, and to grow their businesses. For policy makers, online platforms could provide entry points to reach informal and self-employed workers, who often remain invisible to expanded government protection programs. On the downside, gig jobs offer little to no protection for workers, who often face uncertainty in income streams and no clear career progression pathways. Gig workers are not protected by labor regulations against unfair practices or abuse or injuries at work. There is no recourse or membership in collective networks. In addition, gig work raises challenges for regulation of data security, privacy, antitrust, and the like. Moreover, there are no clear models for regulation that seem to fit the developing country context.

How can policy makers balance the promise and peril of gig work? Finding that balance, especially in low-capacity job-scarce environments, isn't straightforward and might need to be *incremental* and *experimental*. Testing and calibrating according to context will be important. Besides, "perfect" regulation might simply remain perfect on paper, given the low levels of implementation of labor laws in some countries. The following recommendations are suggestions on ways to maximize the upside and to address risks or the downside of online gig work. They take into consideration various stakeholders in the gig ecosystem, from both the supply and the demand sides, as well as the operation of digital platforms (Figure 8.1).

FIGURE 8.1: Policy recommendations to reap the benefits and avoid the risks of online gig work

Source: Study team.

8.1 BUILD DIGITAL SKILLS WHILE SUPPORTING PEOPLE IN EARNING ADDITIONAL INCOME

Governments can use the potential of online gig work to build human capital and develop digital skills, while also providing opportunities for individuals to supplement household income. Our study has found that people are turning to gig work for a variety of reasons, including income generation during difficult transitions such as job loss (making it a form of unemployment insurance) or combining work with other demands on their time, like school or childcare responsibilities. Vulnerable groups with mobility constraints use gig work because of the flexibility it offers in location or because they can tap into work opportunities in other regions or countries when local jobs aren't available. Populations living in poverty often forgo training opportunities because of the need to work and earn a livelihood. Gig work addresses that barrier and enables people to learn while earning an income. For example, the eRezeki program in Malaysia worked especially with the bottom 40 percent of the population in income and supported them as they accessed microwork and freelancing income opportunities. Therefore, policy makers should use this new form of flexible work to increase access to a wider variety of income-earning opportunities for a wider variety of people, especially the disadvantaged, so that they can also build critical digital skills in the process.

Digital public works boost demand for online gig workers and offer promising opportunities for short-term income generation to low-income populations, as well as the chance to build digital skills. The additional benefits of digital public works are that they build digital government architecture and assets and promote transparency, efficiency, and good governance. (See the case study on a Kenya pilot in chapter 7).

8.2 USE ONLINE GIG JOBS AS A SHORT-TERM INSTRUMENT TO PROMOTE LABOR MARKET INCLUSION

Gig jobs could be used as one of several instruments to promote female labor force participation, especially in areas where mobility is a constraint—for example, in conflict-affected situations. An example is the World Bank’s Click-On Kaduna operation in Nigeria, which trained women in a fragile region to use gig work to earn income. To ensure a higher degree of gender inclusion, policy makers need to create targeted training programs that combine training in technical digital skills with practical on-the-job skills such as negotiation, bidding, and managing client interactions. Our study found that while digital skills are a must, they alone aren’t enough to access the increasingly online world of work. For women, we found that mentoring, confidence building, and exposure to successful role models are especially effective. Interviews with female freelancers in Khyber Pakhtunkhwa (Pakistan) show that with the right programs, women not only became successful freelancers but also went on to become digital entrepreneurs who in turn trained additional women to do gig work.

Spatial inclusion is another policy goal to promote more equitable regional development of smaller cities, towns, and villages. Investments in digital infrastructure and last-mile connectivity could bring new types of job opportunities to secondary towns and rural areas. One of the advantages of online gig work is that it is not location dependent, which means that people living in smaller cities and towns can participate in the gig economy as easily as those in larger cities. This is particularly relevant to workers in smaller towns, where the lack of good-quality local jobs forces residents to migrate to capital cities or other countries. Our global survey shows that more than half of online gig workers live in smaller cities, which suggests that expanding online gig work opportunities is one approach to narrowing the employment and earning gaps between larger cities and smaller towns or rural areas, at least in the short term. Policy makers could consider investments in digital infrastructure to connect government buildings and other public buildings such as schools, libraries, clinics, and job and community centers and expand programs to offer free internet access in those places. Reliable access to electricity is necessary, because powering digital devices is often another impediment. Exploring possible partnerships with large tech companies is another option. For example, World Bank’s Digital Jobs for Khyber Pakhtunkhwa (Pakistan) developed a partnership with Jazz, Pakistan’s largest private sector telecommunications company, to support the provincial government in improving internet connectivity (see chapter 7 for details).

8.3 INVEST IN DIGITAL INFRASTRUCTURE AND ACCESS TO DEVICES

Access to digital infrastructure is a must. Affordable access to digital information and communication technologies (ICTs) (internet, mobile phones, mobile money, and so on) for all citizens, including disadvantaged groups such as youth and women, is crucial and urgent. This can be done through policies that reduce the cost of internet and bring broadband connectivity to rural areas, poor neighborhoods, and groups in need. A potential gig worker requires access to three key things: a reliable internet connection (mobile or fixed broadband), an internet-enabled device (smartphone, tablet, or computer), and a reliable energy source (electricity). The availability of high-speed, reliable, and affordable internet across rural and urban areas vastly expands opportunities for individuals to engage in online work. From a jobs perspective, digital access is vital.

In addition, digital devices such as laptops, smartphones, and tablets can open new opportunities for work. Access to a desktop is especially essential for freelancers. The share of online gig workers who responded to our surveys from desktop computers is 10 percentage points higher than that for non-gig workers. Our global and platform-based surveys also revealed that one of the

most highly sought-after benefits from platforms is access to loans for purchasing digital devices. Governments could consider lower tariffs and taxes on computers, direct cash subsidies or vouchers to low-income families or students, and partnerships with large tech firms. In the short to medium term, policy makers could identify existing public resources or venues such as public universities and government-owned telecenters to maximize the use of existing infrastructure, help lower the entry barriers for the least-privileged people, and support access to online work. See chapter 7 for examples, such as eRezeki in Malaysia and the Ajira Digital Program in Kenya.

8.4 EMBED THE JOBS AGENDA IN THE INFRASTRUCTURE AGENDA

Programs to promote jobs should not be an afterthought but should go hand in hand with infrastructure programs. While access to infrastructure and digital connectivity is foundational, it is also vital that policy makers be intentional, right from the start, about integrating a jobs agenda into the digital infrastructure expansion agenda. For example, one component of the World Bank's Kosovo Digital Economy Project (KODE), which aims to expand high-speed broadband coverage in remote areas, is designed exclusively to support the training of young people, especially women, to access new online gig work opportunities.²¹⁹ Integrating a jobs lens into digital infrastructure projects will maximize the economic impact on local livelihoods and create more job opportunities closer to home for vulnerable youth and others. There are several other types of jobs beyond online gigs that become possible when an area is connected to the internet—for example, cell phone repair and cybercafes. Such job promotion programs need to be designed along with the infrastructure investments. However, this obviously requires a Ministry of ICT to work closely with a Ministry of Labor, for example.

8.5 ENGAGE WITH PLATFORMS TO ENHANCE SOCIAL PROTECTION COVERAGE FOR INFORMAL WORKERS

Wider coverage of all types of informal workers is the best way to protect gig workers without segmenting the labor market. However, informal workers often remain unobservable and hard to reach for policy makers. Platforms would provide strategic entry points toward this objective. Several governments are beginning to work with digital platforms to promote coverage of informal workers in social security programs. Offering some level of organization to the otherwise unorganized sector, the digital platforms have the technological capacity to conduct massive outreach activities—even individually tailored framing and messaging—through automatic enrollment, payment reminders, and enabling small yet frequent contribution deductions. Innovative partnership models with platforms could help create win-win solutions. Policy makers should find innovative ways of partnering with platforms to provide support and training for persons from vulnerable and disadvantaged backgrounds. For example, the state government of Selangor in Malaysia collaborated with Workana, an online gig jobs platform, on the Selangor Freelance Initiative, which provides better job opportunities to residents. Workana provides training of independent freelancers that includes soft skills like client and project management. Participants receive a cash incentive for training and a profile on the platform, as well as a “free” five-star rating on a project to kick-start

²¹⁹ KODE project achievements include the following: (a) connection of 201 villages to high-speed broadband infrastructure, representing 4,376 households (around 24,000 people), (b) bringing the national average broadband penetration to 99.8 percent, the highest in Europe; (c) establishment of the Kosovo Research and Education Network (KREN) and connection of Kosovo to the pan-European network of universities (GÉANT); (d) connection of universities in Kosovo to KREN and provision of innovative, cost-effective, and reliable services; (e) and the launch of the Youth Online and Upward (YOU) Program, which will train 2,000 young people in high-demand advanced digital skills (trainings have already been completed by 400 beneficiaries in seven regions of Kosovo).

their gig careers on the platform. From the platform perspective, this helps promote a cadre of skilled freelancers that helps attract more clients to their platform. The workers, in turn, onboard to the platforms. From a policy perspective, it provides a practical way to build human capital while also supporting vulnerable populations to earn additional income. Another way in which governments can partner with platforms is to use platforms to reach workers and connect them to national social protection registries and other databases. The e-Shram portal in India is an example of how self-employed workers can be included in a comprehensive national database to facilitate last-mile delivery of social protection programs for unorganized workers. Informal workers often remain invisible to governments, and platform workers could be a more easily reached category of informal self-employed workers (see chapter 6 for details). By requiring mobile payments and identity information, platforms could be important partners for policy makers to increase uptake of government social insurance plans, for example.

8.6 EXPERIMENT WITH INNOVATIVE SOCIAL INSURANCE MODELS

Countries should experiment with various pilots and methods to establish effective social protection and insurance for online gig workers. Online gig work is a relatively new and rapidly growing segment of the workforce, and traditional labor protections have not kept pace with the changing nature of work. As a result, gig workers are often without adequate social protections such as health insurance, sick leave, or retirement benefits, leaving them vulnerable to economic shocks and personal emergencies. Moreover, online gig jobs are often project based and exhibit more income volatility than traditional jobs over time. Building consensus for an international governance system to ensure minimum rights and social protection for platform work might take years. Therefore, experimenting with different pilots and methods depending on the local context is highly relevant. Ongoing pilots and interventions initiated by governments and platforms and their collaboration should continue and be encouraged. More specifically, government should establish social protection floors to ensure that platform workers are protected in the event of covariate and idiosyncratic shocks; expand social registries in partnership with gig work platforms to facilitate gig worker access to social programs for which they are eligible; facilitate the accreditation of gig workers and create a regulatory sandbox to test how behavioral tools that promote pension savings can be successfully deployed at scale; and supplement social protection programming with digital public works interventions that leverage digital platforms on a pilot basis, given the nascent nature of digital public works. Also, government should explore partnering with private insurers to offer benefits to freelancers or to link gig workers to existing, publicly provided social security programs. Southeast Asia's ride-hailing platform Grab and insurance provider NTUC Income partnered to establish a micro-insurance product for driver-partners to facilitate affordable critical illness protection featuring a flexible, pay-per-trip micropremium and accumulative coverage. Participation in the retirement savings plan, however, is still entirely voluntary. A simple choice experiment suggests that subsidization (in the form of either matching contributions or a direct contribution subsidy) and allowing more frequent payment of contributions in smaller amounts would make retirement programs more appealing to gig workers and to informal workers in general.

8.7 USE E-GOVERNANCE REFORMS TO CREATE NEW DIGITAL WORK OPPORTUNITIES

Governments can also drive demand for online gig work as they implement e-governance and digital reforms for various sectors. There is a broad push for transparency and e-governance in quite a few countries. As a result, many governments are digitizing records and putting them online, as they move toward e-governance. Ways in which governments can drive demand include

programs to digitize archives, public records, and court files and to transcribe public health information and government services, all of which require digitally trained workers. There are also growing opportunities for telehealth for public hospitals, transcription of public health information and government communications, and digital cultural preservation. For example, the KEPISA pilot in Kenya, which focuses on digitization and transcription of court records, generated domestic demand for local online gig workers. The project group estimated that if all government departments were to digitize, that would contribute about 40 percent of the total demand for digital work in Kenya. Such big government contracts can create substantial demand for online gig workers and small regional platforms.

8.8 PROMOTE GROWTH OF THE LOCAL PRIVATE SECTOR ECOSYSTEM

Online gig workers are a crucial source of talent for micro, small, and medium enterprises (MSMEs) and start-ups and hence play an important role in the formation of a private sector development agenda. Our study finds that start-ups and smaller companies often turn to gig workers for cost-effective talent that they may otherwise have difficulty finding. However, most regional and local platforms struggle to establish themselves as a profitable business. This aspect needs attention from development organizations that work to promote entrepreneurship, start-up ecosystems, and firm growth, which are vital for the creation of good jobs in an economy. Local gig work platforms could be allies in developing an ecosystem for the local private sector, which includes firms that list access to a skilled workforce as a hindrance to their growth. Programs need to work on increasing the capacity of local MSMEs and start-ups to encourage them to use digital tools for productivity, improve quality, and overcome constraints in accessing skilled talent, for example, through online work platforms (see chapter 5 for details).

8.9 PROMOTE CROWD RATINGS AND THIRD-PARTY ACCREDITATION

Applying the very mechanism of ratings used by platforms (to rate workers) to platforms themselves could be an effective way to incentivize platforms to protect workers. Third-party monitoring and ratings could be used to align platform incentives with those of workers and policy makers. An example of this is the work being done by Fairwork Foundation that rates platforms on principles like the extent to which a platform ensures fairness in pay, fair working conditions, representation, and so on. Including worker-friendly policies to gain higher ratings may create the right incentives for a platform, as it attempts to appear attractive to both new gig workers and to new clients, who may also seek to address reputational risks involved in using a gig workforce. Another example of crowd rating is Turkopticon, a website and browser plug-in that enables Amazon Mechanical Turk workers to submit information on clients, rate clients, and check a client's record before accepting a task. These mechanisms use reputational ratings as a sort of regulatory instrument to incentivize good practices (see chapter 6 for details).

8.10 SUPPORT NEW MODELS OF COLLECTIVE BARGAINING

New forms of collective bargaining would be needed to support this new distributed model of work and to address worker protection. Traditional forms of collective bargaining are ineffective for online gig work since the workers, platforms, and clients are spread across the globe. This is another issue for which innovative models that keep pace with new forms of digitally enabled work need to be explored. A unique feature of some recent structures of collectivization is the leveraging of technology to scale access and impact. Self-initiated groups on Facebook, Reddit, WeChat, or

WhatsApp are bringing gig workers—including those working on location and online—together from across the world.

8.11 ADDRESS RISKS AND INCREASE TRANSPARENCY

Although our report does not examine these important issues, avoiding algorithmic biases and ensuring transparency in the operation of online gig work platforms are essential to achieve efficiency and equity. Online gig platforms collect data from gig workers and employers and use algorithms to assign tasks. Governments need to establish data safeguard standards and to ensure transparency in how platforms use data to match tasks in order to address discrimination embedded in algorithms, such as geofencing. Moreover, there should be documented due process for decisions affecting workers. Gig workers must be able to appeal decisions affecting them and be informed of the reasons behind those decisions. However, there could be a risk for overregulation, so balancing the opportunity and the risk associated with such measures should be duly studied. Governments could consider supporting third-party monitoring to ensure worker protections.

8.12 STRENGTHEN CAPACITY TO COLLECT SYSTEMATIC DATA

Gig work is challenging to regulate. For governments to address any risks associated with this form of work, they need to first understand the size, scale, and scope of gig work before designing any regulation. But to understand the nature of gig work, governments need reliable data and the ability to track and monitor trends in real time, considering how rapidly these trends are changing. Labor force surveys need to adapt to and measure these new forms of work. Given the nonnegligible and increasing share of online gig workers, standard labor force surveys need to adapt the questionnaires and agree on standard ways to define this type of work and collect relevant labor market information about them. The International Labour Organization is leading global efforts toward standard definitions to supplement labor force surveys, which is an encouraging initiative. Moreover, governments should frame appropriate measures to enforce standards of data sharing by platforms. Online gig platforms record transactions that exhibit characteristics like those of the informal sector. This transactional data can be leveraged to monitor labor market conditions associated with contracts that were previously unrecorded and typically absent in the informal economy. International coordination would be needed for such standards to be effective.

APPENDIXES

APPENDIX A

Stakeholder Interviews

This appendix lists the stakeholders interviewed for this study—that is, platform stakeholders (table A.1), governmental representatives and development organizations (table A.2), and private sector organizations (table A.3).

TABLE A.1: List of platform stakeholders interviewed

Platform	Headquarters	Representative(s)
Apna	India	Nihal Rustgi
Asuqu	Nigeria	R. J. Musah
Appen	Australia	Jessica Mony, Samantha Chan
BeMyEye	United Kingdom	Luca Pagano
Bookings Africa	Nigeria	Fado Ogunro
B.O.T.	Lebanon	Charbel Karam
Elharefa	Egypt, Arab Rep.	Nermine Elnemr
Findworka	Nigeria	Wilfred Epko
Flexiport	India	Shailesh A. Kantak
Freelancer	Australia	Sebastian Siseles
Khamsat and Mostaq (Hsub)	United Kingdom	Abedalmohimen Alagha
Jolancer	Nigeria	Femi Lukman Yale
Karya	India	Vivek Seshadri, Manu Chopra
M4JAM	South Africa	Garth McCann, Donelle De Vos
Meaningful Gigs	United States	Ronnie Kwesi Coleman
Native Teams	United Kingdom	Igor Radosevic
Onesha	Kenya	Bernard Momanyi Nyagaka, Levis Lawrence
SheWorks!	United States	Carla Cassanello, Maricruz Tabbia
SoyFreelancer	El Salvador	Pedro Müller, Raúl Escamilla Raul
Truelancer	India	Dipesh Garg
Upwork	United States	Patrick Hendren; M'Chelle Ryan (Upwork Academy)
Ureed	United Arab Emirates	Marwan Abdelaziz
Voices.com	Canada	David Ciccarelli
Workana	Argentina	Martin Bata Casaccia, Matias Alonso, Alejandro Kikuchi
Wowzi	Kenya	Mike Otieno
YouDo	Russian Federation	Alex Giridim, Anastasia Volodina

TABLE A.2: List of interviews with governmental representatives and development organizations

Institutions	Contact(s)
IFC/UREED	Elvira Van Daele
GIZ —Flagship Gig Economy Project	Shakhlo Kakharova, Kristen Schuettler
IDB	Oliver Azuara Herrera, Catalina Rodriguez Tapia, Mauricio Mondragon, Luis Carmona Silva
NASA – Center of Excellence for Collaborative Innovation	Steve Rader
i-Saaran Initiative (Malaysia)	Balqais, Ferizan
Kenya Ajira Digital Program (Emobilis)	Edna Karijo, Ken Mwenda
KEPSA (Kenya Private Sector Alliance)	Ehud Gachugu
Malaysia Digital Economy Corporation (MDEC)	Mohd Redzuan Affandi Abdul Rahim, Muhammad Farhan Hizami Said, Sivarao Aparahu
Digital Jobs for Khyber Pakhtunkhwa, Pakistan	Shoaib Yousafzai
Leveraging ICT for Growth, Employment and the Governance (LICT) Project, Bangladesh	Sami Ahmed
EFE Jordan	Lizzie Clark, Israa Awajan
Generation	Jennifer Decker Mehta, Teresiois Bundi
Humans in the Loop	Iva Gumnishka
eRezeki—Malaysia Digital Economy Corporation (MDEC)	Mohd Redzuan Affandi Abdul Rahim, Muhammad Farhan Hizami Said, Sivarao Aparahu
Selangor Freelance Initiative	Alejandro Kikuchi
Hsub Academy	Abdelmohimen Agha
Microsoft Research India (Project Karya)	Vivek Sheshadri
Mastercard Ghana	Esinam Maura Adorkor
Mercy Corps	Christopher Maclay
Digital Data Divide	Sopheap IM

TABLE A.3: List of interviews with private sector

Organization/Company	Contact(s)
60decibels	Tom Adams, Roshi Chengappa
AXA Mansard (Nigeria)	Adebimpe Adejoro, Olalekan Tijani
Catch	Kristen Anderson, Christina MacDonald
Federal Tax Service of Russia	Anatoly Gaverdovsky
Generation—Kenya	Jennifer Decker Mehta, Teresios Bundi
Insured Nomads	Chris Nam
KEPSA (Kenya Private Sector Alliance)	Dr. Ehud Gachugu
Koa (Kenya)	Patrick Russell
Modalis (Canada)	Curtis Grad, Frode Skulbru
Motionwares (Nigeria)	Chris Eliezer

APPENDIX B

Methodology for the Global Mapping Database

OVERVIEW

A global mapping database was created to analyze the landscape of online gig platforms globally. The database was created by combining existing databases from previous research with a subset of two firm databases that were filtered for gig platforms using data science methods such as natural language processing. To understand the landscape of gig platforms, website traffic data were incorporated as a key proxy to measure platform activity and a methodology to determine the operational focuses of global and regional/local platforms was introduced.

STEPS TO CREATE THE MAPPING DATABASE

The basic approach was to filter a universe of technology- and start-up-focused firms for the existence of gig platforms, using key words generated from an existing pool of gig platforms. A database of over 850,000 firms from CB Insights and PitchBook²²⁰ served as the basis of the master data set (figure B.1).

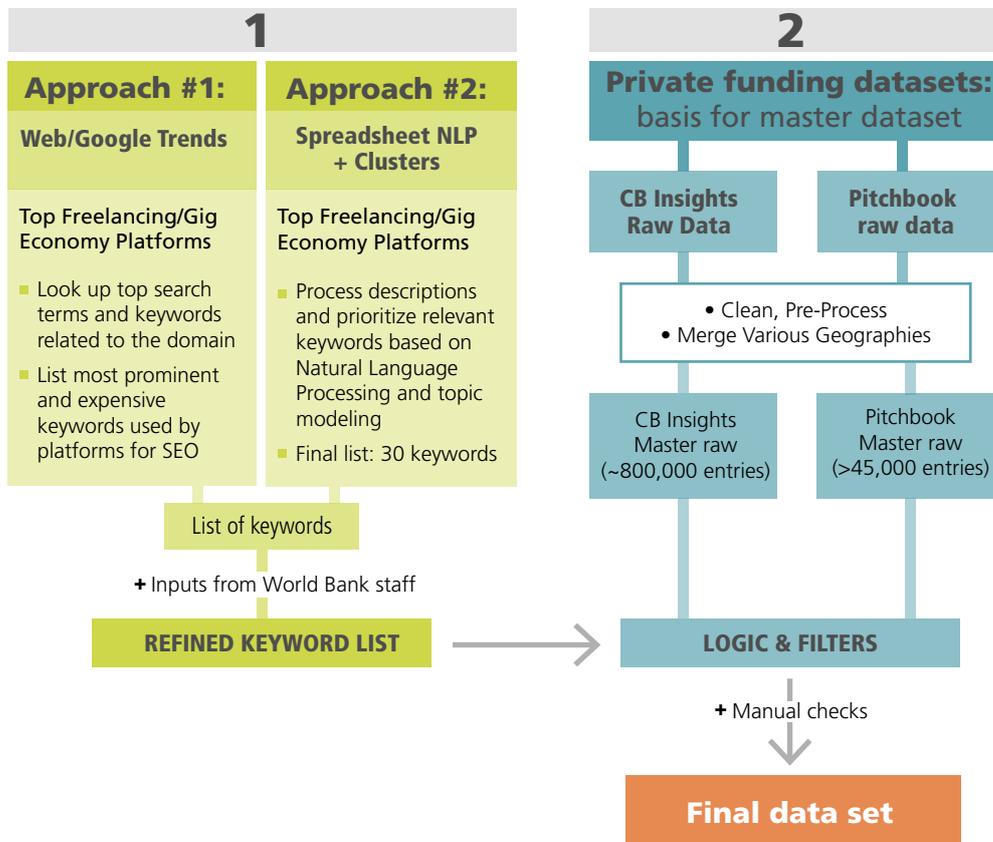
CB Insights and PitchBook are two proprietary data providers that focus on technology start-ups and venture funding ecosystems globally.

