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Digital Economies at Global Margins

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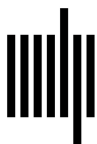
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11 Digital Labor and Development: Impacts of Global Digital Labor Platforms and the Gig Economy on Worker Livelihoods

Mark Graham, Isis Hjorth, and Vili Lehdonvirta

The Rise of Digital Labor

Work has historically been geographically bounded. Workers and the work they perform have always been inexorably linked, with labor being the most place bound of all factors of production (Hudson 2001). As David Harvey (1989, 19) famously noted, workers are unavoidably place based because “labor-power has to go home every night.”

But the widespread use of the Internet has changed much of that. Clients, bosses, workers, and users of the end products of work can all be located in different corners of the planet. This chapter is about what the spatial unfixing of work means for workers in some of the world’s economic margins.¹ It provides examples illustrating who performs much of the digital work that is carried out today and reflects on some of the key benefits and costs associated with these new digital regimes of work.

The rise of digital labor has come about at a confluence of two trends. First, in much of the world, unemployment (and underemployment) is a major social and economic concern for policymakers, for people with jobs, and for those looking for jobs (ILO 2015). The International Labour Organization (ILO 2014) estimates that between 2014 and 2019, there will be 213 million new labor market entrants.

Second, much of the world is increasingly characterized by rapidly changing connectivity. We have gone from a world, only ten years ago, where less than 15 percent of humanity was connected to the Internet, to one today where around 50 percent of the world’s population is connected. There are now over three billion connected people on the planet. Furthermore, ten years ago, less than 8 percent of people in low-income countries were connected. Today, the figure is over one-third (ITU 2016).

In response to this confluence of a need for more jobs in places where they do not currently exist and the spreading of digital connectivity among billions of the world's population, millions of people have turned to outsourced digitally mediated work as a way to transcend some of the constraints of their local labor markets. Many governments, third sector organizations, and private sector actors see significant developmental potential in digital labor: jobs can be created for some of the world's poorest by taking advantage of connectivity and the willingness of an increasing number of firms to outsource business processes. Underpinning some of these hopes is an idea that, in a global market for labor, the actual locations of workers are irrelevant. Anyone can, in theory, do any work from anywhere—an idea that, if true, could bring significant economic benefits to workers in parts of the world where good jobs are hard to come by.

This chapter challenges that notion by highlighting four key concerns addressed (alongside other themes) in a multiyear program of research into digital labor at the world's economic margins. Building on those concerns, the chapter concludes with a reflection on four broad strategies—certification schemes, digital labor organizing, regulatory strategies, and democratic control of online labor platforms—that could be employed to improve conditions and livelihoods for digital workers.

Empirical Foundation

This chapter draws on preliminary findings from ongoing research that is presented with more detailed methods and further context in a longer open-access article (see Graham, Hjorth, and Lehdonvirta 2017). The data sources we refer to in this chapter consist of transaction log data from one of the world's largest digital labor platforms and interviews conducted with workers, managers, and policymakers in Southeast Asia and sub-Saharan Africa.

The transaction data consist of transaction records of all 61,447 projects completed during the month of March 2013. These records were provided to us by the platform in an anonymized, privacy-protected form.

The qualitative data consist of semistructured interviews conducted in person with 125 digital workers and 27 digital work stakeholders (policy-makers, platform owners, and third sector organizations) carried out by the authors during fieldwork in Manila, Kuala Lumpur, Vietnam, Johannesburg,

Cape Town, Nairobi, and Lagos between September 2014 and October 2015. The main sampling goal was to ensure varied representations of (primarily) low-skilled labor experiences in the countries of interest. In this chapter, we present selected cases from the data rather than a representative view. In the sections below, we first outline the theories and hopes pertaining to each area of concern, and then interrogate them with supporting and contrary examples from the research articles and data.