- **CB Insights** offers funding and deals data in the emerging technology and venture capital space. To create the data, it uses a machine learning algorithm to crawl, classify, and extract millions of insights from unstructured documents such as company filings and news articles. The database covers 193 countries (where companies have headquarters) globally and over 800,000 deals since 1983.
- **PitchBook** is a data provider focusing on private capital markets, with a database covering over 3 million companies globally. Data are crowdsourced or crawled from the web and fact-checked by analysts.

Both CB Insights and PitchBook are considered reliable, as they have in-house analysts and business intelligence pipelines to validate information, compared with crowdsourced data of other providers.²²¹

²²⁰ The number of firms included in the source databases is around 800,000 for CB Insights, representing its whole universe of firms at the end of 2020. Around 45,000 firms from the PitchBook database are included, which represents only a fraction of the total database in mid- to end-2020 but includes most low- and middle-income countries (LMIC). The additional PitchBook data layer was included to increase coverage of firms based in LMIC, which might be underrepresented in firm databases.

²²¹ A survey of eight leading providers of private start-up/venture capital (VC) data providers found that “VentureSource (which got acquired by CB Insights in July 2020) and PitchBook have the best coverage and quality across the dimensions of general company, team and financing information.” The study compared actual information on 108 start-ups that received 339 financing rounds from 396 globally active VC partnerships between January 1, 1999, and July 1, 2019, with their representation in the startup data-bases. See Retterath and Braun (2020) Benchmarking Venture Capital Databases, <https://ssrn.com/abstract=3706108>.

FIGURE B.1: Mapping method

Source: Elaboration by study team.

Note: NLP = natural language processing; SEO = search engine optimization; WB = World Bank.

TWO APPROACHES TO CREATING RELEVANT KEYWORDS

The first approach searched common terms to search for gig platforms online (figure B.2).

An existing mapping database of gig platforms that was prepared by Kässi, Lehdonvirta and Stephany (2021) was merged with CB Insights and PitchBook to add descriptive text as well as indicators that were going to be important later in the process (such as total funding, headquarters, founding year) about each firm. Then the URL for each platform was used to search top keywords relevant to these gig platforms using search engine optimization and keyword analytics platforms such as Semrush, Google Trends, and SimilarWeb.²²² These top keywords with respect to the domain include what users generally search for as well as what major platforms bid or pay to rank on the search platforms. This process resulted in a list of 23 key words that were most commercially relevant on search engines, including “app,” “design,” “platform,” and “project.”²²³

²²² Semrush is a software-as-a-service platform that is typically used for keyword research and online ranking analysis, providing data on information such as traffic, search volume, keywords, and cost-per-click (for more details, visit <https://www.semrush.com/features/>). Google Trends summarizes search volume and top search queries on Google over time (<https://trends.google.com/trends/>). SimilarWeb is a platform that provides data on web traffic analytics and performances (<https://www.similarweb.com/>).

²²³ All keywords generated are (alphabetically ordered): App, client, design, developer, development, employment, freelance, gig, graphic, hiring, hourly, jobs, microwork, parttime, platform, programming, project, rate, remote, talent, task, website, work.

FIGURE. B.2: Keyword method—common terms



The second approach to generating keywords used descriptions from CB Insights and PitchBook to feed into a model that generated a list of the most common keywords related to the gig platforms in the sample. From the descriptions, a corpus was created, which is a collection of text organized into a structured data set. Natural language processing and topic modeling techniques that process, identify, and cluster keywords—namely, Natural Language Toolkit (NLTK) and Latent Dirichlet Allocation (LDA), methods²²⁴—were used to retrieve relevant keywords from the corpus. This produced a list of 19 keywords relevant to describing gig platforms, with the most common five being “platform,” “company,” “data,” “design,” and “developer.”²²⁵

Keywords from the two methods were combined and clustered to produce three-word groups for filtering. Three types of words were visible in the list of 30 keywords: those that capture the digital platform business model, those that associate it to the vertical of employment and jobs, and, finally, words to describe different types of tasks performed on gig platforms, such as design, microwork, or transcribing.

FILTERING PRIVATE FIRM DATA SETS

To create the master data set, CB Insights and PitchBook firm-level data were cleaned and combined and then filtered for the key words. The raw CB Insights data set consisted of ~800,000 firms globally, while the PitchBook data set included only ~45,000 firms from low- and middle-income countries. Cleaning including removing duplicates, merging information from the two sources (using clean URLs to identify the same firm), and fact-checking information in cases where the sources contradicted each other. For example, where sources contradicted on the headquarter location, a search on the firm’s website or LinkedIn was used to determine the correct answer. Then, the raw CB Insights and PitchBook data were parsed using the three keyword categories to filter for relevant platforms.

²²⁴ NLTK, written in the Python programming language, provides a suite of different libraries for natural language processing, including capabilities for text classification, tokenization, tagging, parsing, and semantic reasoning. LDA is a natural language processing method that seeks to explain observations through unobserved clusters or groups, each explaining the underlying similarities of the data.

²²⁵ The words were Platform (334 occurrences), Company (245 occurrences), Data (108 occurrences), Design (98 occurrences), Developer (79 occurrences), Content (75 occurrences), Business (75 occurrences), Intended (70 occurrences), Time (65 occurrences), Service (63 occurrences), Talent (62 occurrences), World (61 occurrences), Provider (60 occurrences), Connect (57 occurrences), Mobile (55 occurrences), Community (52 occurrences), Web (52 occurrences), Marketing (52 occurrences), Hire (49 occurrences)

The filtered data were then merged with two existing mappings of gig platforms and manually checked for false positives. The final filtered data set was merged first with the data set from Kässä, Lehdonvirta, and Stephany (2021) and then with a data set of European platforms (EC 2021) that was filtered for those that focus on online work or offer both online and location-based work. Then the combined data set was manually checked by visiting each website to filter out the items that (a) were not platforms, (b) focused on providing long-term employment, or (c) focused on location-based work. This exercise yielded the clean data set of 545 platforms, to which further variables were subsequently added.

ADDING TRAFFIC DATA

Estimations of online traffic to the gig platforms in the database for the year 2022 were added as a key proxy for activity on platforms. Web traffic data provide insight into the browsing behavior of individuals, including which sites they visit, for how long, and how many pages they click on during a visit. Except for observed data that are available to a website owner and their provider of website analytics software (for instance, Google Analytics), these data are available as estimations, offered for purchase by specialized data platforms. Semrush is a software-as-service (SaaS) platform focused on the search engine marketing industry that also offers estimations of website traffic indicators. To estimate website traffic, Semrush uses clickstream data, which are records of individual users' clicks through their journey on the internet, including the pages visited and time spent on each page. Semrush collects and aggregates these data from several sources and feeds it into proprietary algorithms that then estimate traffic for a domain. Table B.1 provides an overview of key variables included in the Semrush data set for the purposes of this exercise.

TABLE B.1: List of variables included in the Semrush data set

Indicator	Definition	Value or type
Target	Domains or subdomains for which data are pulled	URL
Device type	Device with which the domain was accessed	Desktop, mobile, all
Display date	Specifies the month for which data are shown	YYYY-MM-01
Geo	Country for which data are shown	Two-digit ISO code
Traffic	Number of visits driven to the analyzed domain from the given country	Number
Global traffic	Website visits over specified month globally	Number
Traffic share	Share of visits driven to the analyzed domain from the given country	Percent
Users	Number of unique visitors driven to the analyzed domain from a listed country	Number
Average visit duration	Average amount of time a person spends on an analyzed domain during each visit	Number
Bounce rate	Share of visitors who leave an analyzed domain after viewing just one page	Percent
Pages per visit	Number of pages (on average) a person views during one visit on an analyzed domain	Number
Desktop share	Share of unique visitors coming from a given country to an analyzed domain via desktop	Percent
Mobile share	Share of unique visitors coming from a given country to an analyzed domain via mobile devices	Percent

Source: Study team's elaboration based on Semrush.com. Accessed on November 11, 2022.

In addition, country-level indicators which provide estimates of the share of traffic and visitors coming from each country to a single URL were available. The methodology accounted for the presence of websites with multiple unique country code top-level domains (ccTLDs),²²⁶ which cannot be captured as belonging to the same overall URL by Semrush. Semrush can identify subfolders and subdomains, such as url.com/en or en.url.com, but not cases where the ccTLD changes. As there was no comprehensive information on the existence of additional country-level URLs besides anecdotal evidence, a sample of 46 priority ccTLDs²²⁷ was searched on Semrush. Those that returned positive traffic, which indicates that the domain is active, were then manually checked whether they belonged to the gig platform in question. A total of 32 had further ccTLDs of which their traffic numbers were merged with the main observation. In addition to Semrush traffic data, global and local Alexa traffic ranks and reach were added from Bulk SEO Tools.²²⁸

Traffic data offer a detailed and widely available proxy for activity on gig platforms. Website traffic measure users' engagement with a domain, which can provide valuable insight into the performance of competing online businesses such as platforms. In the case of the digital platform, traffic can give insight into the interest and attention of all sides of the platform, as long as they use the same domains. Further, by relying on data-driven estimations, traffic data, even for smaller websites, are widely available. This contrasts with revenue and other business performance indicators, which tend to be available for only a small share of a sample which is usually larger or publicly traded firms. In the gig platform mapping, revenue data were available for 40 percent of platforms, while traffic data were available for 92 percent.

IDENTIFYING REGIONAL AND LOCAL PLATFORMS

The geographic distribution of website traffic was used to determine to what extent a gig platform could be considered global or regional/local in terms of its operations. Monthly data on the share of traffic by country and averaged over one year²²⁹ were used to assess whether a platform can be considered global or regional/local. The team drew on a study of multinational companies that uses firms' share of revenue streams from different regions to determine whether their markets are deemed regional/local or global (Rugman and Verbeke 2004). Accordingly, a gig work platform could be considered regional if more than a certain share of monthly average traffic originates from this region, using World Bank official regions.²³⁰ Traffic was weighted by the number of internet users in each country to account for different market sizes and levels of digital development across countries.²³¹

Three thresholds were considered and manually checked for sensitivity, with a threshold of 60 percent arrived at. The thresholds that were checked were 40, 50, and 60 percent. The results were checked manually, using information on the operational reach of platforms that were interviewed for this

²²⁶ A ccTLD is a TLD used in the internet domain name server (DNS), which translates domain names into IP addresses, to identify a country (for example, ".ch" for Switzerland). The two letters chosen for each country are derived from the ISO 3166 standard. Currently there are 243 ccTLDs. See ITU (2008).

²²⁷ The following ccTLDs were searched: .com, .ae, .ar, .at, .au, .bd, .be, .bg, .br, .ca, .ch, .cl, .cn, .co, .cz, .de, .dk, .eg, .fr, .in, .ke, .kr, .la, .ma, .mm, .mx, .my, .ng, .nl, .no, .ph, .pl, .pt, .ru, .rw, .se, .sg, .si, .sk, .sn, .th, .tn, .tr, .us, .vn, .za.

²²⁸ Bulk SEO Tools is a consolidation of free and public search engine optimization tools for webmasters and researchers seeking to better understand and optimize their websites.

²²⁹ The traffic figures represent monthly estimates, averaged over the period from January to December 2022.

²³⁰ East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, South Asia, Sub-Saharan Africa, and North America.

²³¹ We divide total traffic from a country or region by the same region's number of internet users according to the International Telecommunications Union (ITU) (2021). Accordingly, only countries covered in the ITU data are included in this formula.

report (see chapter 3) as well as from publicly available sources. According to this method, 40 and 50 percent appeared to be too loose, while 60 percent was more reliable.²³²

LIMITATIONS OF THE APPROACH

There may be issues on data completeness while web scraping. The data obtained from web research and web scraping can be only as useful as the individual sources they are taken from. This means that, given the large set of sources in an online search, inconsistencies and incompleteness of data are inevitable. For example, there are likely inconsistencies with respect to the reporting time frame of registered workers. The web searches did not specifically use languages other than English. This might also limit the results of the scraping and search exercises and introduce some bias into the database.

Private market data as a basis of the mapping might introduce some bias to the selection of gig platforms. The part of the mapping database added by means of the filtering exercise covers only the universe of private sector firms that have been involved in venture or other funding deals or are otherwise covered by CB Insights and PitchBook. The two databases have been compared and found to provide the overall best-quality data sets in the venture funding and tech ecosystems space (Retterath and Braun 2020). Nevertheless, there is some bias introduced through using them, as they focus on the private sector. Therefore, firms that are not-for-profit or owned by a nongovernmental organization or those that have been created using personal (friends and family) funds might not be included. At the same time, there are no data available on any geographic bias in these data sets. While total numbers of firms are likely to be smaller in low- and middle-income countries (LMIC) than in high-income countries (HIC), there might be underreporting of firms in LMIC due to overall underreporting. For example, firm registration and filing requirements might be stricter in HIC than in LMIC, while media coverage is more comprehensive. This might result in a bias toward firms that are registered in HIC in private firm databases. However, there has not been an estimation of the size of this bias.

REFERENCES

- ITU (International Telecommunications Union) 2021. "ITU Household ICT Indicators." <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>.
- Kässi, Otto, Vili Lehdonvirta, and Fabian Stephany. 2021. How many online workers are there in the world? A Data-Driven Assessment. Open Research Europe, 1–53.
- Retterath, Andre, and Reiner Braun. 2020. "Benchmarking Venture Capital Databases." <https://ssrn.com/abstract=3706108>.
- Rugman, Alan M., and Alain Verbeke. 2004. "A Perspective on Regional and Global Strategies of Multinational Enterprises." *Journal of International Business Studies* 35: 3–18. <https://doi.org/10.1057/palgrave.jibs.8400073>.

²³² As it is quite simple, the approach misclassifies a small number of platforms. These misclassifications might stem from lack of reliable observations to estimate correct traffic figures, but they might also be driven by people connecting via VPNs or by diaspora populations. Tracing the reason for these misclassifications in detail would have been beyond the scope of this report.

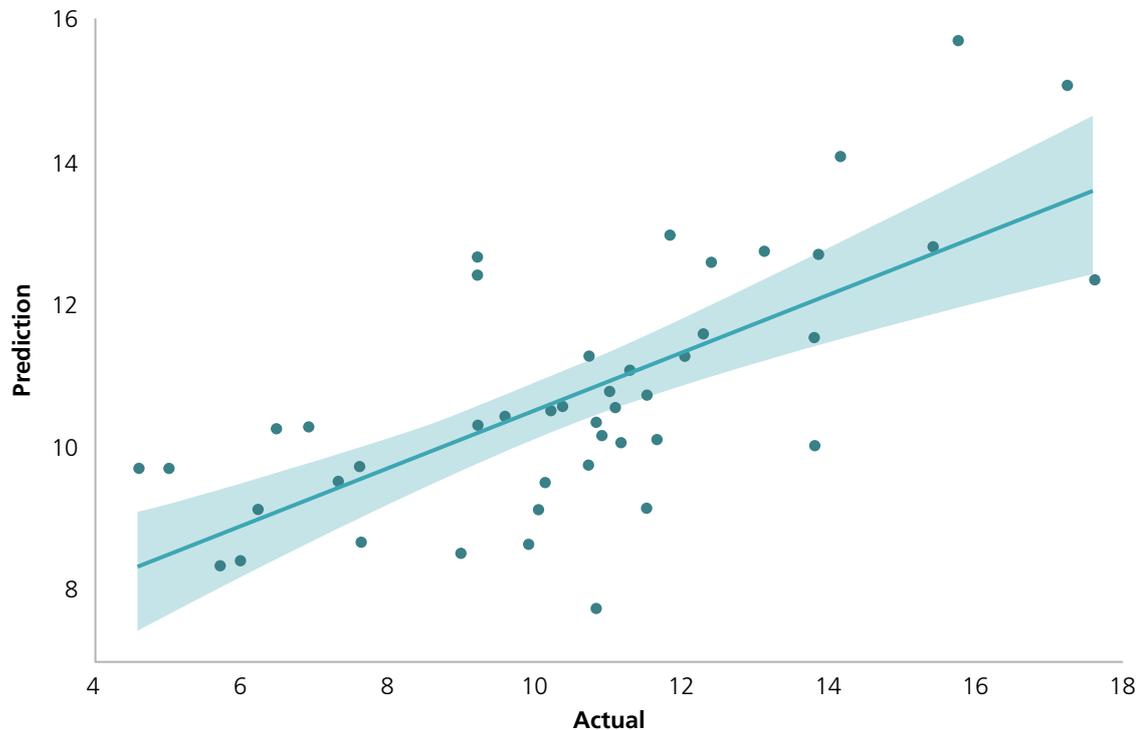
APPENDIX C

Methodology for Estimating the Number of Online Gig Workers Globally

MODEL TO PREDICT THE NUMBER OF REGISTERED USERS

Automated and manual web searches were used to fill in information on registered users on platforms. Many platforms publish on their website the number of workers that are registered on their platform. As a first step, an automated search that looked for this information was implemented. However, the automated tool was not always reliable, as websites are structured differently, and many nonglobal platforms do not use English as the primary language. Therefore, this approach was supplemented with manual searches of platforms' home pages and websites or through third-party publications such as media or press releases. Together, these searches yielded data for 236 of 545 platforms.

A data science approach was adopted to predict registered workers for the remaining platforms. Specifically, the number of registered workers observed for a subset of platforms was used as a target label to train a machine learning model, which was used to predict the number of registered workers for platforms with nonobservable data. The model included features such as website traffic (visitors and unique visitors) and Alexa rank and reach as independent variables. Prior to estimation, the values for traffic and visitors and unique visitors were logarithmically transformed, as the data appeared to be highly skewed with a few high outliers—specifically, a small number of platforms, such as Freelancer and Upwork, have extremely high numbers of registered workers. The finding of skewness and the approach to reducing it by logarithmic transformation are consistent with prior literature (Ang, Chia, and Saghafian 2021; Lütkepohl and Xu 2010). The 236 observed platforms were split into training (80 percent of observations) and testing (20 percent of observations) sets. Various models, including linear and polynomial regressions, Random Forest, Extra Trees, and XGBoost, were experimented. The models' hyperparameters were optimized using grid search across a different number of trees and different tree depths to arrive at the best-performing set of hyperparameters for each model. The XGBoost model performed best on the test set, with the lowest mean square error and highest R^2 value between the actual and predicted values. Figure C.1 illustrates the plot between the actual and predicted values for the test set. This fit appears comparable with relevant literature (Kässi, Lehtonvirta, and Stephany 2021). Using this best-performing model, the overall number of registered workers was estimated for the remaining platforms, from which data had not been obtained previously.

FIGURE C.1: Model fit (XGBoost) for prediction of registered workers on the test set

Source: Elaboration by the study team.

Note: The figure presents the plot for the model predicted values for number of registered workers (log scale) versus the actual data (log scale) for the test set. As observed, apart from outliers, the model performed reasonably well.

ESTIMATING THE NUMBER OF ACTIVE WORKERS FOR EACH PLATFORM

Data on the number of active workers are difficult to obtain, and projections on the total number of active gig workers rely primarily on estimations and rules of thumb. Since no information on the number of active workers was available for the sample, a model was developed to estimate this figure on a platform level. Platforms as private, commercial enterprises are hesitant to publish competitively relevant information, for example, on the number of active workers on their platform. This means that it is nearly impossible to obtain these figures from either web scraping or visiting publicly accessible websites.²³³ Different views of what constitutes “active” also challenge the possibility of obtaining this data consistently. For example, some platforms may consider workers active if they submit bids or proposals (that is, engage with the platform), others if they have worked a certain amount of time or have had a certain transaction volume (if they are currently working on live projects and generating income or revenue). Prior research (Kässi, Lehdonvirta, and Stephany 2021; Kuek et al., 2015; Pesole and Rani, forthcoming) solved this issue by using rule-of-thumb methods to estimate the number of active workers, combined with insights generated by project-level data for a small subsample ($n < 10$) of platforms that account for the majority of the market (Kässi, Lehdonvirta, and Stephany 2021; Pesole and Rani, forthcoming).

²³³ See also Kässi, Lehdonvirta, and Stephany (2021).

While using a small sample ($n < 10$) from large platforms that account for a majority of the market in terms of workers and transaction volume can be used to extrapolate information on the type and volume of transactions to the global gig platform landscape, it may be less useful in accurately predicting the shares of active workers across various matching mechanisms. This is because large, global platforms might differ substantially from smaller, specialized, or regional platforms with respect to their business model and user base. Thus, these platforms might also differ in the share of registered workers that can be considered active in the overall pool of registered workers. For example, smaller platforms may adopt a curated approach with preselected workers who have to go through elaborate testing to be able to be part of the labor pool, which might increase the likelihood of these preselected workers being considered active.

Multihoming and multiworking are trends in online gig work and labor that are important to consider for estimating the number of online gig workers. Multihoming is the practice of using multiple digital platforms for a similar service simultaneously. In the case of online gig work platforms, this refers to gig workers registered or actively working on more than one online gig work platform. Surveys conducted by ILO (2021) and Wood et al. (2019) estimate that, on average, workers are active on 1.83 platforms. Kässi, Lehdonvirta, and Stephany (2021) used this finding to multiply the active worker estimates by 1.83 to account for multihoming practice. Surveys of around 6,000 workers conducted for this report find a similar figure, an average of 1.834 platforms per worker. Interviews with gig workers in Africa (Melia 2020; Wood et al. 2019) suggest that multiple workers may be working under a single freelancing account (multiworking) or subcontract to others for reasons including lower barriers to entry—for example, where subcontractors are not yet able to perform tasks using their own accounts (Melia 2020) and the trust and reputation of more established accounts (Wood et al. 2019). There are no systematic studies or surveys of the multiworking phenomenon (Kässi, Lehdonvirta, and Stephany 2021). The adjustment factor was derived through internal World Bank surveys of a total of 6,000 responses. They find that, on average, 1.19 workers are active under one account. Therefore, adjustment factors of 1.834 and 1.19 were utilized in the estimation to account for multihoming and multiworking, respectively.

An estimation approach was developed to estimate the share of workers among registered workers that are likely to be active on the platform. The model estimates the share of active workers, defined as the share of registered workers likely to be actively using the platform. With the lack of other viable data sets, website traffic—more specifically, data sent and received by users or visitors to a website—is used as a proxy indicator of users browsing through and engaging with each platform’s main website. A longer time per visit is also a reasonable indicator of users searching for jobs, posting jobs, or both. However, one potential issue with using website traffic to indicate the platform activity of workers is that traffic data come aggregated, and it is not possible to separate the data for the two sides as well as for additional website visitors who do not belong to either side.

To account for the split of supply and demand in the traffic data, an adjustment factor (r) is used, which represents the ratio of workers to clients within traffic. The factor used for this model (0.755) was derived from 10 surveys and data requests that have been conducted for this report and is the mean share of workers on those platforms: Al7arefa, Asuqu Elite,²³⁴ BeMyEye, Jolancer, Onesha, SoyFreelancer, Upwork, Truelancer, Workana, and Wowzi. This sample includes global, regional, large, and small platforms. While the share of workers is unlikely to be uniform across platforms, this ensures that the adjustment factor at least reflects the diversity of platforms in the sample. However, future research could explore more accurate methods to split worker and client traffic that include more parameters, including the country of traffic origin, size, and business model of the platform in question.

²³⁴ Asuqu has closed since these interviews took place. The data are as of July 2022.

The estimation, then, takes the average number of unique website visitors per month that do not bounce, multiplies by the estimated ratio of workers to clients, and divides this by the number of registered users, accounting for multihoming and multiworking. The bounce rate of a platform's website is typically an internet term used in web traffic analysis to indicate the percentage of visitors who enter or visit the website and leave, rather than continuing to engage with other pages within the same website. The model thereby associates more time spent on a platform with a higher likelihood of being active. As such, workers who spend considerable time looking for work—but perhaps do not win any task—are considered active for the purpose of this estimation.

The approach is as follows:

$$\text{Estimated share of active workers for each platform (Percentage}_{\text{active}}) = \left[\frac{V_u * (1 - br) * r}{1.19 * \frac{(W_r)}{1.834}} \right]$$

where:

- V_u = average number of unique visitors per month,
- Br = average monthly platform bounce rate,
- W_r = number of registered workers (observed or predicted) for each platform,
- 1.834 = adjustment factor for multihoming,
- 1.19 = adjustment factor for multiworking, and
- r = ratio of workers to client.

LIMITATIONS

The approach chosen can provide reasonable estimates of active worker shares in the absence of observable data but should be interpreted cautiously. Given that data-driven models require observed training data, the difficulties associated with obtaining reliable information on the number of active workers online mean that the chosen model heavily relies on assumptions and survey-based observations. The present model relies on traffic data rather than observed transactional data of a few market-leading platforms on which to base estimations. As discussed, traffic data offer unique insights into the usage of platforms that likely correlate with actual gig work patterns. Using traffic also allows the model to capture workers who are available to work but fail to win tasks with clients. However, factors other than traffic likely significantly influence the proportion of active workers, which cannot be captured in this model. In addition to the split of demand and supply among website traffic, these factors include to what extent work requires spending time on the platform and the type of gig work (especially microwork versus freelancing). These data points are proprietary and owned by the platforms. Therefore, collaboration with platform providers might offer a worthwhile expansion of the model in the future.

A further limitation is the likely underestimation of traffic from mainland China. Traffic is most likely underestimated for the whole of mainland China. Despite capturing key gig platforms in the country, China contributes only 0.7 percent of traffic to the sample. This is highly unlikely, given China's thriving gig economy, large population, and large number of people online. Further research showed that Chinese traffic appears to be underestimated more systematically. For example, comparison with India, which has a similar population size but fewer internet users, shows that India has recorded roughly 30 times more traffic than China in January 2022. Even Hong Kong SAR, China, recorded more traffic than China in that month. Reasons for these underestimations might be related to the underlying panel used for Semrush's estimations. Overall, this implies that the total numbers for registered and active workers are likely higher (see discussion in chapter 3), since only a fraction of the Chinese market seems to be captured.

ESTIMATING THE SIZE OF THE GIG WORK POPULATION USING THE GLOBAL RDIT SURVEY

Figure C.2 outlines the process used to estimate online gig workers. The process of using the random domain intercept technology (RDIT) is detailed in appendix C.

FIGURE C.2: Process of estimating online gig workers using the global online gig work survey



Source: Study team compilation.

REFERENCES

- Ang, Yu Qian, Andrew Chia, and Soroush Saghafian. 2021. "Using Machine Learning to Demystify Startups' Funding, Post-Money Valuation, and Success." In *Innovative Technology at the Interface of Finance and Operations*, edited by V. Babich, J. R. Birge, and G. Hilary. Springer Series in Supply Chain Management, vol 11. Edinburgh, Scotland: Springer, Cham. https://doi.org/10.1007/978-3-030-75729-8_10.
- Kässi, Otto, Vili Lehdonvirta, and Fabian Stephany. 2021. "How Many Online Workers Are There in the World?" *Open Research Europe*, 1–53.
- Kuek, Siou Chew, Cecilia Paradi-Guilford, Toks Fayomi, Saori Imaizumi, Panos Ipeirotis, Patricia Pina, and Manpreet Singh. 2015. "The Global Opportunity Online Outsourcing." World Bank, Washington, DC. <http://hdl.handle.net/10986/22284>.
- ILO (International Labour Organization). 2021. *World Employment and Social Outlook: The Role of Digital Labour Platforms in Transforming the World of Work*. Geneva: ILO.
- Lütkepohl, Helmut, and Fang Xu. 2010. "The Role of the Log Transformation in Forecasting Economic Variables." *Empirical Economics* 42: 619–38. <https://doi.org/10.1007/s00181-010-0440-1>.
- Melia, Elvis. 2020. "African Jobs in the Digital Era: Export Options with a Focus on Online Labour." Discussion Paper 3/2020, German Development Institute, Bonn.
- Pesole, A., and U. Rani. Forthcoming. "How many online gig workers?: Estimates based on selected online web-based and location-based platforms." European Commission Working Paper, European Commission, Brussels.
- Wood Alex J., Mark Graham, Vili Lehdonvirta, and Isis Hjorth .2019. "Networked but Commodified: The (Dis)Embeddedness of Digital Labour in the Gig Economy." *Sociology* 53 (5): 931–50.

APPENDIX D

Methodology for Global RDIT Country Survey

This appendix summarizes the survey technology used, the motivation behind adopting it, the procedures that were followed during the selection of the sampled countries, the questionnaire design and sample size determination, the lessons learned from deploying the pilot phase, a brief overview of the received data, the validation and data cleaning process, and the post-stratification weighting methodology adopted.

SURVEY TECHNOLOGY

A randomized online survey was conducted by the team in the period July to October 2022 with a population that had internet access, using an internationally respected online survey firm, RIWI. Data were collected for the online randomized survey using an opt-out approach offered by RIWI. It captures a sample of respondents that is broadly representative of the internet population in each country by using random domain intercept technology (RDIT). This involves sampling internet users who incidentally access expired or inactive domains (which often result in a “404 error”). As domain names regularly change and often internet users are not automatically redirected, it is common for the internet-using population to incidentally access inactive domains.

Research suggests that the likelihood of accessing an inactive domain is approximately proportional to having access to the internet (IRIS 2021). RIWI exploits this by redirecting users from inactive domains to a website inviting them to take part in a survey. At this point, people can decide whether to continue to participate in the survey or opt out. In other words, as people are using the web or apps, they may come across a RIWI survey via dormant domains (websites that are no longer in use), incorrect URLs, and links within apps and websites. Instead of encountering a “page does not exist” notification or an advertisement, a RIWI survey or message test is rendered full site on the page. Web users then decide whether they would like to participate anonymously in the research and do so without incentivization.

RIWI tracks information about the device and operating system used by people who are redirected to the survey platform, even if they do not answer a single question. In addition, the first questions respondents are asked are about their age and sex.

Why use RDIT to conduct the survey?

RDIT allows for random sampling of the entire internet-using population of a country, resulting in large sample sizes in a short time and in multiple languages. Other World Bank studies have also recently used this technology to take advantage of these features (for example, Hoy 2022; Mellon et al. 2021; Sjoberg et al. 2019.) However, Soundararajan et al. (2022) have noted that the RDIT tends to attract respondents who are young, male, and relatively well-educated. It also argues that although this overrepresentation may limit its ability to be generalized to the entire population, RDIT can still be useful for identifying trends and patterns within the specific population it represents (that is, male, young, and educated). This is partly because these groups tend to have better access to the internet. Nevertheless, given that our survey aims to identify and describe *online* gig workers, who are necessarily internet users, RDIT is a more suitable method for our study than research that aims to draw general conclusions about the overall population. This situation helps to mitigate some of the potential concerns.

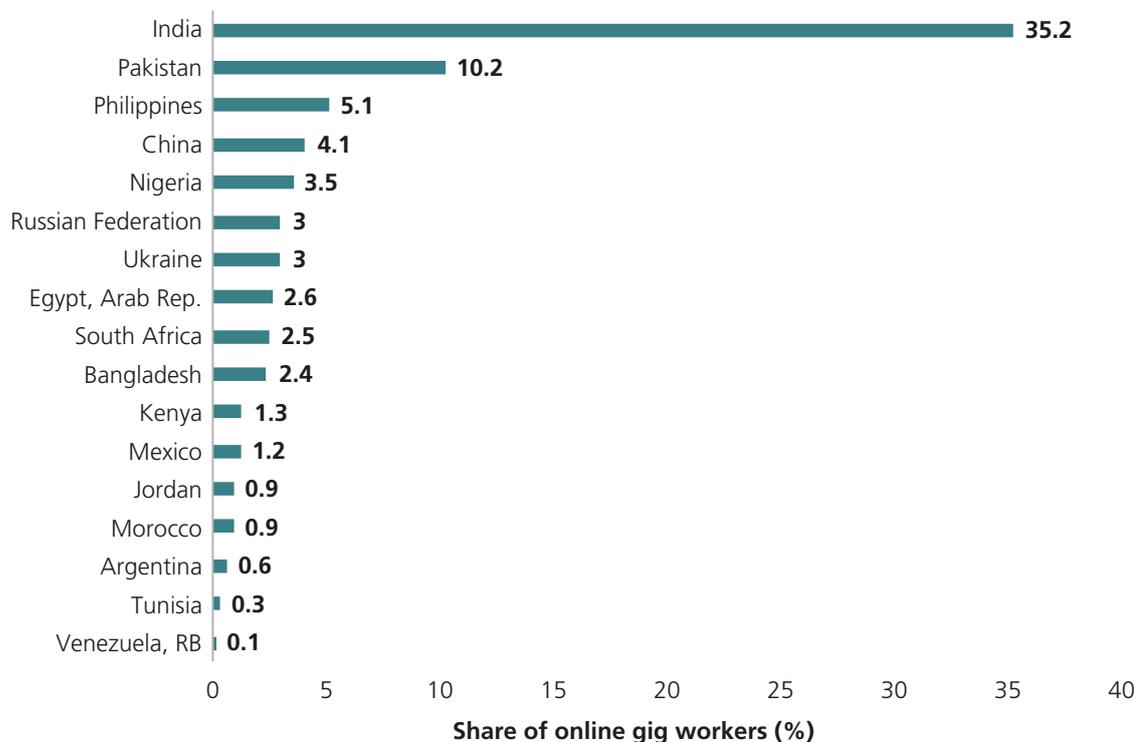
Selection of countries

The survey was launched in 17 selected countries from the six regions and excluded HIC: Argentina, Bangladesh, China, Arab Republic of Egypt, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, Pakistan, the Philippines, Russian Federation, Tunisia, Ukraine, South Africa, and República Bolivariana de Venezuela. The countries were selected through a careful process that considered various factors such as the countries' share of global online gig workers from the OLI database,²³⁵ geographical diversity, and language usage.

Representativeness of the countries

The 17 selected countries account for 76.9 percent of online gig workers in non-high-income nations based on Online Labour Index (OLI) data from 2022 (see figure D.1). Furthermore, the selected countries account for 97 percent of online gig workers in South Asia, 82 percent in Sub-Saharan Africa, and 78 percent in the Middle East and North Africa (see figure D.3). The proportion of online gig workers in the remaining regions ranges from 35 percent in Latin America and the Caribbean to 47 percent in East Asia and Pacific. Additionally, these 17 countries also represent a significant portion of internet users in their respective regions (figure D.2). Thus, the information collected from these countries provides a good basis for conducting region-level analysis of online gig work. Also, the respondents were given the option to answer in their local language or English, except in South Africa, where only English was offered. Western Europe and North America were not included in the sample, as the focus of this study is limited to the non-HIC.

FIGURE D.1: Share of global online gig workers among non-high-income countries

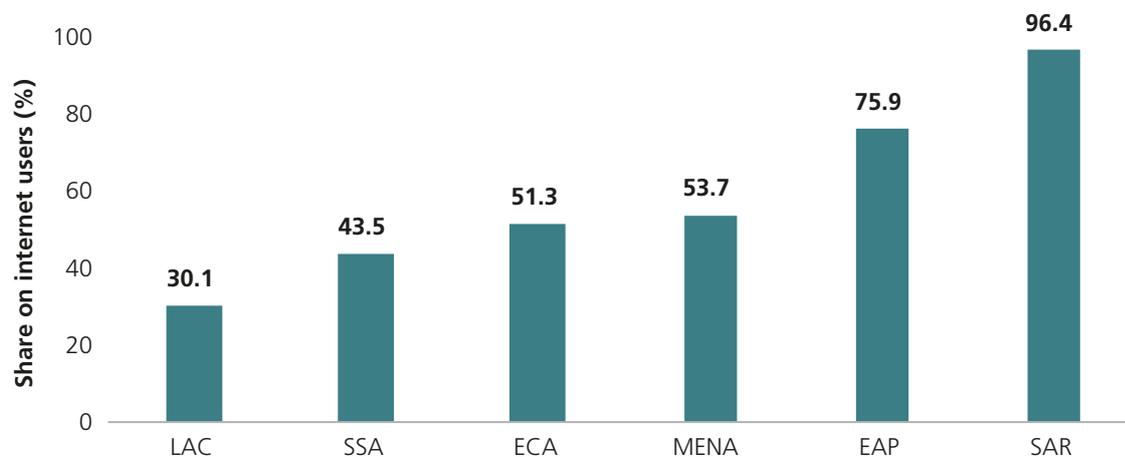


Source: Study team calculation based on Online Labour Index (OLI) data.

Note: Figure shows the global share of 17 countries among non-high-income countries.

²³⁵ See <http://onlinelabourobserver.org/oli-supply/>. Countries such as Indonesia, Serbia, Türkiye, and Romania were also considered based on the OLI data, but due to language considerations and regional representation, they were replaced with other candidates.

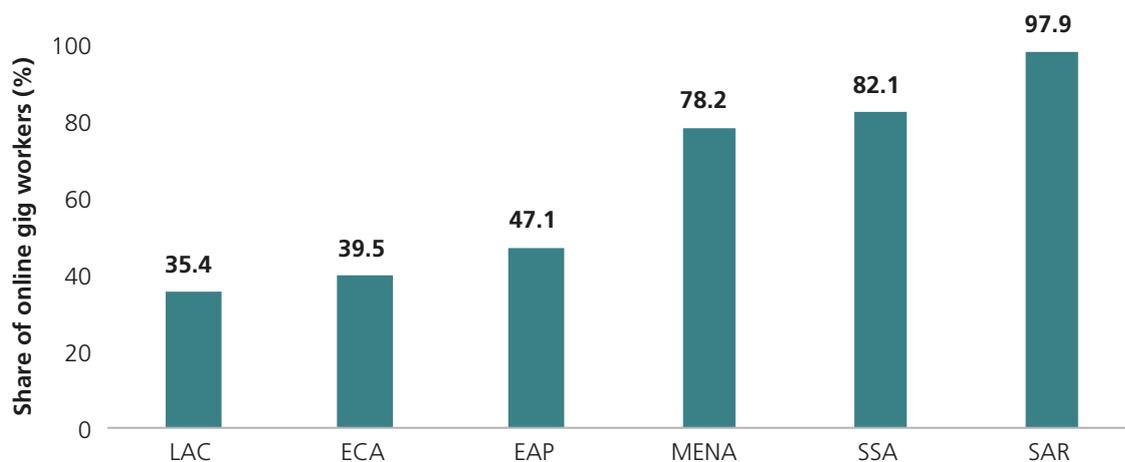
FIGURE D.2: Share of internet users in the sampled countries within each region



Source: Team analysis based on OLI (2022) and WDI data.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

FIGURE D.3: Share of online gig workers from the sampled countries in each region



Source: Team analysis based on OLI (2022) and WDI data.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

Questionnaire design and targeted sample size

Based on the experience of RIWI conducting such online surveys, the team decided to keep the survey short, with only 12 closed-ended questions to prevent high levels of dropouts. Basic demographic questions, such as age, gender, and education, were placed in the first section, while more sensitive questions, such as the share of income earned from online gig work and opinions about benefits sought, were placed in later sections. We presented the questionnaires in simple language. The English version of the questionnaires is attached at the end of this appendix.

To avoid response bias in such online surveys, in which respondents may be more likely to choose certain options if they are presented first or last in a list, we randomized the order of the options to ensure that every option had an equal chance of being chosen. Multiple options were allowed for only two questions.

The overall target for the project was 5,000 completed surveys across the 17 countries. Survey completion was measured once a respondent answered the last question. In addition to the overall target, subtargets were created for gig worker identification (100 per country) and a target number of completed surveys for each of the 17 countries. Individual country targets were determined on the basis of the size of the internet-using populations of the countries, with countries with larger populations having larger targets. The country-level target was later updated to be 384 completed surveys per country based on a power calculation conducted earlier, while also identifying at least 100 gig workers at question 5 (see questionnaire). The pilot launch was used to test how the survey questions were received in the field. It determined the effectiveness of the questions themselves and the order of their presentation.

The survey was translated into the main languages spoken in the 17 selected countries. The translations were provided by RIWI and reviewed by the World Bank. The languages provided for each country and their data collection timeline are outlined in Table D.1. Times for data collection vary due to the differences in the population of internet users in each country. In addition, time for data collection was also influenced by the incidence of gig workers, as this dictated how much oversampling was required to identify 100 gig workers. Multiple data collection periods represent the survey being taken out of field and relaunched later, either to make adjustments or to increase the sample size in the country.

One of the key advantages of the global RDIT survey is the ability to reach a broad audience in a variety of countries. The translations of the survey in local languages ensured that online gig workers who do not speak English could participate in the survey. In addition, this method allowed us to gather data on the Chinese supply of online gig workers, a market for which it has been difficult so far to capture data.²³⁶

²³⁶ For instance, the OLI features limited data on the supply of online gig workers from China, since the index is based on a selection of top online gig work platforms that do not include Chinese platforms. For more information, please see <http://onlinelaborobservatory.org/oli-supply/>.

TABLE D.1: Languages provided for surveys and dates of data collection in each country

Country	Survey language(s)	Dates of data collection (2022)
Kenya (pilot)	English, Swahili	June 20–July 6 July 15–July 18 November 23–November 25
Nigeria (pilot)	English, Hausa	June 20– July 9 July 15–July 18 November 23–November 28
South Africa (pilot)	English	June 20– August 4
Argentina	English, Spanish	August 3–August 9 November 10–November 12
Bangladesh	English, Bangla	August 3–August 9 November 10–November 11
China	English, Mandarin	August 3–August 10
Egypt, Arab Rep.	English, Arabic	August 3–August 5 November 12–November 13
India	English, Hindi	August 3–August 10 November 10 – November 11
Lebanon	English, Arabic, French	August 3–August 15 November 11–November 13
Mexico	English, Spanish	August 3– August 7 November 10– November 12
Morocco	English, Arabic, French	August 3– August 9 November 10– November 15
Pakistan	English, Urdu	August 3–August 13 November 10–November 11
Philippines	English, Tagalog	August 3–August 10, 2022
Russian Fed.	English, Russian	August 3–August 8, 2022
Tunisia	English, Arabic, French	August 3–August 10, 2022 November 11–November 16
Ukraine	English, Russian, Ukrainian	August 3–August 10
Venezuela, RB	English, Spanish	August 3–August 10 November 10–November 11

Pilot launch

The survey was piloted before full launch in Kenya, Nigeria, and South Africa to identify possible issues or concerns, such as response rates, order of questions, and more. One of the aims of the pilot included understanding how the respondents perceived the study in field. In addition, the pilot was used to check how each question was being responded to, as well as how the order of questions was being received. One of the main targets of the pilot was to get 100 respondents per country who identified themselves as gig workers. Therefore, the survey was designed to ask respondents at the outset whether they had participated in gig work or not. The survey was also grouped into three modules (A to C), with module B available only to those who said yes to having done gig work. A full survey outline is provided at the end of this report.

Lessons learned from the pilot

During the launch of the pilot, it was observed that more than 50 percent of respondents in each country identified themselves as gig workers. This alerted the team about the need to

have a clearer definition of gig work up front. As a result, the pilot was paused, and a second pilot phase was planned. In the second pilot phase:

- Question 1 (which identified gig workers) was updated to elaborate on the meaning of gig work and add more detail to the answers. During the second pilot, the new question resulted in a more accurate, decreased number of individuals identifying as gig workers.
- The point in the survey at which gig workers were identified was re-evaluated. In initial discussions, gig workers were to be identified at question 1, and therefore this was the point where the gig worker target was measured. However, after review of the early results, it was determined that this target would not be sufficient for analysis and a deeper understanding of gig work was required for proper identification. As a result, RIWI agreed to adjust the target to count gig workers at question 5 instead. This meant that all gig workers included toward the target had a record of their gig work status, their attraction to gig work, and their primary platform for conducting gig work. This also allowed for a larger sample size for the team's analysis. The shift from question 1 to question 5 also ensured quality control checks for the team to ascertain that a positive response was indeed from a genuine gig worker, not simply someone who misunderstood the question.

Full launch

After the second pilot launch, which concluded that the survey was well received, the full launch of the survey was done. In addition to the overall completed survey target, an additional goal was to get 100 people per country who identified as gig workers at question 5. Overall, data collection in all 17 countries was successfully completed, with a total of 7,015 completed surveys, at least 384 completed surveys per country, and 100 or more gig workers identified at question 5. A full breakdown of completed surveys is provided in Table D.2.

TABLE D.2: Number of gig workers identified and breakdown of completed surveys for each country^a

Country	Total number of completed surveys	Total number of gig workers who completed the survey	Total number of non-gig workers who completed the survey
Kenya	398	80	318
Nigeria	387	77	310
South Africa	400	32	368
Argentina	385	44	341
Bangladesh	391	61	330
China	525	69	456
Egypt, Arab Rep.	388	60	328
India	393	39	354
Lebanon	389	38	351
Mexico	395	55	340
Morocco	392	66	326
Pakistan	384	69	315
Philippines	567	53	514
Russian Fed.	425	61	364
Tunisia	393	54	339
Ukraine	411	50	361
Venezuela, RB	392	48	344
TOTAL	7,015	956	6,059

Source: Global survey.

a. This count excludes all respondents who answered the first version of question 1 during pilot phase 1.

Data validation

The survey was carefully monitored by the study team. The study team ensured that appropriate targets were set for the identification of online gig workers based on question 5 (at least 100 gig workers per country responding to this question). In addition, to ensure that a large enough sample was collected for each country within the overall limits of the survey, an overall target of at least 384 completed surveys per country was set. The target was calculated to ensure a representative sample based on the internet population in the selected countries.

Quality check

The data collected were analyzed for potential inconsistencies by two approaches, focusing on the respondents who identified as online gig workers:

1. Analysis of the answers received to the questions about the share of time spent on gig work and the share of income earned from gig work (work intensity).
2. Analysis of the time taken to complete the survey (focusing only on the online gig workers who completed the entire survey).

The first approach aimed to identify those responses that were inconsistent between the two questions (work intensity). In practical terms, an inconsistent response across the two questions could mean:

- Little time spent on gig work, but high income from gig work:
 - Time: Less than 10 hours per week;
 - Income from gig work as a share of total income: 100 percent.
- A lot of time spent on gig work, but little income from gig work:
 - Time: More than 20 hours a week;
 - Income from gig work as a share of total income: Less than 25 percent.

While potentially inconsistent responses were identified, they were found to have plausible explanations. A respondent who spends little time on online gig work but earns all their income from online gig work could be using online gig work as their main source of income. A respondent who spends a significant number of hours per week on online gig work but earns only a small share of their income this way may be working overall a very high number of hours per week. After the responses were analyzed and these considerations were taken into account, no responses were discarded.

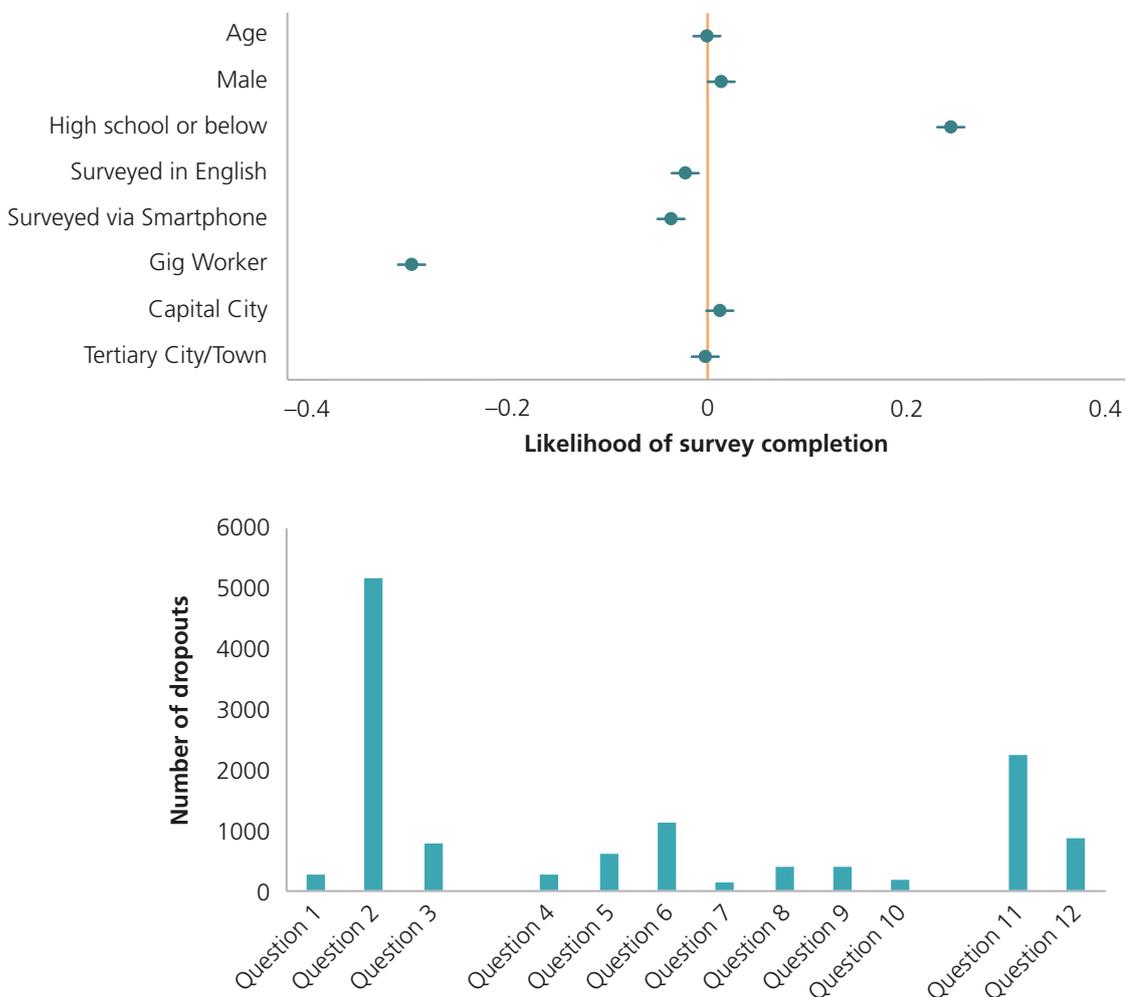
The second approach focused on the time taken by respondents who identified as online gig workers to complete the survey (dwell time). Only the complete responses were considered in this case. The logic behind this analysis is that a very low dwell time may simply indicate clicking through the survey without reading the questions. Several checks were done, progressively:

- First, two thresholds were considered for very low dwell time: less than or exactly 15 seconds and less than or exactly 30 seconds.
- Second, based on the distribution of answers, the first 5 percent of observations with the lowest dwell time were identified. The 5 percent threshold corresponds to all the observations with a dwell time of 18 seconds or less. This discarded 47 observations.

Weighting

The global gig workers survey includes 7,015 completed surveys in 17 countries from an internet-using population of about 2.3 billion. One of the aims of this report is to estimate the number of online gig workers, which requires using the information from our sample data to infer about the internet population. However, not everyone who started the survey completed it. We compared attrition across various demographics, and there are no substantial differences across many variables—except for those who did not finish high school and those who reported they are online gig workers (figure D.4). This problem could cause our share of online gig workers to be underestimated. Moreover, given that the data used for many of the countries are regional averages, that could affect the quality of estimates compared to doing the same exercise using updated data from each country.

FIGURE D.4: Likelihood of completion of the global survey (left) and number of dropouts by question (right)



Source: Study team analysis based on the global survey.

Though the sampling technique is random (assuming the probability of stumbling on a broken link is random), it reaches out to only the population with access to the internet. However, given the report's focus on online gig workers, this may not be a significant challenge. Rather a concerning issue is the nonresponse and dropout rates, as there is no incentive or pressure to respond or remain in the survey. To correct potential biases due to such dropouts and non-responses, we carried out

post-stratification weighting, using information from nationally representative surveys that include details on the internet-using population in each country.

To calculate the weights, we applied an iterative proportional fitting technique using raking ratio estimation, also known as raking. The raking algorithm uses known population totals and adjusts the marginal frequencies of auxiliary variables in the sample to those known for the population total (PPMI 2021). In other words, it forces the survey totals of auxiliary variables to match the known population totals by assigning a weight to each respondent (Anderson and Fricker 2015). We used age group, gender, and education level as our auxiliary variables. The raking process involves repeated estimation of weights across these set of variables until the weights converge and stop changing. The information used to construct the marginal frequencies is drawn from probability-based surveys of the internet-using population, which helps to correct for dropout and nonresponse rate as well as construct frequency weights to estimate population-level figures. The approach is related to that of Hoy (2022), but instead of using population-level data, our approach focuses on the internet-using population only for two reasons. First, the survey reaches only the online population, not the general population. Second, online gig workers are by default internet users, and raking based on their data is more relevant in our case.

For seven of the sampled 17 countries (Argentina, Bangladesh, India, Kenya, Nigeria, Pakistan, and South Africa), the age and sex of internet users are collected from a household survey on internet use, and the rest are calculated using regional average data from the ITU database.²³⁷ The country-level internet penetration levels are collected from ITU/WDI.²³⁸ Similarly, data on the distribution of internet users by education level were gathered from representative household-level surveys called “ICT access and use surveys”²³⁹ for the seven countries, and for the remaining countries, regional average data calculated from the same survey were used.²⁴⁰ The households survey, unfortunately, did not include countries from the Middle East and North Africa or Europe and Central Asia. Therefore, average values from the household survey are used for these countries (table D.3). Having this, we proceed to estimate the number of online gig workers by adjusting the survey responses using the frequency weights estimated by the raking procedure discussed above. The shares of online gig workers in the weighted and unweighted survey responses were similar, which gives us further confidence in our results.

TABLE D.3: Data sources used in the raking procedure

Country	Age	Gender	Education	Internet population	Population	Labor force
Argentina	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
Bangladesh	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
China	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO

(Continued)

²³⁷ Obtained at <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>.

²³⁸ Obtained from <https://data.worldbank.org/indicator/IT.NET.USER.ZS>.

²³⁹ The ICT Access and Use surveys, conducted by RIA (Research ICT Africa), LIRNEasia (Learning Initiative for Network Economies in Asia), and DIRSI (el Diálogo Regional sobre la Sociedad de la Información/Regional Dialogue on the Information Society).

²⁴⁰ Using regional averages, data themselves might introduce biases, especially when the within-region variation across countries is larger.

TABLE D.3: (Continued)

Country	Age	Gender	Education	Internet population	Population	Labor force
Egypt, Arab Rep.	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
India	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
Kenya	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
Lebanon	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
Morocco	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
Mexico	Regional average, ITU	Regional average ITU	Regional average ICT access and use survey	WDI	WDI	ILO
Nigeria	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
Pakistan	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO
Philippines	Regional average ITU	Regional average ITU	Global average ICT access use survey	WDI	WDI	ILO
Russian Fed.	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
Tunisia	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
Ukraine	Regional average, ITU	Regional average ITU	Global average ICT access and use survey	WDI	WDI	ILO
Venezuela, RB	Regional average, ITU	Regional average ITU	Regional average ICT access and use survey	WDI	WDI	ILO
South Africa	ICT access and use survey	ICT access and use survey	ICT access and use survey	WDI	WDI	ILO

Source: Study team compilation.

Note: ICT access and use surveys were conducted by RIA (Research ICT Africa), LINEasia (Learning Initiative for Network Economies in Asia), and DIRSI (el Diálogo Regional sobre la Sociedad de la Información/Regional Dialogue on the Information Society). The regional average data collected from ITU are from 2022. The population, internet-using population, and labor force surveys are from 2021.

List data used in comparing online gig workers with labor force, service sector, and informal workers

The profile of the online gig workers in the global survey was compared to that of workers in the labor force, in particular to workers in the services sector and the informal sector. The data were drawn for the most recent available labor force and household surveys as shown in Table D.4, D.5, Table D.6

TABLE D.4: Countries and surveys used in comparing online gig workers with labor force, informal workers

Country	Source	Year
Argentina	LFS—Encuesta Permanente de Hogares (Urbano)	2021
Bangladesh	LFS—Labour Force Survey	2017
Egypt, Arab Rep.	LFS—Labour Force Sample Survey	2020
India	LFS—Periodic Labour Force Survey	2020
Kenya	HIES—Household Budget Survey	2019
Lebanon	LFS—Labour Force Survey	2019
Mexico	LFS—Encuesta Nacional de Ocupación y Empleo	2021
Pakistan	LFS—Labour Force Survey	2021
South Africa	LFS—Quarterly Labour Force Survey	2021
Tunisia	LFS—Labor Market Panel Survey	2014
Venezuela, RB	LFS—Encuesta de Hogares por Muestreo	2017

Source: Study team compilation.

TABLE D.5: Countries and surveys used in comparing online gig workers with labor force, service workers

Country	Source	Year
Argentina	LFS—Encuesta Permanente de Hogares, Urbano	2021
Bangladesh	LFS—Labour Force Survey	2017
Egypt, Arab Rep.	LFS—Labour Force Sample Survey	2021
India	LFS— Periodic Labour Force Survey	2022
Kenya	HIES—Household Budget Survey	2019
Lebanon	LFS—Labour Force Survey	2019
Mexico	LFS—Encuesta Nacional de Ocupación y Empleo	2021
Nigeria	HIES—Socioeconomic Survey	2019
Pakistan	LFS—Labour Force Survey	2021
Philippines	LFS—Labour Force Survey	2021
Russian Fed.	LFS—Labour Force Survey	2021
South Africa	LFS—Quarterly Labour Force Survey	2021
Tunisia	LFS—Enquête Nationale sur la Population et l'Emploi	2017
Venezuela, RB	LFS—Encuesta de Hogares por Muestreo	2017

TABLE D.6: Countries used in comparing online gig workers with labor force, with similar occupation codes

Country	Year
Argentina	2020
Bangladesh	2015
India	2019
Mexico	2019
Pakistan	2020
Philippines	2020
South Africa	2020
Tunisia	2015

Questionnaire

An internet user landing on the page of the RIWI survey would first see the language picker for English or another language based on the region the survey is in. Then they would see the standard age and gender question, which also provides details about the privacy policy applicable to the survey (figure D.5). No incentives were offered to compel respondents to complete the survey.

The questionnaire used to implement the survey is presented in Table D.7.

FIGURE D.5: RIWI survey page detailing the applicable privacy policy

What is your age and gender?

Your opinion is important to us. Thank you for your participation. ×

Female

< 14	14	15	16	17	18	19			
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65+				

Male

< 14	14	15	16	17	18	19			
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65+				

Privacy Policy

Data Anonymity Policy

Last Updated: July 7, 2020

As a user of this website, this Data Anonymity Policy is intended to describe for you:

1. the information we DO NOT collect about you,
2. how any anonymous, aggregate information will and will not be used, and
3. your choices about such uses and disclosures.

We encourage you to read this Data Anonymity Policy carefully before using the site. If you have questions or concerns regarding this Data Anonymity Policy, please contact us via email using the email contact information provided below.

Information Collection: No Personally Identifiable Information

We DO NOT collect, process, store or transfer personal information such as your name, mailing address, e-mail address and phone number. When you click on a "vote", the voting information only may be sent to our servers located in the United States of America and/or other countries around the world. We may collect and store any anonymous information that is untraceable to you, specifically, what you may think about a certain topic or issue, which information you enter into the site or provide to us in some other manner.

We DO NOT collect, process, store or transfer "personally identifiable information". All data collected are anonymous. "Personally identifiable information" is any information relating to an individual, whether it relates to his or her private, professional or public life. It can be anything from a name, a home address, a photo, an email address, bank details, posts on social networking websites or medical information.

Data Anonymity Policy Changes

This Data Anonymity Policy may be updated from time to time.

Contact: proasdf.com AT domainsbyproxy.com

Source: Screenshot was provided by RIWI Corp.

TABLE D.7: Questionnaire used for the global survey

Question	General English
0	Language picker (if applicable)
0	What is your age and gender?
	Male
	Female
	<15 (Exit)
	15–29
	30–64
	65 and above
Module A	Shown to everyone
1	Have you done any ONLINE GIG WORK in the last 12 months? (Online gig work refers to short-term tasks attained and completed online, with the help of an online platform for matching clients and workers and facilitating payment, such as Upwork, Freelancer, Fiverr, Clickworker, and other similar platforms)
	Yes, I have done online gig work in the past 12 month /I currently do online gig work
	No, I have not done any online gig work in the past 12 months (If Q1 = No, see remaining questions of Module A and then skip Module B—directly see Module C)
0	Where do you live?
	<i>Specific provinces for Bangladesh, Kenya, Lebanon, Morocco, Nigeria, Tunisia, and Ukraine</i>
2	What paid work do you currently do?
	I work for a salary for an employer
	I am self-employed without employees
	I am self-employed with employees (e.g., run my own business with hired employees)
	I am a student and I do not work
	I am a student and I work part-time
	I am disabled, cannot work
	I do unpaid housework (e.g., housewife)
	I am currently unemployed, looking for a job
	I am currently unemployed, not looking for a job
	I have retired
3	What is the highest level of education you have completed?
	Primary school
	Secondary school
	High school
	Vocational/technical training
	College/Bachelor's degree
	University (Master's degree/PhD)
Module B	Shown only if Q1 = yes
4	What attracts you MOST to conduct online gig work?
	Online gig jobs provide flexibility on location—I can work where I want
	Online gig jobs provide more flexibility on time management (e.g., manage household work and childcare while earning money)
	I do not have any other job opportunities in my area
	I need online gig jobs to cover gaps or changes in my income

(Continued)

TABLE D.7: (Continued)

Question	General English
	Online gig jobs provide more pay than an offline job
	I use online gig jobs as a side job to earn extra income
	Online gig jobs allow me to be my own boss
	I am trying to learn new digital skills
5	In the past 12 MONTHS, which digital gig platform did you work on? (e.g., Upwork, Freelancer, Workana, Ureed, Amazon Mechanical Turk)? Please select the top 3 that you spent most time on:
	Upwork
	Fiverr
	Freelancer
	PeoplePerHour
	Toptal
	99 Design
	Amazon Mechanical Turk (Mturk)
	Appen
	Clickworker
	Microworker
	I work on other platforms, but I don't see those platforms listed here
	No more apply, continue
5a	Which of the following other platforms did you work the most on? Select top 3 (If 5 = I work on other platforms, but I don't see those platforms listed here) Each country has a unique set of regional platforms shown to them
	No more apply, continue
5b	What are the reasons for you to work only on these online gig platforms? (If 5 = I work on other platforms, but I don't see those platforms listed here)
	I can work on tasks in my native/local language
	It is hard for me to find tasks on global platforms
	I prefer the work culture on this platform
	I am in the same time zone as my clients
	I get paid in my local currency
	I have skills that make me more competitive on this platform
	I am satisfied with the compensation for the tasks I do
	I am not aware of another online gig work platform
6	On average how much time do you spend in a week working on digital platforms/gig work?
	Less than 10 hours a week
	Between 10–20 hours in a week
	More than 20 hours/week
7	What percentage of your overall monthly individual income comes from working on digital platforms/gig work, on an average?
	Less than 25% of my total monthly income
	25%–50% of my total monthly income

(Continued)

TABLE D.7: (Continued)

Question	General English
	Over 50% of my total monthly income
	100% of my monthly income comes from working on digital platforms/gig work
8	What tasks do you currently get paid to do on the gig work platforms? Please select all that apply <i>(Multiple select)</i>
	Business and professional management (e.g., management consulting, professional accountant, human resources management, lawyer, teacher, training and/or tutoring, project management)
	Business and professional Support (e.g., accounting support and booking, paralegal services, lead generation, market and customer research, display advertising, email and marketing automation)
	Data entry, administrative and clerical tasks (e.g., completing surveys, data entry and cleaning, customer support services, virtual assistant)
	Design, multimedia and creative work (e.g., architecture, graphic design, logo design, product design, video and animation, audio production)
	Sales and marketing support (e.g., Influencer marketing, SEO, SEM and social media marketing, brand identity and strategy, marketing consulting, website feedback, copywriting)
	IT, software development and Tech. (e.g., desktop software development, game development, machine learning, testing apps, websites, website and/or app development and/or software, quantitative analysis)
	Writing and translation (e.g., Academic Writing and Research, Article and Blog Writing, Resume and Cover Letters, Translation)
	Online microtasks (e.g., voice transcription, image tagging, image transcription, geolocation tagging, text annotation, object classification)
	No more apply, continue
9	How do you perform tasks on a digital gig platform?
	I work on the tasks alone on my own account <i>(skip next Q)</i>
	I hire other people and assign tasks to other gig workers <i>(go to 9a)</i>
	Sometimes I work alone; sometimes I hire other people <i>(go to 9a)</i>
9a	Where do you usually find other people to assign tasks to do?
	I register on the freelancing platform as an "agency"
	I find other people on social media (WhatsApp, Facebook, etc.)
	I hire workers in my local area through in-person groups
	I hire family or friends to do online work that I got from a client
	I recruit on other gig work platforms to outsource my work
10	Are you part of a community of gig workers?
	Yes, part of a social media group (Facebook, WhatsApp, Twitter, etc.)
	Yes, part of a virtual community that communicates through text message groups, emails, etc.
	Yes, part of a local community of gig workers that meets in person
	Yes, part of a community offered by the freelancing platform(s)
	No, not part of any online gig worker community
Module C	<i>Shown to everyone</i>
11	In your view, what is the most appropriate way to describe workers on digital gig platforms? <i>(shown to everyone, including non-gig workers)</i>
	Gig workers are employees of the digital platforms
	Gig workers are employees of the clients who post the tasks
	Gig workers are entrepreneurs who own and run a business

(Continued)

TABLE D.7: (Continued)

Question	General English
	Gig workers are like seasonal workers who work during periods of high demand (like holiday season)
	Gig workers are like independent contractors
12	According to you, which of these benefits is the most important one that you think digital gig work platforms should provide? (shown to everyone including non-gig workers)
	Health insurance
	Old age savings/pension
	Paid annual leave
	Paid sick leave
	Access to training
	Access to credit/loans—to buy equipment, laptop, access internet
	Complete

REFERENCE

- Anderson, L., and R. D. Fricker, Jr. 2015. "Raking: An Important and Often Overlooked Survey Analysis Tool." *Phalanx* 48 (3):36–42.
- Hoy, Christopher. 2022. "How Does the Progressivity of Taxes and Government Transfers Impact People's Willingness to Pay Tax?: Experimental Evidence across Developing Countries." Policy Research Working Papers 10167. World Bank, Washington, DC. <https://openknowledge.worldbank.org/handle/10986/37987>.
- IRIS, 2021. IRIS Network. Available online at <http://www.irisnetwork.org/>
- Mellon, J., T. Peixoto, F. M. Sjoberg, and V. Gauri. 2021. "Trickle Down Tax Morale." World Bank, Washington, DC.
- OLI (Online Labour Index). 2020. <http://onlinelabourobservatory.org/oli-demand/>.
- PPMI. 2021. "Study to Support the Impact Assessment of an EU Initiative to Improve the Working Conditions in Platform Work: Methodological Annexes." Study prepared for the European Commission. <https://op.europa.eu/en/publication-detail/-/publication/454966ce-6dd6-11ec-9136-01aa75ed71a1/language-en>.
- Sjoberg, F.M., J. Mellon, T. C. Peixoto, J. Z. Hemker, and L. L. Tsai. 2019. "Voice and Punishment: A Global Experiment on Tax Morale." Policy Research Working Paper 8855. World Bank, Washington, DC.
- Soundararajan, V., S. Soubeiga, D. Newhouse, A. Palacios-Lopez, U. J. Pape, and M. Weber. 2023. "How Well Do Internet-Based Surveys Track Labor Market Indicators in Middle-Income Countries?" World Bank, Washington, DC.

APPENDIX E

Platform Surveys and Country Deep Dives

This appendix presents an overview of the data collected from online gig work platforms for this study. The existing literature and data rarely differentiate between global and regional online freelancing platforms. To address the gap in the literature, this study draws on extensive data collected through platform surveys, country-level surveys, and data and information provided by selected platforms around the world to understand whether there are differences in the profile of online workers between global and regional platforms and what factors could be driving inclusion.

Ten platform surveys targeting online gig workers were conducted (Table E.1). The surveys collected data on the sociodemographic background of online gig workers, their experience in and motivation for doing online gig work, and perspectives on social protection. Nine surveys were conducted in partnership with several platforms with significant presence in certain regions and/or countries. The platforms supported the study team in distributing the survey to online gig workers. The nine platforms with which the World Bank cooperated to roll out the surveys also provided general statistics about themselves (descriptive statistics of the demand and supply on the platform) to the study team. In addition, a survey was carried out on a global platform, Microworkers, to identify trends among online gig workers, focusing particularly on microtasks in their online work. The survey on Microworkers was listed as a task on the platform, and online gig workers using the platform could choose to complete it.

TABLE E.1: Overview of the platform surveys conducted as part of this study

Platform	Sample size (online gig workers)	Time frame (2022)
Elharefa	41	June–September
Flexiport	11	June–September
Jolancer	19	April–July
Microworkers	1073	August–September
Onesha	82	July–December
SheWorks!	36	June–September
SoyFreelancer	324	April
Truelancer	746	June–August
Workana	3,697	June–August; survey conducted by the team in partnership with the IDB
Wowzi	960	September–October

Source: Study team compilation.

Note: All platform surveys with the exceptions of the survey on Microworkers were conducted in cooperation with the platforms. The survey on Microworkers was posted as a task for gig workers working on Microworkers to complete. The task paid US\$1 per completed task; a gig worker could complete the task only once.

Country-based surveys were conducted in collaboration with World Bank country offices in four countries: Bangladesh, Indonesia, Kosovo, and Pakistan (Table E.2). The surveys targeted online gig workers and aimed to collect information about their sociodemographic background and experience in gig work and motivation for doing it, as well as to understand the country-specific context of online gig work and access to social protection.

TABLE E.2: Overview of the country surveys conducted as part of this study

Country	Sample size	Description
Bangladesh	249 online gig workers	The survey was conducted by the study team in collaboration with counterpart client at Bangladesh Computer Council and Startup Bangladesh Limited in November 2021. Respondents were recruited by promoting the survey on social media.
Indonesia	4,524 informal workers, of which 148 respondents identified as online gig workers	A survey regarding the participation of informal sector workers in the old-age saving scheme was carried out by a local survey firm under the supervision of the World Bank Social Protection and Jobs (SPJ) team during March to April 2022. The study team collaborated with the SPJ team in Indonesia to include several questions on online gig work in the questionnaire. The survey was an online, self-enumerated survey, and participants were recruited by using purposive and snowball sampling methods. The survey was divided into two phases: first, using participant database of previous World Bank surveys such as HiFy and SP2BNT; second, using social media, Facebook. The survey targeted mainly informal-sector workers, which includes self-employees, business owners without paid workers, unpaid workers, and employees of micro- and small enterprises in Indonesia. The analysis of the survey data was conducted in collaboration with the SPJ team.
Kosovo— Women in Online Work (WOW) pilot^a	13 online gig workers	The survey was conducted by the study team in collaboration with counterpart client (Ministry of Economic Development) with 13 participants in the 2016 Kosovo Women in Online Work (WOW) pilot, as a follow-up to the pilot. The pilot was a collaboration between the Kosovo's Ministry of Economic Development and the World Bank's ICT and Jobs team, with funding provided by the Korea Green Growth Trust Fund.
Pakistan	1,373 online gig workers	The survey was conducted by the study team in collaboration with the Social Sustainability and Inclusion (SSI) team in Pakistan during June to July 2022. The survey built on implementation of the World Bank project Digital Jobs for Khyber Pakhtunkhwa. ^b Respondents in the survey were recruited by distributing the survey on social media.

Source: Study team.

a. See <https://www.worldbank.org/en/country/kosovo/brief/kosovo-wow>.

b. World Bank project P165684, Digital Jobs for Khyber Pakhtunkhwa.

Additional detailed platform-level data (such as internal surveys conducted by the platform among their user base or other granular data collected by the platform) was received from several platforms as detailed in Table E.3

TABLE E.3: Overview of additional platform and program data collected through interactions with platforms

Country/ platform	Type of data	Sample size (year)	Description
Malaysia: eRezeki	Program data	<ul style="list-style-type: none"> • 147,622 (2016) • 176,797 (2017) • 126,976 (2018) • 18,943 (2019) • 8,342 (2020) 	Data from the Malaysia Digital Economy Corporation (MDEC) about the eRezeki program covering the period 2016–2020. However, the distribution of observations is not equal across the year; 94.3 percent of observations are from 2016 to 2018. The eRezeki program was designed based on the crowdsourcing/sharing economy models with the main objective of providing additional income opportunities via digital platforms.
Malaysia: GLOW PENJANA	Program data	10,200	Data from MDEC about the global online workforce (GLOW) PENJANA Program from October 2020 to June 2021. The program is a highly targeted program to help individuals whose livelihoods were affected by the COVID-19 pandemic and movement restrictions.
Workana	Survey conducted by Workana	13,093 (full sample); 12,979 after invalid entries were removed	The survey was conducted by Workana in 2021, and the results were presented in the 2021 Workana report.
YouDo	Platform data	2,500,000 (total user base in 2021)	The data reported were provided by the YouDo platform.

APPENDIX F

Interviews with Platforms

A total of 27²⁴¹ interviews with selected platforms were conducted between summer 2021 and autumn 2022. Table F.1 provides an overview and brief description of the platforms interviewed for this study.

TABLE F.1: Overview of platforms interviewed as part of the study

Platform	Headquarters	Overview
Apna	India	Apna is an India-based online gig work platform founded in 2019. The platform caters to the Indian market and is present in 74 Indian cities.
Appen	Australia	Appen is a global platform based in Australia and with operations in over 130 countries. Appen supports companies and organizations developing AI and machine learning models by providing a range of platform services, including data sourcing and data annotation.
Asuqu	Nigeria	Launched in 2015, Asuqu is an online freelancing platform aiming to connect online freelance professionals offering creative and professional services with customers in Africa.
BeMyEye	United Kingdom	BeMyEye is an online gig work platform that crowdsources information on how the products of brands are displayed in stores. Using the BeMyEye app, gig workers can select the missions, or tasks, they wish to complete. Most of the tasks are location-based, requiring the gig worker to visit local stores, but a smaller share of tasks can also be completed remotely online. BeMyEye has operations in Europe and the United States.
Bookings Africa	Nigeria	Bookings Africa is a gig work platform featuring both location-based and web-based tasks. The platform is active in Nigeria, Kenya, and South Africa.
B.O.T.	Lebanon	B.O.T. is a social enterprise and gig work platform that provides data services and connects individuals from low-income communities in Lebanon with companies across the world.
Elharefa	Egypt	Elharefa (known previously as Al7arefa) is an Egyptian online freelancing platform connecting online gig workers and clients in the Middle East and North Africa region.
Findworka	Nigeria	Founded in 2016, Findworka operated at first as an online freelancing platform, connecting online gig workers with clients. It has evolved over time into a recruitment and placement company that manages a pool of qualified workers.

(Continued)

²⁴¹ The interviews cover 28 platforms; one interview was conducted with the company that operates two platforms (this was the case for Hsoub, which operates platforms Khamsat and Mostaq).

TABLE F.1: (Continued)

Platform	Headquarters	Overview
Flexiport	India	Flexiport is an online freelancing platform launched in 2014 offering both a marketplace for online freelancers and clients and third-party staffing services. The platform caters to the demand and supply for gig work in India.
Freelancer	Australia	Freelancer is one of the world's largest freelancing and crowdsourcing marketplaces. Freelancer connects employers and freelancers globally from over 247 countries, regions, and territories, featuring work projects in a variety of areas including software development, writing, data entry, design, engineering, sales and marketing, accounting, and legal services.
Khamsat and Mostaq (Hsoub)	United Kingdom	Hsoub is a technology company operating two Arabic freelancing platforms: Khamsat and Mostaq. Khamsat is designed for small services and tasks, and Mostaq for larger freelancing projects. Both platforms are active in the Middle East and North Africa region.
Jolancer	Nigeria	Founded in 2013, Jolancer is a dedicated marketplace for skilled African freelancers to register their profiles, post the services they offer, and bid for projects in their line of expertise. The platform was originally intended for the Nigerian market only, but it evolved beyond Nigeria, being used now by workers and clients in other countries as well.
Karya	India	Having started as a Microsoft project, Karya subsequently evolved into a stand-alone organization. Karya aims to make digital work more inclusive and accessible to workers from rural communities, providing a source of supplemental income to rural workers, bolstering their digital literacy and skills, and also potentially unlocking other income opportunities.
M4JAM	South Africa	M4JAM is a gig technology company founded in 2014 in South Africa enabling a variety of clients (including start-ups, MSMEs, and large enterprises) to connect with over 1.2 million gig workers. The tasks featured on the platform are predominantly location based, but they also have tasks that can be conducted remotely (such as online surveys).
MDEC (eRezeki platform)	Malaysia	eRezeki is an online platform developed and hosted by the Malaysia Digital Economy Corporation (MDEC), a government agency tasked with the development of the digital economy in Malaysia. It was launched in 2015 with the objective of providing opportunities for people to earn additional by working online, with a focus on those in the bottom 40 percent of the income distribution (B40). In its pilot phase, the primary focus of eRezeki was providing access to digital microtasks, following the example of Amazon Mechanical Turk. However, it later expanded to also provide access to location-based and freelance work.
Meaningful gigs	United States	Meaningful Gigs is an online platform founded in 2018 to connect skilled African designers with companies from around the world seeking high-quality digital design.

(Continued)

TABLE F.1: (Continued)

Platform	Headquarters	Overview
Native Teams	United Kingdom	Native Teams is a platform facilitating freelance work. It provides a variety of services, including Employer of Record, payroll, international payment support, visa assistance, and more, for both freelancers and employers. Native Teams is not an online marketplace for gig work, but a facilitator of online freelancing. The company is active in over 30 countries.
Onesha	Kenya	Onesha is a Kenyan platform for online freelancing. The platform aims to enable African freelancers to access work opportunities from around the world, with a strong user base in Kenya.
SheWorks!	United States	SheWorks! is a digital platform that connects businesses with certified remote-ready professionals. SheWorks! brings together talent primarily from Latin America and empowers women to tap into the opportunities of online gig work.
SoyFreelancer	El Salvador	SoyFreelancer is an online freelancing platform based in San Salvador and catering primarily to the Latin American online gig work market. As a Spanish-language platform, it brings together over 140,000 online freelancers.
Truelancer	India	Truelancer was founded in June 2014 as a global freelancing platform to bring better opportunities to talent in the Asia Pacific region. Based in Delhi, the platform brings together over 2 million freelancers, the majority of whom are based in India, and connects them with employers from around the world (primarily India, by volume of projects, and the United States, in terms of transaction value).
Upwork	United States	Upwork, a US-based online freelancing platform, was founded in 2013. It is estimated to be one of the largest online freelancing platforms in the world, connecting online freelancers and clients from around the world.
Ureed	United Arab Emirates	Ureed is an online marketplace connecting employers from around the world with freelance talents in the Middle East and North Africa across a variety of professional fields. The platform was founded in 2016.
Voices.com	Canada	Voices.com is an online freelancing platform specialized in audio content, with a variety of work categories (such as TV ads, radio ads, audiobooks, podcasts, voice assistants, and so on). The platform brings together over 2 million professional voice-over talents from 160 countries.
Workana	Argentina	Workana is the largest freelance and remote work platform in Latin America. The platform was founded in 2012 and has grown over time within Latin America as well as beyond; in 2018, the platform expanded its presence to Southeast Asia.
Wowzi	Kenya	Wowzi is an online gig work platform specialized in influencer marketing based in Kenya. The platform is active in several other African countries, having teams in Ghana, Nigeria, South Africa, Tanzania, and Uganda.
YouDo	Russian Fed.	YouDo is a location- and web-based online gig work platform based in Russia Federation. The platform was founded in 2012.

Source: Study team summary.

The interviews conducted as part of this study were based on a semistructured approach, with several predefined questions and additional questions based on the evolution of the interview and the specificities of the platform. The interviews were usually scheduled with the founders, CEOs, or other representatives from the senior management of the platforms. The set of predefined questions is presented in table F.2.

TABLE F.2: Sample questionnaire for the platform interviews

Topic	Questions
General background	<ul style="list-style-type: none"> • When was the platform founded? • How did the idea to set up such a platform come by? • What challenges did you encounter in the beginning? • What are the key milestones in the development of the platform? • What types of tasks are usually conducted on the platform?
Supply side	<ul style="list-style-type: none"> • How many registered workers are there on the platform? • Out of the total registered workers, how many are active on the platform? • What is the profile of online gig workers on the platform in terms of their age, gender, educational background, skill set? • What is the geographical distribution of the workers in terms of countries? • Where are workers located within the country (urban or rural, capital, major cities, other smaller cities or towns)? • What are the average earnings of workers? What is the average ticket size? • Are there any patterns in the profile of workers and the types of tasks conducted on the platform?
Demand side	<ul style="list-style-type: none"> • How many registered clients are there on the platform? • Out of the total registered clients, how many are active on the platform? • What is the distribution of clients based on their size (in particular MSMEs versus large companies)? • What is the geographical distribution of clients?
Business model	<ul style="list-style-type: none"> • How do you generate revenue? • What challenges have you faced in sustaining your business model?
Social protection	<ul style="list-style-type: none"> • Does the platform provide any social protection benefits (such as retirement/savings plan, health insurance) to the online gig workers using the platform?
Miscellaneous	<ul style="list-style-type: none"> • Does the platform provide training programs for the online gig workers? If yes, please detail. • Seeing how online gig work holds benefits for people with disabilities who may have difficulties finding work in the traditional labor market, are you aware if people with disabilities are using the platform?

Source: Study team compilation.

APPENDIX G

Mapping of Tasks and Occupational Codes

Online gig workers can perform a variety of tasks on online gig work platforms, from microtasks that can be completed in a matter of minutes (such as object classification and text annotation) to complex tasks in various fields (from software development to management consulting and marketing strategy development). To facilitate the comparability with labor force surveys, the team, with the support of World Bank colleagues from the Jobs groups specializing in labor force surveys,²⁴² mapped typical tasks on online gig work platforms to corresponding occupational codes used in those surveys. The mapping relies on the International Standard Classification of Occupations (ISCO-08)²⁴³ and was conducted by considering four-digit ISCO codes (table G.1).

The mapping of gig work tasks was not straightforward and posed several challenges. First, the nature of typical online gig tasks which do not fall into the traditional occupational classifications raised difficulties. While certain tasks could be easily matched to corresponding ISCO codes (for instance, professional accounting, software development tasks, and data entry tasks), for other, emerging online tasks finding a corresponding traditional occupation raised difficulties. A particular example in this sense is tasks that fall under the umbrella term of “influencer marketing”—that is, tasks for which online gig workers rely on their social media presence to promote certain products or services. While no direct correspondent exists in the ISCO codes, the best partial match was selected in this case (artistic, cultural and culinary associate professionals) on the basis of typical requirements for carrying out such tasks. Second, online gig work tasks span different skill levels; even for tasks with similar titles, the underlying skill level required may be different.²⁴⁴ Taking the example of accounting and finance tasks, one can distinguish between lead tasks, for which the online gig worker would have to show advanced skills for advising clients on budgetary planning and taxation issues, for example, and support tasks that require specific knowledge of the field but not necessarily advanced skills in which the online gig worker would support the client with—for instance, preparing financial statements. We tried to capture this distinction between the different levels of skills required by gig work tasks and created seven overarching task categories that are to a certain extent homogeneous from the perspective of the skill level required. One of the key decisions made in this sense was to introduce two categories covering *business and professional* tasks: first, the business and professional management category, which includes tasks that require a more advanced level of skills; and second, the business and professional support category, which includes tasks that require a relatively lower level of skills. The exercise of mapping online gig work tasks to occupational codes must be seen as work in progress that can be further refined.

²⁴² The team thanks Mario Gronert for his support in refining the mapping of tasks and occupational codes.

²⁴³ ILO 2012, International Standard Classification of Occupations: ISCO-08, <https://www.ilo.org/public/english/bureau/stat/isco/docs/publication08.pdf>.

²⁴⁴ The ISCO-08 classification distinguishes between four skill levels, going from level one, which involves the performance of simple and routine tasks—usually manual tasks—that may require basic literacy and numeracy skills to level four, which relates to tasks that involve creativity and complex problem-solving and decision-making and that require high levels of literary and numeracy skills, as well as socioemotional skills. For further details, please see ILO. 2012, International Standard Classification of Occupations: ISCO-08, <https://www.ilo.org/public/english/bureau/stat/isco/docs/publication08.pdf>.

TABLE G.1: Typical tasks on online gig work platforms and corresponding ISCO codes

Task category	Task	ISCO code	ISCO code description
Business and professional management	Management consulting	2421	Management and organization analysts
	Professional accounting (such as preparing and organizing financial statements for an organization)	2411	Accountants
	Human resource management	2423	Personnel and careers professionals
	Project management	2421	Management and organization analysts
	Lawyer	2611	Lawyers
	Teaching, training, and/or tutoring	235#	Other teaching professionals
	Quantitative analysis	2120	Mathematicians, actuaries, and statisticians
	Marketing strategy	2431	Advertising and marketing professionals
Business and professional support	Accounting support and bookkeeping	3313	Accounting associate professionals
	Paralegal services	3411	Legal and related associate professionals
	Market and customer research	4227	Survey and market research interviewers
	Lead generation	3512	Information and communications technology user support technicians
	Display advertising	3514	Web technicians
	Email and marketing automation	3511	Information and communications technology operations technicians
Data entry, administrative and clerical tasks	Completing surveys	4110	General office clerks
	Data entry and cleaning	4132	Data entry clerks
	Customer support and service	4222	Contact center information clerks
	Virtual assistant	4120	Secretaries
	Database administration	3513	Computer network and systems technicians
Design, multimedia, and creative work	Architecture	2161	Building architects
	Art and illustration	2651	Visual artists
	Graphic design, logo design, or UI/UX design, or other multimedia design	2166	Graphic and multimedia designers
	Product design	2163	Product and garment designers
	Video and animation	2166	Graphic and multimedia designers
	Voice talent	2655	Actors
	Voice-over (reading aloud sentences)	2655	Actors
	Audio production	3521	Broadcasting and audiovisual technicians

(Continued)

TABLE G.1: (Continued)

Task category	Task	ISCO code	ISCO code description
Sales and marketing	Influencer marketing (for example, advertising a product on your social media account)	343#	Artistic, cultural and culinary associate professionals
	SEO, SEM, and social media marketing (such as monitoring social media platforms, writing social media posts)	2431	Advertising and marketing professionals
	Brand identity and strategy	2431	Advertising and marketing professionals
	Public relations	2432	Public relations professionals
	Copywriting (review blog posts or other writing)	2431	Advertising and marketing professionals
	Marketing consulting	2431	Advertising and marketing professionals
	IT, software development, and technology	Desktop software development	2512
Game development		2513	Web and multimedia developers
Machine learning		2514	Applications programmers
Network and system administration		2522	Systems administrators
Product management		3511	Information and communications technology operations technicians
Scripts and utilities		2514	Applications programmers
Testing apps, websites, and/or software		2511	Systems analysts
Web scraping/gathering data from websites		2514	Applications programmers
Website and/or app development		2513	Web and multimedia developers
E-commerce development		3511	Information and communications technology operations technicians
Writing and translation	Academic writing and research	2641	Authors and related writers
	Article and blog writing	2641	Authors and related writers
	Creative writing	2641	Authors and related writers
	Editing and proofreading	4110	General office clerks
	Grant writing	2641	Authors and related writers
	Other writing	2641	Authors and related writers
	Resumes and cover letters	2641	Authors and related writers
	Technical writing	2641	Authors and related writers
Online microtasks	Translation	2643	Translators, interpreters and other linguists
	Voice transcription	4132	Data entry clerks
	Image tagging	4132	Data entry clerks
	Image transcription	4132	Data entry clerks
	Geolocation tagging	4132	Data entry clerks
	Object classification	4132	Data entry clerks
	Text annotation	4132	Data entry clerks

Source: Study team.

Note: IT = information technology; SEM = search engine marketing; SEO = search engine optimization; UI/UX = user interface/user experience.

Limitation to the analysis of survey data for gig workers based on the mapping of tasks

The mapping of gig worker tasks to occupation codes was used in two instances in the study: (a) to analyze data collected through the global random domain intercept technology (RDIT) survey and (b) as a robustness check for the estimation of the number of online gig workers. Both analyses have limitations. First, there are limitations to the comparison of the profile of online gig workers based on the survey data and the profile of workers with similar occupations as captured by labor force surveys. This comparison could be carried out for only 8 of the 17 countries covered by the global RDIT survey that had detailed data on the occupational codes of workers in their labor force surveys. These eight countries are Argentina, Bangladesh, India, Mexico, Pakistan, the Philippines, South Africa, and Tunisia. In addition, in India, we had to map the data at a three-digit level since we could not identify four-digit ISCO code data, which provided less precise results. Further details on the labor force surveys used are in appendix D.

Second, there are limitations to the extent to which the mapping of tasks and occupational codes could be used as a robustness check for estimation of the number of online gig workers. We attempted to determine the number of online gig workers in the Philippines and Vietnam using the listed occupation codes as a robustness check for the estimation of the number of online gig workers. Vietnam was chosen because the latest labor force surveys include a question about whether a worker uses the internet regularly for work purposes. The Philippines was included because it is the closest country among our sampled countries where we have labor force survey data from the same year. Since the occupation codes include both online gig workers and offline workers, we used information on the workers' internet usage for their daily activities to refine the data. The probability of internet usage for each two-digit occupation cell was calculated by incorporating labor force survey data from Vietnam. It was then multiplied by the total number of workers within the cell to obtain the total number of online workers. Although online workers do not necessarily equate to gig workers, it is close to our objective. This approach may have an upward bias, as it likely includes non-gig workers, and a downward bias, as it may fail to recognize some online gig occupations that we may have missed in this exercise. Overall, it could be a useful tool for estimating gross figures.

APPENDIX H

Demand Survey Methodology

A global survey was conducted to analyze why firms hire gig workers over web-based digital labor platforms as well as to determine the types of tasks outsourced and trends in firms' hiring practices with respect to gig workers. To ensure the diversity of the sample both in terms of firm size and country coverage, several distribution channels were utilized, including:

1. Twitter,
2. The PitchBook contact database, and
3. Other communication channels.

The sampling strategy that was applied to each of these distribution channels is presented in the following sections, after an overview of the overall sample characteristics. We conclude by discussing survey limitations.

Characteristics of the survey sample

The final survey sample consisted of 814 firms, including 364 firms that hire gig workers. The sample contained companies of diverse sizes (see figures H.1 to H.3). Of all the responses to the survey, 24 percent (or 198 responses) came from solo self-employed workers, 17 percent (139) from firms with 2 to 4 employees, 18 percent (144) from companies that employ 5 to 19 employees, another 18 percent (150) from firms with 20 to 99 employees, and the remaining 22 percent (183) from firms with 100 or more employees. The share of responses from microenterprises may seem surprising; however, anticipating that these firms may be difficult to reach, we purposefully targeted small businesses and start-ups through the Twitter campaign (see table H.1), so that the views of such firms would be captured in the survey. The size of firms that hire gig workers follows a pattern similar to that of all the firms, although the distribution is somewhat more uniform and, as discussed in Chapter 5, a smaller share of firms with 100-plus employees hire workers than could be expected from the distribution of all firms.

FIGURE H.1: Surveyed firms, by size and whether they hire gig workers

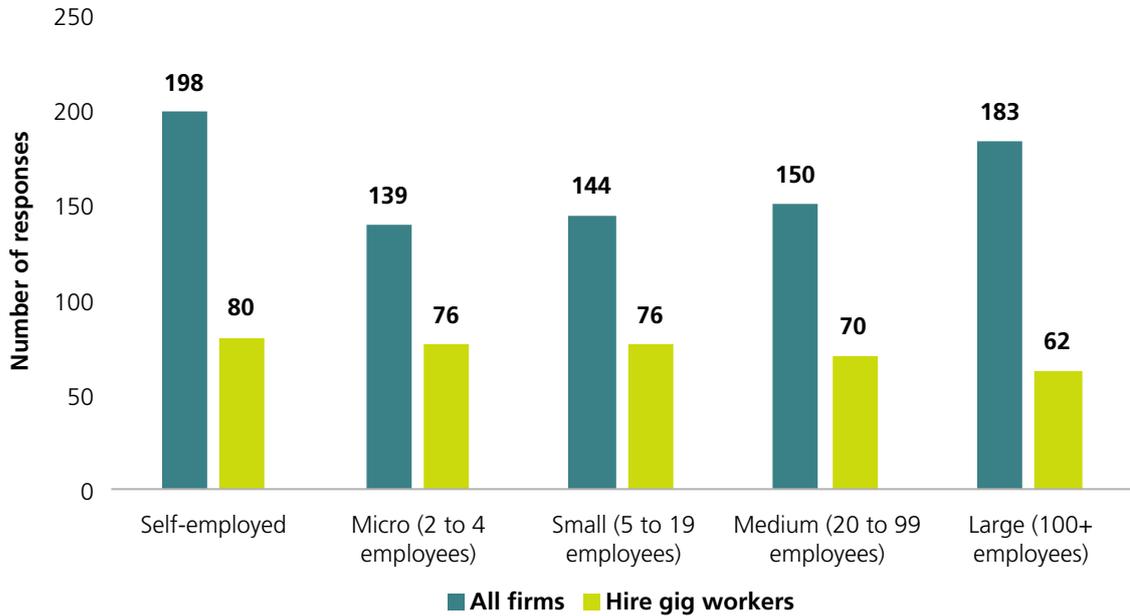
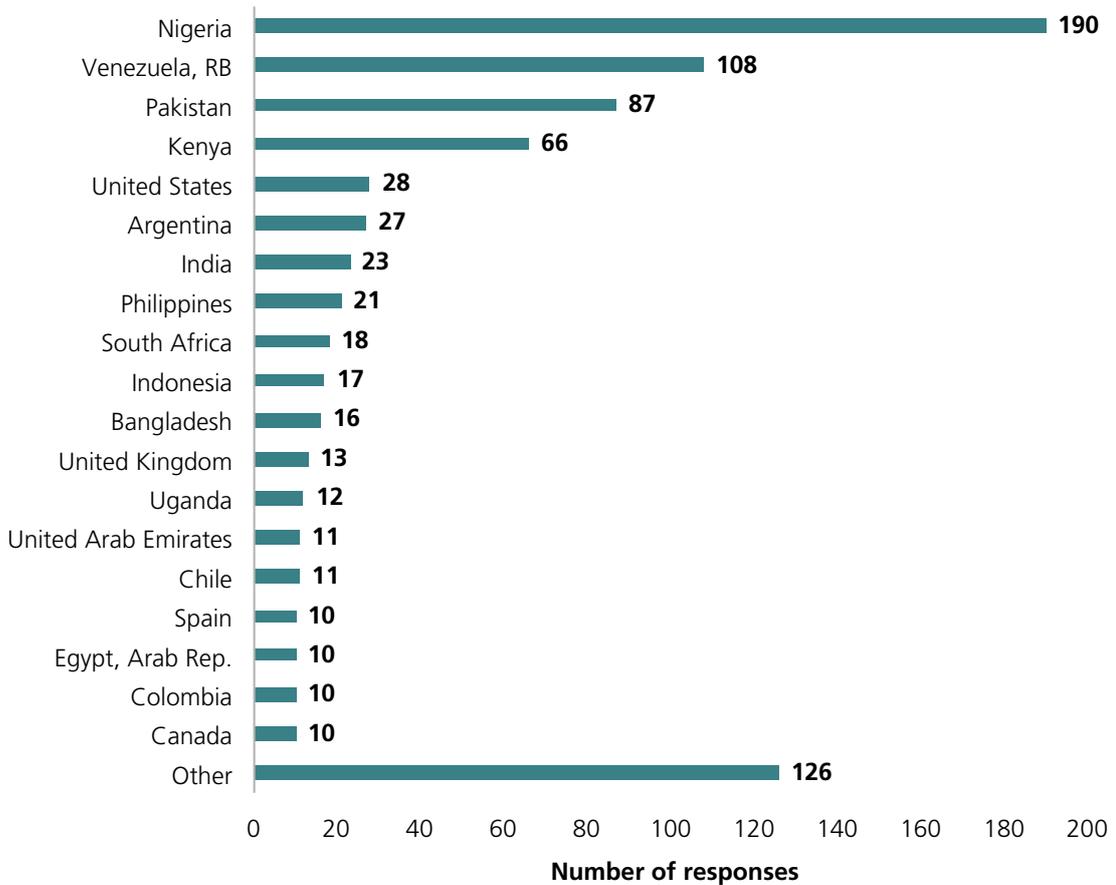
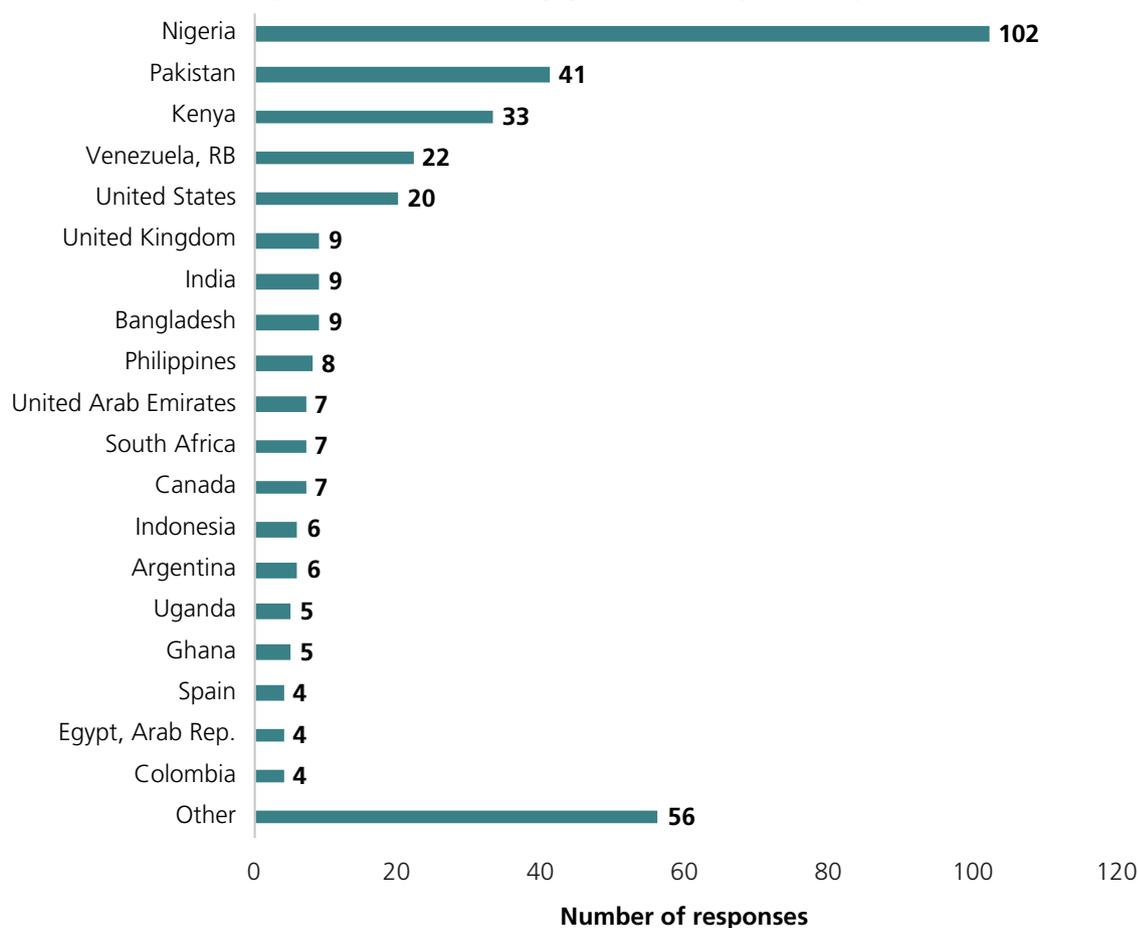


FIGURE H.2: All surveyed firms, by country



Source: Study team survey.

FIGURE H.3: Surveyed firms that hire gig workers, by country

The firms surveyed in total span 78 countries (58 that hire gig workers), with most based in Kenya, Nigeria, Pakistan, and República Bolivariana de Venezuela. This is due to the way Twitter's algorithm works when trying to maximize the number of clicks on the ad; see the explanation in the following section. Hence, the survey results better reflect the views of firms based in these countries than in others.

Distribution through Twitter

Twitter was chosen as a suitable distribution channel for the survey because its reach is global and users can be targeted on the basis of various digital labor platforms they follow. The survey was launched through Twitter in multiple waves, with the team closely monitoring survey results and trying to maximize the number of responses gathered. The World Bank's External and Corporate Relations team helped implement the survey by identifying the best keywords to target respondents, launching the ad campaign, and monitoring its progress.

Twitter ads were launched in English only and were shown to users based in 21 countries, including the 17 targeted in the global RDIT survey (a survey of gig workers conducted as part of this study)²⁴⁵

²⁴⁵ Argentina, Bangladesh, China, the Arab Republic of Egypt, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, Pakistan, the Philippines, República Bolivariana de Venezuela, the Russian Federation, South Africa, Tunisia, and Ukraine.

as well as the United States, the United Kingdom, Germany, and Spain. The intention was to gather a number of responses from the same countries as in the RIWI survey to compare the supply of gig labor and demand for it in each of the countries. The four developed countries were targeted since globally, the demand for web-based gig work originates mostly from developed countries, the United States in particular.²⁴⁶ The targeting criteria used in the first wave of Twitter ads are summarized in Table H.1.

TABLE H.1: Criteria used to target Twitter users

Age	25+
Language	English
Locations	Arab Republic of Egypt, Argentina, Bangladesh, China, Germany, India, Kenya, Lebanon, Mexico, Morocco, Nigeria, Pakistan, the Philippines, República Bolivariana de Venezuela, Russian Federation, South Africa, Spain, Tunisia, Ukraine, the United Kingdom, and the United States.
Follower look-alikes	Fiverr, @fiverr, Freelancer.com, @freelancer, Freelancers Union, @freelancesu, PeoplePerHour, @PeoplePerHour, Total, @toptal, 99 designs by Vista, @99designs, Amazon MTurk, @amazonmturk, Appen, @AppenGlobal, clickworker, @clickworker_com, microWorkers.com Crowdsourcing Platform, @Microworkers, Digital EU, Dribbble, Fiverr Affiliates, Digiday
Keywords	Gig, jobs, online job, remote, remote work, freelance, freelancer, hiring, digital work, virtual, technology, entrepreneurship, career, manager, #hiring, entrepreneurial, #recruiting, #hiringnow, #freelance, technologies, #freelancing, #smallbusiness, #entrepreneurship, #entrepreneurs, #jobsearch, #techjobs, it, #business, #startup, ##entrepreneur, #freelancer, mobile, #marketing, startup, management, small business, #tech, #businessowners, #smallbiz, #startups, #technology, start up, #innovation, crowdsourcing, talent

Source: Study team.

As illustrated in table H.1, in addition to targeting specific countries, the ads also targeted specific age groups and people based on the type of content they engage with. We targeted people ages 25 or older because people younger than 25 years old are less likely to make hiring decisions at their firms. Follower look-alike targeting allows people with interests similar to those of a Twitter account's followers to be targeted. For example, @fiverr targets people likely to be interested in Fiverr. Meanwhile, keywords are used to reach people on Twitter on the basis of their search queries, recent Tweets, and Tweets they engaged with lately. Relevant follower look-alikes and keywords were suggested to the research team by the World Bank's marketing team.

The ad contained a short message asking Twitter users to fill out the survey if they hire freelancers (because the term "freelancer" is more common among the general public than "gig worker"). It was accompanied by a short video to attract more attention.

Once the first Twitter ads wave was launched, we gathered the majority of responses from Kenya, Nigeria, and Pakistan. This is for two reasons. First, the survey was launched in English and these three countries are predominantly English speaking. Second, the Twitter algorithm works to automatically maximize the number of clicks on the ad for the budget given. Twitter uses an "ad score" for each Tweet to predict how likely someone is to engage with your ad and will serve higher-ranked Tweets more frequently in your campaign.²⁴⁷ Since it is cheaper to advertise in developing countries than in developed ones, Twitter was more likely to show the ad where it was gaining more traction, that

²⁴⁶ See <http://onlinelaborobservatory.org/oli-demand/>.

²⁴⁷ See <https://business.twitter.com/en/help/campaign-editing-and-optimization/intro-to-optimizing.html>.

is, in Kenya, Nigeria, and Pakistan. This is illustrated in table H.2, which summarizes the number of impressions and clicks on the survey ad in the initial stages of the campaign.

TABLE H.2: Impressions and links clicks after the first wave of Twitter ads, by country

Location	Number of impressions	Link clicks	Click rate (%)
Nigeria	378,458	1423.00	0.38
Pakistan	188,611	971.00	0.51
Kenya	143,775	777.00	0.54
Argentina	85,661	132.00	0.15
India	77,660	164.00	0.21
Philippines	45,450	133.00	0.29
South Africa	13,242	28.00	0.21
United States	6,729	7.00	0.10
United Kingdom	5,300	7.00	0.13
Bangladesh	5,015	38.00	0.76
Egypt, Arab Rep.	2,956	8.00	0.27
Venezuela, RB	1,774	11.00	0.62
China	1,150	1.00	0.09
Spain	915	1.00	0.11
Morocco	790	2.00	0.25
Mexico	787	0.00	0.00
Lebanon	745	3.00	0.40
Germany	681	1.00	0.15
Tunisia	409	1.00	0.24

Source: Study team based on Twitter ads statistics.

To gather responses from more diverse countries, we pursued two strategies. First, we translated the survey and the ad into Spanish and launched a separate ad targeting only the Spanish-speaking countries from the original list (Argentina, Mexico, Spain, and República Bolivariana de Venezuela,). The remaining targeting criteria were similar to those in table H.1, with the exception that additional platforms popular in the Spanish-speaking world were added to the follower look-alikes if they had a Twitter account.²⁴⁸ The strategy worked to some extent: in total, the Spanish ad helped gather 209 responses, including 29 responses from firms that hire gig workers through online platforms. However, most of these responses (107) were from people based in República Bolivariana de Venezuela. As was the case for the English ad campaign, Twitter showed the ad to more people based in República Bolivariana de Venezuela because the ad was gaining more traction there.

The second strategy to capture responses from more diverse countries was to stop showing the English advertisement in Kenya, Nigeria, and Pakistan. We reasoned that if these countries were removed from the list, Twitter's algorithm would promote the ad in the remaining countries of interest. However, during the week following the change, the number of survey responses received every day dropped significantly. Given the growing cost per response, the decision to continue showing the ad in Kenya, Nigeria, and Pakistan was made. The English Twitter campaign in

²⁴⁸ These included Applause/Utest, Atexto, BairesDev, FreelancerViet, Milanuncios, Neobux, Preply, Proz, RedBubble, Remotasks, Rent a Coder, SheWorks!, SoyFreelancer, Swagbucks, Twago, and Workana.

total gathered 603 responses, including 196 responses from firms that hire gig workers through online platforms.

Distribution using the PitchBook contact database

In parallel to the Twitter campaign, the survey link was sent to 20,285 email addresses of various firms gathered through the PitchBook database.²⁴⁹ The contacts came from 144 countries, representing all regions of the world, although some countries contained more contacts than others (see table H.3). For example, more than 1,000 each were contacted in Indonesia, South Africa, United Arab Emirates, and the United States and only one each in Saint Helena, São Tomé and Príncipe, Slovenia, Sri Lanka, and Tajikistan. This reflected both the availability of contacts in the PitchBook database and the desire to capture responses from developed and developing countries, ideally allowing for country-level analysis of responses from the most targeted countries.

For 14,083 firms, the database contained personalized information—that is, the name and email address of the CEO or CFO of the company. In these cases, personalized messages were sent to recipients to motivate their participation. For the remaining 6,202, however, only the generic company email (info@...com) was available, so the same generic message was sent to all these participants. After the initial invite to complete the survey, each firm received two more reminders roughly a week apart. In total, 316 responses were gathered using this distribution channel, including 122 from firms that hire gig workers.

Distribution through other communication channels

In addition to the Twitter ad campaign and direct emails to contacts from the PitchBook database, we used the S4YE LinkedIn page,²⁵⁰ World Bank's Jobs and Development blog,²⁵¹ and various Facebook groups that are commonly used to hire gig workers. In total, 46 responses, including 19 responses from people who hire gig workers, were generated through these communication channels.

Additionally, two platforms interviewed for the purposes of the study agreed to share the link to the survey with the firms that use those platforms to hire gig workers. Nevertheless, this approach generated only two responses. Given that the questionnaire for this distribution channel was tailored to ask platform-specific questions, these responses were not included in the analysis with the others.

Data validation

Upon completion of data collection, survey responses were merged to create one final data set containing responses from all the respondents. In total, the sample contained 1,174 responses, including 366 from firms that hire gig workers.

Responses were then checked for (a) duplicates and (b) suspicious response patterns (responding to the survey in a very short time or always selecting the first question option). Following this step, three responses were discarded as they failed to pass the quality check. Furthermore, 352 responses came from people who were not working, so they were automatically disqualified from the survey. This resulted in a final sample of 814 firms, including 364 responses from firms that hire gig workers.

²⁴⁹ See <https://pitchbook.com/>.

²⁵⁰ See <https://www.linkedin.com/company/solutions-for-youth-employment>.

²⁵¹ Namita Datta, Rong Chen, and Luka Klimaviciute, "Help the World Bank Figure Out a Piece of the Puzzle on Gig Jobs," World Bank blog, <https://blogs.worldbank.org/jobs/help-world-bank-figure-out-piece-puzzle-gig-jobs>.

TABLE H.3: Number of contacts targeted from the PitchBook contact database, by country

Country or economy	Contacts	Country or economy	Contacts	Country or economy	Contacts	Country or economy	Contacts
Algeria	23	Cyprus	3	Israel	25	New Zealand	7
Angola	25	Czech Republic	7	Italy	43	Nicaragua	21
Argentina	723	Denmark	31	Côte d'Ivoire	107	Niger	8
Australia	90	Dominican Republic	43	Jamaica	64	Nigeria	572
Austria	7	Ecuador	57	Japan	255	Norway	38
Bahrain	125	Egypt, Arab Rep.	528	Jordan	490	Not identified	8
Bangladesh	2	El Salvador	36	Kenya	490	Oman	116
Belgium	29	Equatorial Guinea	1	Korea, Rep.	42	Pakistan	2
Benin	7	Eritrea	2	Kuwait	196	Panama	105
Bermuda	2	Estonia	3	Lao PDR ^a	12	Paraguay	1
Botswana	20	Eswatini	21	Latvia	2	Peru	340
Brazil	36	Ethiopia	52	Lebanon	223	Philippines	668
British Virgin Islands	5	Finland	35	Lesotho	5	Poland	6
Bulgaria	3	France	150	Liberia	5	Portugal	18
Burkina Faso	11	Gabon	3	Libya	8	Qatar	164
Burundi	3	Gambia, The	3	Liechtenstein	2	Reunion	11
Cambodia	65	Germany	68	Lithuania	1	Romania	1
Cameroon	27	Ghana	182	Luxembourg	12	Russian Federation	13
Canada	98	Gibraltar	2	Malawi	14	Rwanda	46
Cabo Verde	3	Greece	5	Malaysia	1,351	Saint Helena	1
						Venezuela, RB	3
						United Arab Emirates	1,282
						United Kingdom	422
						United States	1,243
						Uruguay	82

(Continued)

TABLE H.3: (Continued)

Country or economy	Contacts	Country or economy	Contacts	Country or economy	Contacts	Country or economy	Contacts	Country or economy	Contacts
Cayman Islands	2	Guatemala	61	Mali	12	São Tomé and Príncipe	1	Vietnam	831
Central African Republic	2	Guinea	4	Malta	5	Saudi Arabia	540	West Bank and Gaza	36
Chad	2	Hong Kong SAR, China	50	Mauritania	6	Senegal	38	Yemen	3
Chile	857	Hungary	8	Mauritius	110	Seychelles	12	Zambia	64
China	45	Iceland	2	Mexico	32	Sierra Leone	12	Zimbabwe	76
Colombia	641	India	199	Morocco	175	Singapore	316		
Comoros	1	Indonesia	1,093	Mozambique	26	Slovak Republic	3		
Congo, Dem. Rep.	16	Iran, Islamic Rep.	150	Myanmar	85	Slovenia	1		
Costa Rica	123	Iraq	26	Namibia	39	Somalia	4		
Croatia	1	Ireland	42	Netherlands	79	South Africa	2,425		

Source: PitchBook data compiled by study team.

a. PDR, People's Democratic Republic

Limitations

The key survey limitation is that it is based on voluntary, nonprobability sampling. Given that respondents that were willing to participate in the survey may be inherently different from those who were not, the results of the survey should not be inferred to the broader population of firms.

Nonprobability sampling was chosen for a few reasons. Probability sampling requires a list of all firms globally that hire gig workers, from which it would be possible to sample at random, and such a list of enterprises does not exist (which is also why weights could not be estimated for this survey²⁵²). Nevertheless, in theory, such a list could be created by first surveying a random sample of all firms to identify those which hire gig workers and subsequently sampling from the companies identified. The research team explored this option by attempting to draw a sample of firms from the Orbis company database.²⁵³ However, this option was not feasible because of the financial and time constraints of the study. Despite the limitations associated with nonprobability sampling, the survey draws preliminary insights into why and which firms turn to digital labor platforms, highlighting questions that should be explored in future research.

²⁵² The team considered the option of developing weights that would make the total survey sample representative of firms worldwide. However, this approach runs the risk of distorting the sample of firms that hire gig workers through online platforms if these firms differ from those that are not using platforms. Hence, an unweighted survey sample was used throughout the analysis.

²⁵³ See: <https://login.bvdinfo.com/R0/Orbis>.

APPENDIX I

Social Insurance for Online Gig Workers: Methodology Note

Research questions

1. What proportion of surveyed gig platform workers have pensions and social insurance coverage?
2. What constrains social insurance coverage for self-employed gig workers?
3. What emerging approaches are governments and nongovernment actors taking to extend social insurance to self-employed platform workers?
4. What can governments do to ensure social insurance for workers in nonstandard forms of employment, including gig platform workers?

Data sources used

Chapter 6 uses data from multiple sources described earlier in the report, including (a) a global RDIT survey of gig and non-gig workers (see description in appendix D); (b) surveys of digital gig workers on selected platforms (see description in appendix E);²⁵⁴ (c) interviews with management of gig platforms, policy makers, financial institutions, and relevant private sector players; and (d) focus group discussions with participants of digital worker operations supported by the World Bank. The data for empirical assessment in this chapter were collected using a standard set of questions in the social protection module of the survey instrument (see appendix D). Chapter 6 also uses analysis of data collected from a survey of gig workers in Pakistan (see description in appendix E). Bank colleagues from the EAP Social Protection & Jobs team also shared analysis from a March–April 2022 survey of informal-sector workers in Indonesia, which sought to determine participation in old-age saving programs.

Secondary data sources include the World Bank's Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE), the World Development Indicators (WDI), and the United States Social Security Administration's (SSA) global surveys.

²⁵⁴ Due to sample size constraints, chapter 6 focused on surveys conducted on four platforms: Microworkers, Soyfreelancer, Truelancer, Workana.

APPENDIX J

Social Security Welfare Schemes under the eShram Program

TABLE J.1: Social security schemes under the eShram Program

Program	Eligibility requirements	Benefits
Old age protection (Pradhan Mantri Shram Yogi Maan-Dhan Yojana [PM-SYM])	<p>Should be an Indian citizen.</p> <p>Unorganized workers (working as street vendors, agriculture-related work, construction site workers, workers in industries of leather, handloom, mid-day meal, rickshaw or auto wheelers, rag picking, carpenters, fishermen, and such.</p> <p>Age group of 18–40 years.</p> <p>Monthly income is below Re 15,000 and not a member of EPFO/ESIC/NPS (government funded).</p>	<p>After attaining the age of 60 years, beneficiaries are entitled to receive a minimum monthly assured pension of Re 3,000.</p> <p>On death of the beneficiary, spouse is eligible for 50% monthly pension.</p> <p>If husband and wife both join the scheme, they are eligible for Re 6,000 monthly pension jointly.</p>
National Pension Scheme for Traders and The Self-Employed Persons (NPS)	<p>Should be an Indian citizen.</p> <p>Shopkeepers or owners who have small shops, restaurants, hotels, real estate brokers, and so on.</p> <p>Age 18–40 years.</p> <p>Not covered in EPFO/ESIC/PM-SYM.</p> <p>Annual turnover not more than 1.5 Crore in rupees.</p>	<p>Under the program, beneficiaries are entitled to receive minimum monthly assured pension of Re 3,000 after attaining the age of 60 years.</p>
Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY)	<p>Should be an Indian citizen.</p> <p>Age of 18–50 years.</p> <p>Having Jandhan or savings bank account with Aadhaar.</p> <p>Auto-debit from bank account on consent.</p>	<p>Receive 2 lakh upon death due to any cause.</p> <p>Premium around Re 330 per year.</p>

(Continued)

TABLE J.1: (Continued)

Program	Eligibility requirements	Benefits
Pradhan Mantri Suraksha Bima Yojana (PMSBY)	Should be an Indian citizen. Age of 18–70 years. Having Jandhan or savings bank account with Aadhaar. Auto-debit from bank account on consent.	Re 2 lakh on death due to any cause and permanent disability and Re 1.0 lakh on partial disability. Premium around Re 12 per year
Atal Pension Yojana	Should be an Indian citizen. Age of 18–70 years. Having bank account linked with Aadhaar.	The contributor, on their choice, can attain a pension of Re 1,000–5,000, or they can get an accumulated sum of the pension after death. The accumulated amount will be given to the spouse or if the spouse is dead as well then to the nominee.
Public Distribution System (PDS)	Should be an Indian citizen. All families below the poverty line are eligible. Any family which does not have a member between ages 15 and 59 years of age. Any family which has a disabled member is also eligible for benefits under Pradhan Mantri Awas Gramin Yojana. Those who do not have a permanent job and only engage in casual labor.	35 kg of rice or wheat every month, while a household above the poverty line is entitled to 15 kg of food grain monthly. Being implemented as ONORC to enable migrant workers to receive the food grains wherever they are working.
Pradhan Mantri Awaas Yojana – Gramin (PMAY-G)	Should be an Indian citizen. Any family including workers, which does not have a member between ages 15 and 59 years. Any family which has a disabled member is also eligible for benefits under Pradhan Mantri Awas Gramin Yojana. Those who do not have a permanent job and only engaged in casual labor.	Assistance provided to the beneficiary to the tune of 1.2 lakhs in plain areas and 1.3 lakhs in hilly areas.
National Social Assistance Programme (NSAP)—Old-age protection	Should be an Indian citizen. Any person who has little or no regular means of subsistence from his/her own source of income or through financial support from family members or other sources.	Central contribution of Re 300–500 for different age groups. Monthly pension ranges from Re 1,000 to 3,000 depending upon state's contribution.

(Continued)

TABLE J.1: (Continued)

Program	Eligibility requirements	Benefits
Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)	Those living in scheduled caste and scheduled tribe households. Families with no male member age 16 to 59 years. Beggars and those surviving on alms.	Health coverage of Re 5 lakhs per family per year for secondary- and tertiary- care hospitalization free of cost.
Health Insurance Scheme for Weavers (HIS)	Should be an Indian citizen. The weaver should be earning at least 50 percent of his income from handloom weaving. All weavers, whether male or female, are eligible to be covered under the health insurance scheme.	The beneficiaries would receive a package of Re 15,000 that covers both pre-existing diseases and new diseases.
Pradhan Mantri Kisan Mandhan Yojana	Should be an Indian citizen. For small and marginal farmers. Entry age 18–40 years. Cultivable land up to 2 hectares as per land records of the concerned state/union territory.	Assured pension of Re 3,000/month. Voluntary and contributory pension scheme. Matching contribution by the government of India.
National Safai Karamcharis Finance and Development Corporation (NSKFDC)	Should be an Indian citizen. People involved as Safai Karmacharis and manual scavengers.	Scheme provides financial assistance to the Safai Karamcharis, manual scavengers, and their dependents through State Channelizing Agencies/Regional Rural Banks/Nationalized Banks for any viable income-generating schemes, including sanitation-related activities and for education in India and Abroad.
Self-Employment Scheme for Rehabilitation of Manual Scavengers	Should be an Indian citizen. Identified manual scavengers, one from each family (as defined in para 2.3.1), would be eligible for one-time cash assistance (OTCA) of Re 40,000 or any such amount as OTCA is revised from time to time.	Identified manual scavengers, one from each family (as defined in para 2.3.1), would be eligible for OTCA of Re 40,000 or any such amount as OTCA is revised periodically.

Source: Social Security Welfare Schemes | e-SHRAM (eshram.gov.in), <https://eshram.gov.in/social-security-welfare-schemes>.

APPENDIX K

Social Insurance Regulatory Developments in Select Countries

TABLE K.1: Regulatory developments²⁵⁵

Country	Description of regulatory innovations leveraging digital platforms
Chile	The government automatically deducts 10% of each electronic invoice of the self-employed and directs it to the pension fund of the person's choice. Overcollection and undercollection are considered at the end of the year after the self-employed has filed their tax return. To ease the collection process, contributions are made in practice by the corporate service buyers on behalf of the self-employed.
Colombia	New legislation, Law 1174 (2020), anticipates social security system contributions for platform workers according to hours worked. Contributions can be paid by the day or by the hour. As of February 2021, independent or salaried workers who earn less than minimum wage need to compulsorily enroll in the public social security scheme.
Croatia	Social insurance schemes cover self-employed who contribute 1.7% of monthly covered earnings. The minimum monthly earnings used to calculate contributions is HRK 3,047.60. The maximum monthly earnings used to calculate contributions is HRK 48,120.
Czech Republic	Compulsory insurance contributions for self-employed of 1.2% of monthly covered declared earnings. The annual declared earnings used to calculate contributions are 50% of the difference between income and expenses in the previous calendar year. The minimum annual earnings used to calculate contributions are 12 times 25% of the national average monthly wage (full-time self-employed persons) or 12 times 10% of the national average monthly wage (part-time self-employed persons). The maximum annual earnings used to calculate contributions are 48 times the national average monthly wage. The national average monthly wage is CZK 29,979.
Hungary	Self-employed persons can participate in unemployment insurance. Self-employed contributions are 1.5% of declared monthly earnings.
India	Social Security Code 2020 provides protection to gig workers. Under the act, a gig worker is defined as a person who performs work or participates in a work arrangement and earns from such activities outside of the traditional employer-employee relationship. After mandatory registration, gig workers are entitled to various social security benefits, including life and disability insurance, accident insurance, health and maternity benefits, and old-age protection.
Indonesia	In Indonesia for motorcycle taxi platforms (such as GoJek), a small amount of the taxi fare is deducted automatically for accident insurance. Indonesia has introduced a digital mechanism to securitize the new application that the country has for motorcycle taxi rides. When using the application, a small amount of the tariff is automatically deducted for accident insurance for both the driver and the passenger for the length of the trip.

(Continued)

²⁵⁵ This appendix was compiled with the support for Maho Hatayama.

TABLE K.1: (Continued)

Country	Description of regulatory innovations leveraging digital platforms
Lithuania	Platform workers are insured by social insurance for pensions, sickness, and maternity but not for unemployment, accidents at work, or occupational diseases.
Malaysia	The Self-Employment Social Security Scheme was introduced to provide protection for individuals who are self-employed under the provisions of the Self-Employment Social Security Act 2017. In the beginning, this scheme was compulsory for the self-employed in the Passenger Transportation Sector, which includes taxi, e-hailing, and bus drivers under the provisions of the Self-Employment Social Security Act 2017, which took effect on 1 June 2017. Effective from 1 January 2020, the scheme has been extended to 19 other sectors. The coverage for self-employed individuals contributing to the scheme starts from the date and time the contribution is paid and recognized on the contribution payment receipt. This scheme provides protection for self-employed insured persons against employment injuries, including occupational diseases and accidents during work-related activities.
Slovenia	Self-employed persons contribute 2% of the monthly covered declared income. The minimum and maximum monthly earnings used to calculate contributions are €456 and €6,384, respectively.
United States	Various cooperatives of freelancers are involved in the insurance against major life-cycle risks. Besides the traditional self-employed, they also cover platform workers. The Freelancers Union, for instance, the largest US cooperative of this kind with 350,000 members, provides health, life, and disability insurance at relatively low costs for the self-employed.
Uruguay	Uber drivers in Uruguay can download a phone application that automatically deducts social security contributions. In Uruguay taxi drivers, including those working through digital platforms (such as Uber), are covered by social insurance, requiring the registration and payment of contributions through an easy-to-use online application. This innovation builds on Uruguay's long experience with covering self-employed workers and workers in microenterprises through a simplified tax and contribution payment mechanism (monotributo). Monotax contributions are collected by the Uruguayan Social Security Institute (BPS), which transfers the tax share to the fiscal authority and uses the contribution share to finance social security benefits for members affiliated through the scheme and their families.

Source: Study team.

APPENDIX L

Illustration of How Social Protection Instruments Offered by Private Markets Address Risk-Sharing Objectives

TABLE L.1: Private-market social protection instruments

Initiative	Description	Prevents the idiosyncratic risk of chronic poverty	Smooths consumption when saving and insurance are not available	Supports economic advancement with safe ways for people to build and protect their wealth
Partner Protection program^a	Covers independent drivers and couriers that use the Uber and Uber Eats apps across 23 European countries.	x		
Coverage includes on-trip benefits (accidents, injury, or hospitalizations) and off-trip benefits (sick pay and maternity paternity payments)				
Grab PHV Medisave Match Programme^b	As part of Grab's driver-partners' benefit package, Grab matches qualifying PHV partner's Medisave contributions up to US\$100.	x		x
Catch (https://catch.co)	Partners with digital gig platforms to provide investment and savings plans to self-employed. Subscribers save a little each time they are paid.			x
Jobtech Alliance^c	Data scraping platform Unveel and Kenyan financial service provider Power partner to offer a suite of financial services (earned-wage access, insurance, loans, savings) for gig workers on major ride-hailing platforms in Kenya.	x	x	x
Lynk microinsurance for completely uninsured individuals and higher levels of insurance ^d	Lynk has used M-Pesa for disbursements to workers or artisans on Lynk's platform as a workaround to the poor payments infrastructure because most freelancers do not have bank accounts.			x

Source: Study team.

Note: PHV = private hire vehicle

a. https://www.allianz.com/en/press/news/business/insurance/211206_Allianz-Partners-and-Uber-are-partnering-to-provide-benefits-and-protection-insurance-for-independent-drivers-and-couriers-in-Europe.html.

b. <https://help.grab.com/driver/en-sg/900004833383>. To be eligible, private hire vehicle (PHV) driver-partners need to meet all the following criteria: (a) Completed registration process within the month (4–5 weeks based on Monday to Sunday), (b) minimum weekly acceptance rate of 90 percent (across all service types), (c) maximum weekly cancellation rate of 10 percent (across all service types), (d) minimum weekly driver rating of 4.5 stars (across all service types), (e) completion of a minimum of 80 rides per week, (f) contribution to own Medisave Account for the same month, and (g) contribution to own Medisave Account as "Self-Employed."

c. Jobtech Alliance is a collective of entrepreneurs, practitioners, funders, and policy makers collaborating to help build the jobtech ecosystem in Africa. See <http://jobtechalliance.com>.

d. Marissa Dean, "Three Pain Points of African Platforms Adding Financial Services to Their Business Models," *Finance in a Digital Africa* blog, June 3, 2019, <https://www.financedigitalafrica.org/2019/06/03/three-pain-points-of-african-platforms-adding-financial-services-to-their-business-models/>.

APPENDIX M

Measuring Gig Work through Nationally Representative Surveys

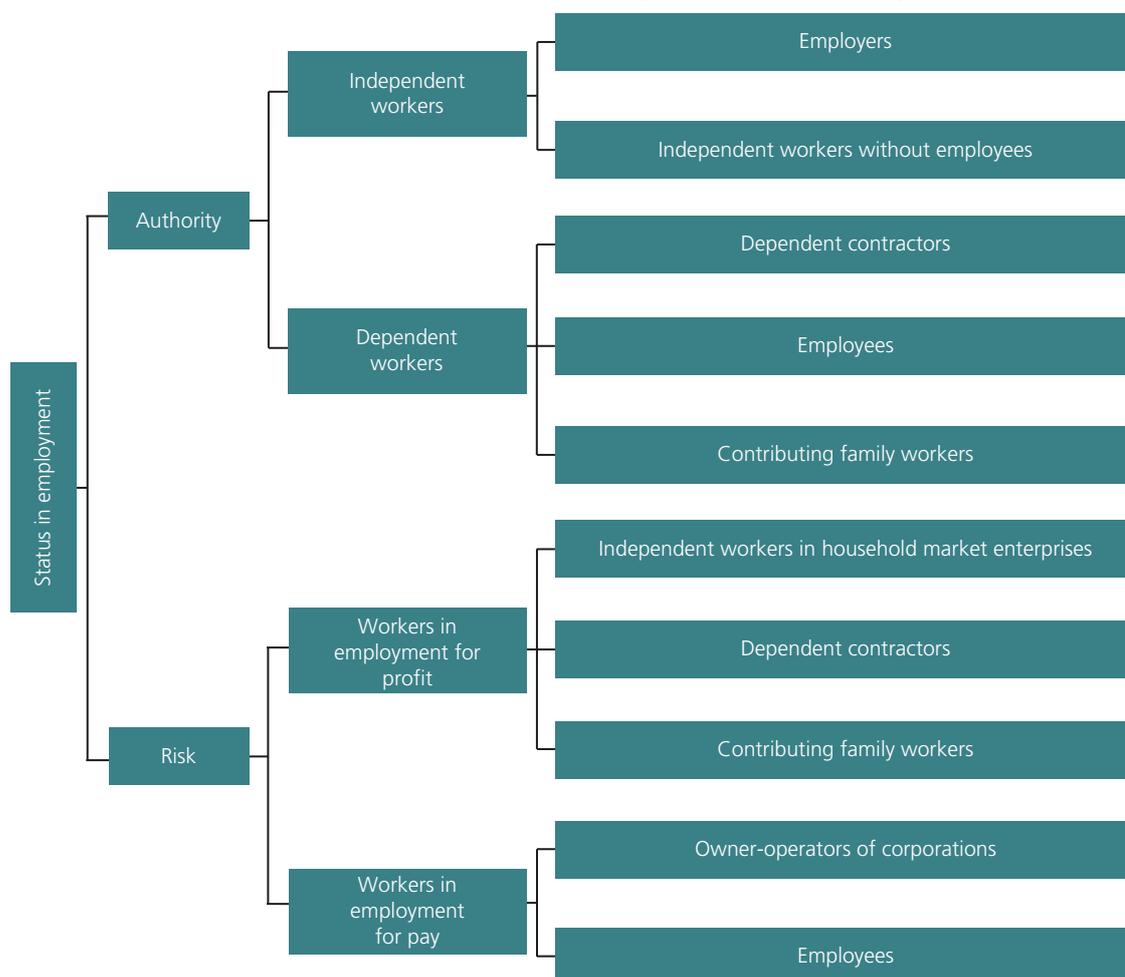
To measure and analyze the evolution of gig work globally, countries should start from a common framework.²⁵⁶ The International Labour Organization (ILO) 20th International Conference of Labor Statisticians (ICLS), from 2018 (ICLS-18), proposed a revision of the international classification of status in employment (ICSE-18) based on (a) the type of authority the worker can exercise in the job and (b) the type of economic risk to which the worker is exposed (see figure M.1). Furthermore, the ILO has developed a tool to help countries improve collection of survey data on status in employment that will aid in quantifying the scale of gig work (ILO 2021a). Specifically, the new tool enables identification of dependent contractors. The category “dependent contractors” allows identification of workers who are employed for profit but do not have full control over the activities of the economic unit for which they work.²⁵⁷ While the implementation of ICSE-18 will increase the complexity of the questionnaire as well as the number of questions, note that filters will be used and, in practice, most respondents will get only around two additional questions, while a few will get more.

At the country level, efforts are under way to adopt better measures of gig work. Table M.1 presents examples of questions that some country surveys have asked to determine the extent of gig employment. Examples include the 2017 US Contingent Worker Supplement (CWS), the 2020 China Labor Force Survey, the 2019 Swiss Labor Force Survey, and others. Questions vary in complexity. Of the examples excerpted in table M.1, the Swiss Labor Force Survey is longest but also richer than others in that it probes on earnings from platform-mediated work.

²⁵⁶ This appendix was prepared with Amparo Palacios-Lopez, senior economist, World Bank.

²⁵⁷ The resolution defines contractors as workers who (a) have registered with the tax authorities (and/or other relevant bodies) as a separate business unit responsible for the relevant forms of taxes, and/or who have made arrangements so that their employing organization is not responsible for relevant social security payments, and/or the contractual relationship is not subject to national labor legislation applicable to, for example, “regular employees” but who (b) hold explicit or implicit contracts which correspond to those of “paid employment.”

FIGURE M.1: Classification of status in employment proposed by ICLS



Source: Team analysis using ICLS report 2018.

TABLE M.1: Illustrative examples of surveys measuring gig work

Source	Questions	
U.S. 2017 Contingent Worker Supplement (CWS) of the US Bureau of Labor Statistics	Some people select short, ONLINE tasks or projects through companies that maintain lists that are accessed through an app or a website. These tasks are done entirely online, and the companies coordinate payment for the work.	1 Yes 2 No
	For example. data entry, translating text. web or software development. or graphic design. Does this describe ANY work (you/NAME) did LAST WEEK?	
	Was that for (your/NAME's) fjob/main job), (your/NAME's) second job)) or (other) additional work for pay?	1 Primary 2 Secondary 3 Other

(Continued)

TABLE M.1: (Continued)

Source	Questions	
China Labor Force Survey, 2020	27. Do you have any business that you undertake via the internet? ① yes ② No - Question 28 27.1 Which of the following are you mainly engaged in? a. To undertake production orders (such as physical production. software programming) b. Commodity transactions (such as WeChat. Taobao) c. Financial services (such as Internet microfinance, Internet insurance agency) d, Car service (such as express, special c..ir-hai1ing, chauffeuring) d. Logistic:;;service:;;(Such a:;; food dell!very, expe:;;;; delivery, freight, errand:;;) e. Living service:;; (such as catering, housekeeping, famlly hotels, farmhouse:;;) f. Knowledge, sk:ills, entertcainment, ctdvertising c1nd other seNices (such c1s online education, medical treitltment, consulting, on1ine editing, onllne maintenance) Others (please specify)	
Swiss Labor Force Survey Questionnaire 2019	Internet platforms and apps make new income opportunities possible today. You are put in contact with the client and generally paid directly via the platform. Have you rented a room. apartment or a house to somebody via an internet platform such as Airbnb or Flipkey in the past 12 months? Have you provided taxi services via an internet platform or app such as for example Uber of Lyft in the past 12 months? Have you provided other services via an internet platform such as cleaning. handiwork, delivery services or online programming in the past 12 months? What percentage of your income comes from the income from these paid services provided via an internet platform or app?	1 Yes 2 No 8 Don't know 9 N/A 1 Yes 2 No 8 Don't know 9 N/A 1 Yes 2 No 8 Don't know 9 N/A Share as% 998 Don't know 999 No answer

(Continued)

TABLE M.1: (Continued)

Source	Questions	
Finnish Labor Force Survey	Finnish Labour Have you during the past 12 months worked or otherwise Force Survey (2017) earned income through the following platforms?	1 Airbnb 2 Uber 3 Tori.fi/Huuto.net 4 Solved Some other None of the above
Eurostat (2019)	Have you obtained paid work by using an intermediary website or apps (e.g. Upwork, 1 Yes TaskRabbit, Freelancer, Amazon Mechanical Turk) in the last 12 months? Websites of 2 No employment agencies are excluded.	1 Yes 2 No
	If YES: Could you please specify if this work is:	
	a) The main source of your income	<input type="checkbox"/>
	b) An additional source of income	<input type="checkbox"/>

Source: ILO 2021b.

As the international community acts to adopt a common framework, country-level practices could benefit from key principles. Hardie (2016) offers useful guidance to help address gig work measurement issues through traditional surveys.

- First, concepts being measured should be clearly defined using terminology that can be understood by individuals and the confidentiality of the data collected should be emphasized. Surveyors should define the types of activities that should be captured (for example, monetary or nonmonetary) and define who the target population will be (for example, businesses or households and individuals).
- Second, offices of national statistics should continuously engage the ILO to ensure that country surveys keep pace with international best practice.
- Finally, countries should identify existing surveys where additional questions on the sharing economy could be asked.

REFERENCES

- Hardie, Michael. 2016. "The Feasibility of Measuring the Sharing Economy." Office for National Statistics. <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/thefeasibilityofmeasuringthesharingeconomy/2016-04-05>.
- ICLS (International Conference of Labour Statisticians). 2018. *20th ICLS Report*. Geneva: International Labour Office.
- ILO (International Labour Organization). 2021a. Integrating ICSE-18 in a Household Survey. https://rtc-cea.cepal.org/sites/default/files/rtc_connected/files/Integrating%20ICSE-18%20in%20HH-survey.pdf.
- ILO (International Labour Organization). 2021b. "International Experiences and Standards in Monitoring the Employment and Social Security Coverage of Workers in the Platform Economy: Lessons for a Survey in China." Technical Note 3. https://www.ilo.org/wcmsp5/groups/public/---asia/--ro-bangkok/---ilo-beijing/documents/briefingnote/wcms_777143.pdf.

APPENDIX N

List of Projects Interviewed on Program Design

TABLE N.1: Program designs

#	Project	Country(s)	Leading organization(s)	Project period	Brief description
1.	Leveraging ICT for Growth, Employment and the Governance (LICT) Project (P122201)	Bangladesh	World Bank, Ministry of Posts, Telecommunication and Information Technology, Bangladesh Computer Council	2013–19	The objectives of the World Bank's Leveraging Information and Communication Technologies (LICT) were to catalyze the growth of Bangladesh's IT and IT-Enabled Services (IT/ITES) industry for employment creation and export diversification and to establish basic e-government foundations to support public sector modernization. The project focused on increasing the competitiveness of Bangladesh's IT/ITES industry by increasing the quantity and quality of skills, awareness, and perception of the country.
2.	Kenya Ajira Digital Program	Kenya	Ministry of ICT, Innovations and Youth Affairs, Youth Affairs, eMobilis, Kenya Private Sector Alliance	First Phase—2017 Second Phase—2019–ongoing	Government initiative driven by the Ministry of ICT, Innovations and Youth Affairs to empower over 1 million young people to access digital job opportunities. The main objectives are to raise the profile of digital work, promote a mentorship and collaborative learning approach to finding digital work, provide Kenyans with access to digital work, and finally promote Kenya as a destination for online workers.
3.	eRezeki	Malaysia	Ministry of Communications & Multimedia, Malaysia Digital Economy Corporation (MDEC)	2015–ongoing	eRezeki is a digital platform developed and hosted by MDEC, a government agency tasked with the development of the digital economy in Malaysia. It was launched in 2015 with the objective of providing opportunities for people to earn additional income through working online, with a focus on those in the bottom 40 percent of the income distribution (B40). In its pilot phase, the primary focus of eRezeki was on providing access to digital microtasks, following the example of Amazon Mechanical Turk. However, it later expanded to also provide access to location-based and freelance work.

(Continued)

TABLE N.1: (Continued)

#	Project	Country(s)	Leading organization(s)	Project period	Brief description
4.	Gaza Emergency Cash for Work and Self-Employment Support (P167726)	West Bank and Gaza	World Bank	2018–21	World Bank's Gaza Emergency Cash for Work and Self-Employment Support project supported NGOs that connected unemployed youth with online work opportunities. The project objective was to fund skills training and digital job support for 750 youth (including 375 young women).
5.	Digital Jobs for Khyber Pakhtunkhwa (P165684)	Pakistan	World Bank, Khyber Pakhtunkhwa Information Technology Board	2018–22	Digital KP was a provincial project focused on supporting regulations, institutions, and capabilities with the objective of promoting job creation and growth. Implementing the Digital KP, the Khyber Pakhtunkhwa Information Technology Board (KPITB), focused on four pillars of the project: digital access, digital governance, digital economy, and digital skills.
6.	Women in Online Work (WOW) Pilot and World Bank Kosovo Digital Economy Project (P164188)	Kosovo	World Bank, Ministry of Economy, Coders Trust	WOW: 2015–16 KODE: 2019–23	The Women in Online Work (WOW) pilot sought to generate awareness of online employment opportunities for underemployed and unemployed women in Kosovo. WOW targeted women age 18–34 from rural areas in Gjakova and Lipjan who had completed or would complete university-level education, were under- or unemployed, and were seeking employment. The success of the WOW pilot prepared the ground for the activities to be extended to the rest of municipalities under the Kosovo Digital Economy (KODE) Project.
7.	Click-On Kaduna Pilot (P159231)	Nigeria	World Bank, Kaduna ICT Hub, Upwork, Andela, Rockefeller Foundation	2018–19	World Bank's "Digital Jobs in Nigeria" pilot project team adopted various strategies to help vulnerable youth in conflict-affected areas to leverage employment opportunities in the digital economy. The pilot provided training for unemployed and underemployed youth in Kaduna State to pursue digital jobs, including online freelancing and digital entrepreneurship.
8.	Mastering the World of Online Freelancing	Jordan, Lebanon	International Finance Corporation, UREED, RUWAAD	2020	As a pilot project, IFC commissioned the design of an online, self-paced training program called "Mastering the World of Online Freelancing" and offered the training for free to interested female freelancers from Jordan and Lebanon who were subscribed to the Ureed online marketplace. The training sought to improve their digital inclusion by enabling them to successfully bid for freelance jobs.

(Continued)

TABLE N.1: (Continued)

#	Project	Country(s)	Leading organization(s)	Project period	Brief description
9.	Kenya Digital Freelancing Curriculum	Kenya	Generation	2022–ongoing	Generation is a nonprofit that prepares unemployed or underemployed young people for entry-level middle-skill jobs that feature either high scarcity or high turnover. They have recently launched a pilot project on online freelancing focused on transcription and virtual assistant skills with a target of 200 youth to be reached by June 2022.
10.	Selangor Freelance Initiative	Malaysia	Workana, Permodalan Negeri Selangor Berhad, Menteri Besar Selangor Incorporated, PLATS (Platform Selangor)	2022–ongoing	The goal of this initiative is to provide Selangorians with better work opportunities in technology, design, marketing, content, translation, and administration. The program provides: guaranteed access to Workana, free training courses, cash incentives (RM 400), and enhanced profile so it's easier to land more jobs.
11.	Working Virtually in the Global Economy	Jordan, West Bank and Gaza	Education for Employment (EFE), French Agency for Development (Agence Française de Développement - AFD)	2020–ongoing	EFE is a nonprofit that trains youth and links them to jobs across the Middle East and North Africa. Working Virtually in the Global Economy is a training program that provides recent graduates and entry-level employees with the necessary skills to work in the global marketplace through remote assignments, contracts, and employment. This program equips participants with tools to locate, manage, and maintain steady work while increasing their marketability in a digital economy.
12.	Digital Upskilling Scholarship Program	Lebanon, Jordan	HSOUB Academy, World Bank Skilling Up Mashreq Initiative	2020	In 2020, Hsoub signed an agreement with World Bank to pilot an initiative in supporting skills development and job placement opportunities for youth and refugees in the Middle East and North Africa region. The agreement involved provision of a holistic training experience for a cohort of 100 aspiring tech and media freelancers from Jordan and Lebanon.

(Continued)

TABLE N.1: (Continued)

#	Project	Country(s)	Leading organization(s)	Project period	Brief description
13.	Project Karya	India	Microsoft Research India	2019–ongoing	Aims to make digital work more inclusive and accessible to workers from rural communities, with the goals of providing a source of supplemental income, bolstering their digital literacy and skills, and potentially unlocking other income opportunities.
14.	Skills for Virtual Gigs	Kenya	IREX, Kazi Remote, Ministry of ICT	2022	IREX's Center for Applied Learning and Impact, Kazi Remote (an impact-sourcing transcription service provider), and the Kenya Ministry of ICT, Innovation, and Youth Affairs collaborated on a pilot research initiative that focused on equipping youth with the skills they need to succeed in virtual gigs and leverage their new skills for future professional opportunities.
15.	Humans in the Loop	Various	Humans in the Loop	2017–ongoing	Humans in the Loop has both a company wing and a foundation side. The company works on the demand side and works with employers to create data annotation work opportunities for refugees, a standard B2B outsourcing model.
16.	Stablecoin micropayments for digital workers	Kenya	Mercy Corps Ventures (MCV), Appen, Corsali, Celo, 60 Decibels	2021	MCV is a nonprofit that accelerates financial inclusion and de-risking the adoption of new technological innovations by conducting real-world pilots. The MCV pilot studied here was completed over three months at the start of 2021 to test whether digital stablecoins (a type of cryptocurrency) and mobile wallets could ease frictions and reduce costs in cross-border payments for unemployed and underemployed youth completing microwork in Kenya.

APPENDIX O

Note on Funding of Platforms

Although increased venture funding indicates a growing interest in online gig platforms, the average funding tends to be small and skewed toward large platforms. An overall US\$9.5 billion has been invested in gig platforms alone (figure O.1). The average total funding of gig platforms is US\$43.5 million, but the median is US\$4.56 million. This indicates that few platforms have received large sums, while many platforms have received much smaller amounts. On average, global platforms have received more funding than regional/local ones, with median funding of US\$5 million and US\$4.55 million, respectively. Around a quarter of regional/local platforms have received less than US\$1 million in funding, while some global platforms have received US\$1 million to US\$5 million. Two-thirds of gig platforms in the sample are currently venture capital funded (early, mid-, and late stage), while around 12 percent are backed by angel investors and incubators or accelerators and around 10 percent are backed by later-stage investments (figure O.2). More generally, funding in the sample is skewed, with the 10 highest-funded platforms in the database²⁵⁸ attracting 58 percent of total funding. Except for Zbj, which is based in China, all of these platforms are based in high-income countries—Australia, France, Israel, the United Kingdom, and the United States. However, these top-funded platforms account for only 26 percent of registered users among platforms for which we have funding information, highlighting the importance of network effects in platform-based business, where the amount of funding might be a less important predictor of business success than for other business models.

The high level of merger and acquisition activities shows volatility and experimentation in the platform business models. A total of 44 online gig work platforms (around 14 percent) have been successfully acquired by or merged with other companies in the past 10 years. Twelve (4 percent) have gone public, while the large majority (82 percent) have not been involved in any deals. Of platforms that were acquired or merged, 64 percent were bought by other digital businesses, competitors, or corporations. The platforms that were acquired or went public include leading global and regional platforms with large numbers of workers such as Upwork, Freelancer, Dribbble, and 99designs. However, they also include smaller, regional platforms such as crowd-testing platform Test.io; design-focused Krop; Gengo, a translation platform; and Gamersensei, a coaching platform focusing on gaming. This shows that business models that focus on specific market niches can operate competitively. The majority of the deals involve corporations as the acquiring or investing party. Those include competitors, which was the case in the 2019 takeover of FigureEight (previously Crowdfunder) by the global data-labeling platform Appen,²⁵⁹ Middle East and North Africa-focused Ureed's acquisition of local competitor Nabbesh in 2020,²⁶⁰ and the 2021 acquisition of the high-end creative freelance platform Working Not Working by market leader Fiverr.²⁶¹ Digital giants have

²⁵⁸ They are Twine (United Kingdom), Jana (United States), Scale (United States), Verbit (United States), Zbj (China), Degreed (United States), Fiverr (Israel), Appen (Australia), made (United Kingdom), and Side (France). LinkedIn Services is excluded from this list, as any funding received by the firm refers to its main platform LinkedIn.com as well as other business lines, including the LinkedIn Services platform. Source: CB Insights (2020) and PitchBook (2020) databases.

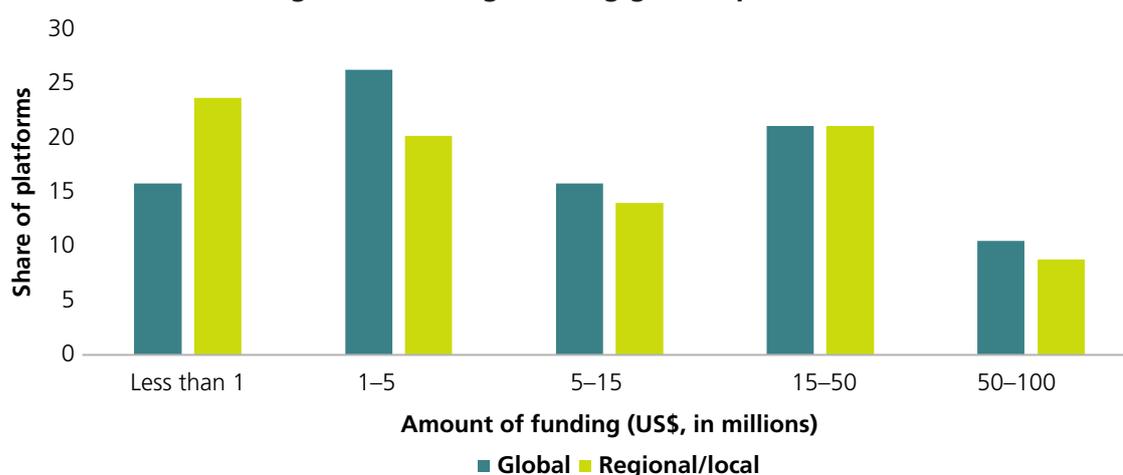
²⁵⁹ "Appen to Acquire Figure Eight to Create Industry-Leading Solution for High-Quality Machine Learning Training Data," Appen news release, March 10, 2019, <https://appen.com/press-release/appen-to-acquire-figure-eight/>.

²⁶⁰ Zubair Naeem Paracha, "Dubai-Based Freelance Marketplace Ureed Raises Seven-Figure Seed, Acquires Nabbesh," *Menabytes*, June 30, 2020, <https://www.menabytes.com/ureed-seed/#:~:text=Ureed%20today%20has%20also%20announced,also%20be%20absorbed%20by%20Ureed>.

²⁶¹ John Glenday, "Fiverr Acquires Freelance Creative Network Working Not Working," *The Drum*, February 11, 2021, <https://www.thedrum.com/news/2021/02/11/fiverr-acquires-freelance-creative-network-working-not-working>.

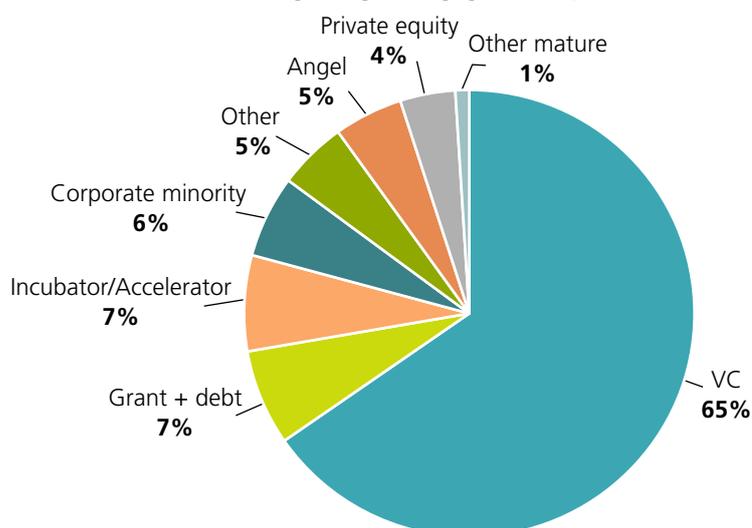
invested in gig work platforms as well, such as Google’s acquisition of the data science community Kaggle in 2017,²⁶² IKEA’s investment in TaskRabbit in 2017,²⁶³ and the acquisition of Russian classifieds website Avito by global conglomerate Naspers’ OLX Group in 2019.²⁶⁴ Those takeovers tend to complement the acquirers’ business models or allow them to expand their service offering. Private equity and other investment firms account for 16 deals involving online gig work platforms in the database. For example, South African microjobbing platform M4JAM, global law-focused freelance platform Axiom Law, software development platform Gigster, and Arise, a customer support-focused platform, all have been acquired by private equity firms and other investors.

FIGURE O.1: Funding levels among online gig work platforms (N=352)



Source: World Bank Group online gig work database based on data from CB Insights and PitchBook.

FIGURE O.2: Funding stage of gig work platforms in the sample (N = 198)



Source: World Bank Group online gig work database based on data from CB Insights.

Note: VC = venture capital (early, mid-, and late stage VC as well as “Other VC” as defined by CB Insights)

²⁶² Frederic Lardinois, Matthew Lynley, and John Mannes, “Google Is Acquiring Data Science Community Kaggle,” *TechCrunch*, March 7, 2017, <https://techcrunch.com/2017/03/07/google-is-acquiring-data-science-community-kaggle/>.

²⁶³ Megan Rose Dickey, “IKEA Has Bought TaskRabbit,” *TechCrunch*, September 28, 2017, <https://techcrunch.com/2017/09/28/ikea-buys-taskrabbit/>.

²⁶⁴ Jon Russell and Ingrid Lunden, “Naspers Takes Full Control of Russian Classifieds Site Avito in \$1.16B Deal,” *TechCrunch*, January 28, 2019, <https://techcrunch.com/2019/01/28/naspers-avito-1-16-billion/>.

APPENDIX P

Pricing Schemes of Online Gig Work Platforms

Online gig work platforms are all for-profit companies, and they usually rely on a combination of fees and/or subscription plans to generate revenue. The largest platforms (such as Upwork and Freelancer) tend to be publicly listed companies, while most platforms are organized as limited-liability corporations. The revenue usually comes from fees charged on the demand side or supply side or both, as well as from subscription plans that grant additional features to the online gig workers or clients who subscribe to them. The sample of global and regional/local platforms examined for this study²⁶⁵ shows that the commissions charged to the worker generally range from a minimum flat fee to 20 percent (table P.1). Global platforms (such as PeoplePerHour and Upwork) tend to charge progressive commissions based on the lifetime earnings of the worker as well as additional fees like transaction or withdrawal fees (associated with certain payment mechanisms)²⁶⁶ and optional fees. Such fees may be charged on regional platforms as well, although they may be less common (Truelancer charges a withdrawal fee). Optional fees can enable freelancers to access special features, such as the ability to promote their offer or bid (the “featured offers” option on PeoplePerHour, or “highlight bid” on Freelancer and others), or the ability to pass tests on the platform to prove competencies (the “exam” feature on Freelancer, for instance, which is available for US\$5 to \$15).²⁶⁷ On the client side, the service varies; on some regional platforms there may be no service fee charged, or sometimes it can be very high. Some platforms (SheWorks! and the Kenya-based Wowzi) charge commissions only on the client side. Very often, the fee is less than 5 percent of the transaction value (as is the case on Truelancer, Workana, Freelancer, and Upwork).

Subscription plans are often used to generate more revenue and attract more workers and clients. On the supply side, subscription offers are usually available as monthly plans that online gig workers can purchase. The subscription plans can include a reduced commission charged by the platform (for instance, on SoyFreelancer and Truelancer) or an increased number of times a worker can bid for projects in a month without being charged a fee (applicable for the “bids” on Freelancer and the “connects” on Upwork and Workana, for instance). Visibility on the platform can be another added incentive. The Freelancer Plus²⁶⁸ subscription plan offered by Upwork enhances the visibility of subscribed workers on the platform, provides them with more information about projects they bid on (for example, who else is bidding), and allows them to keep information on their earnings private.

²⁶⁵ The platforms in this sample were selected based on the extent to which information about their fee structure was available online at the time of compiling this study. For additional data, a global platform not interviewed for this study was included in the sample, given the ample data available online about the fee structure.

²⁶⁶ For instance, on Freelancer.com there are no transaction fees for transactions to local bank deposits, but fees are charged when using PayPal, credit card, or international wire transfer.

²⁶⁷ The information reported is accurate as of January 2023.

²⁶⁸ Upwork, Support—Freelancer Plus, <https://support.upwork.com/hc/en-us/articles/211062888-Freelancer-Plus>. Accessed January 2023.

TABLE P.1: Pricing schemes of selected regional and global online gig work platforms

Platform	Workers		Clients	
	Fees	Subscription plans	Fees	Subscription plans
Regional				
Elharefa^a	20%			
Flexiport^b		<ul style="list-style-type: none"> • 0 (limited) • US\$9.4 per quarter • US\$31.4 per year 		<ul style="list-style-type: none"> • 0 (limited) • Approx. US\$31.4 per quarter
Onesha^c	Commission: 20%			
SoyFreelancer^d	Commission: 20% (minimum US\$10 per task)	US\$7.99 per month (“Elite”) and reduced commission of 10% per task		
SheWorkst^e			Commission charged only on the client side	
Truelancer^f	<ul style="list-style-type: none"> • Commission: 8–10% • Withdrawal fee: US\$0–25 • Fee for additional bids/proposals: dependent on the number 	US\$10 per month and 8% commission fee	Payment processing fee: US\$0 to 3.9% + US\$0.32	
Workana^g	Commission calculated based on lifetime billings with each client: US\$<301, 20%; US\$301–3,000, 10%; US\$>3,000, 5%	US\$4.9–24.9 per month	4.5% (minimum US\$2)	US\$0–299 per year
Wowzi^h			Commission charged only on the client side	
Global				
Freelancerⁱ	<ul style="list-style-type: none"> • Commission: 0–20% (minimum €5; depends on the type of service provided) • Transaction fee: US\$0–15 • Additional optional fees: US\$0–15 	US\$4.45–59.95 per month	3% (minimum US\$3)	

(Continued)

TABLE P.1: (Continued)

Platform	Clients		
	Workers	Subscription plans	Fees
PeoplePerHour	<ul style="list-style-type: none"> Commission calculated based on lifetime billings with each client: US\$<350, 20%; US\$350–7,000, 7.5%; US\$>7,000, 3.5% Withdrawal fee: US\$0–29.99 Additional optional fees: US\$13–14.95 	<ul style="list-style-type: none"> Service fee: US\$0.9 + 10% Additional optional fees: US\$15–60 	<ul style="list-style-type: none"> Marketplace fee: up to 5%
Upwork^k	<ul style="list-style-type: none"> Commission calculated based on lifetime billings with each client: US\$<500, 20%; US\$501–10,000, 10%; US\$>10,000, 5% Transaction fee: varies depending on payment option Additional optional fees: US\$0.15 for additional job bids beyond the plan, for example 	<ul style="list-style-type: none"> Upwork enterprise (subscription plan details not available) 	<ul style="list-style-type: none"> Upwork enterprise (subscription plan details not available)

Source: Team compilation based on the interviews conducted with platforms and the information available on the websites of the platforms and their terms of service.

Note: The information provided in this table is accurate as of January 2023. Changes in the pricing schemes used by platforms may occur. <https://www.elharefa.com/en/how-it-works>. Last accessed: January 2023.

a. <https://www.elharefa.com/en/how-it-works>. Last accessed: January 2023.

b. <https://www.theflexiport.com/employers>; <https://www.theflexiport.com/talent/>. Last accessed: January 2023.

c. <https://onesha.co.ke/guidelines>. Last accessed: January 2023.

d. <https://www.soyfreelancer.com/blog/preguntas-frecuentes/>. Last accessed: January 2023.

e. <https://wihersheworks.com/talent-page/>. Last accessed: January 2023.

f. <https://www.truelancer.com/legal/fee-charges>. Last accessed January 2023.

g. <https://help.workana.com/hc/en-us/articles/360040846094-How-much-does-it-cost-to-use-Workana>.

h. <https://www.wowzi.co/faq>. Last accessed: January 2023.

i. <https://www.freelancer.com/feesandcharges#>. Last accessed: January 2023.

j. <https://www.peopleperhour.com/static/terms>. Last accessed: January 2023.

k. <https://www.upwork.com/legal#fees>; <https://www.upwork.com/legal#freelancer-membership-policy>; <https://support.upwork.com/hc/en-us/sections/360002707473-Payment-Options>. Last accessed: January 2023.

JOBS

S **4** SOLUTIONS
Y **E** FOR YOUTH
EMPLOYMENT

 **WORLD BANK GROUP**
Digital Development

 **WORLD BANK GROUP**
Social Protection & Jobs