Four Concerns for Digital Labor

Bargaining Power

A key feature of digital work platforms is that they attempt to minimize outside regulation of the relationship between employer and employee (Lehdonvirta 2016). Workers are, for instance, generally classified as independent contractors (even though their work sometimes more closely resembles that of an employee, a finding discussed in more detail in Wood et al. 2016), and national labor laws are rarely applied to digital workers. These issues are particularly acute when transactions cross national borders, as it becomes unclear which jurisdictions' regulations apply to the work being transacted.

If we have a world in which work is a commodity that can be bought and sold (as a result of standardizing and disembedding tasks as well as a lack of regulations and protections for workers), much of this work can, in theory, be done from anywhere. Concomitantly, if work can be done from anywhere, competitive dynamics (in which there is more demand for work than supply of it) could lead to a situation in which low-cost, low-capability suppliers of work (for instance digital workers) could be disadvantaged and become clear price takers with little bargaining power (Kaplinsky 2004; Manning 2003). We summarize some of the findings and provide further examples and discussion below.

Drawing on anonymized transactional data of tasks carried out by members of a pool of more than 4.5 million registered workers over the course of one month, we have identified distinct geographies emerging in the context of global trade in digital labor. These structural characteristics provide insights into the competitive production relations that digital workers in the Global South must navigate when seeking to move beyond their local labor markets to engage in digital work.

A key pattern emerging relates to imbalances in the relationship between supply and demand of digital work. Figure 11.1 maps the geographic distribution of buyers involved in the more than 60,000 transactions performed in March 2013. Most buyers of work are located in high-income countries (with the darkest shade on the map). Among the top-twenty list of countries with the highest number of purchases, the only countries not considered to be high-income nations are Malaysia (ranked fifteenth) and India (ranked nineteenth).

The geography of sales (see figure 11.2) reveals a very different pattern. Even though most demand comes from the Global North, most work is carried out in low-income countries. India and the Philippines, in particular, perform much of the work on the platform. Yet, a significant amount of work continues to be carried out in wealthy countries such as the United States, Canada, and the United Kingdom. Figure 11.2 also illustrates the supply of work's broad geography. The fuller context, therefore, is one whereby demand is relatively concentrated geographically, but supply is relatively diffuse, with workers from low- and high-income countries ending up competing in the same contexts—a situation that is likely to have influence the relative degrees of bargaining power exerted by individual digital workers. (Note that at the time of writing, the platform hosted nine

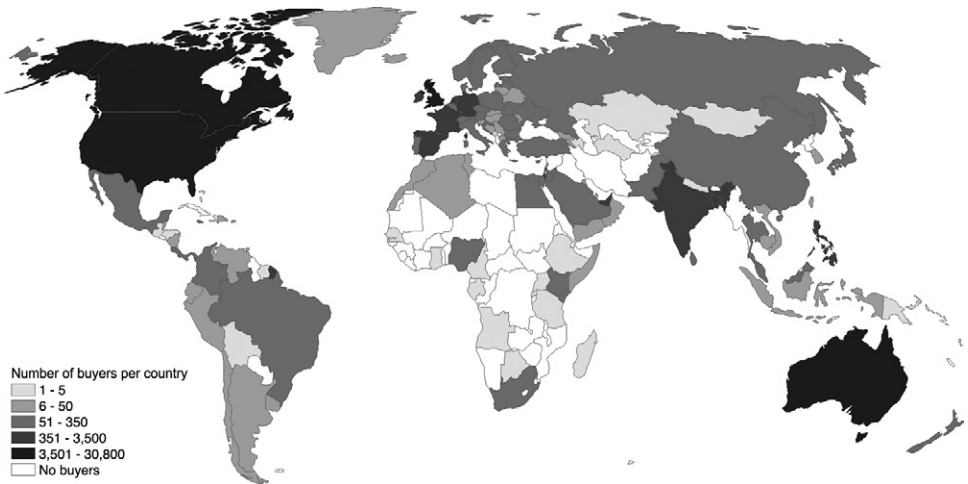


Figure 11.1

Number of buyers of digital work per country. *Source:* Authors.

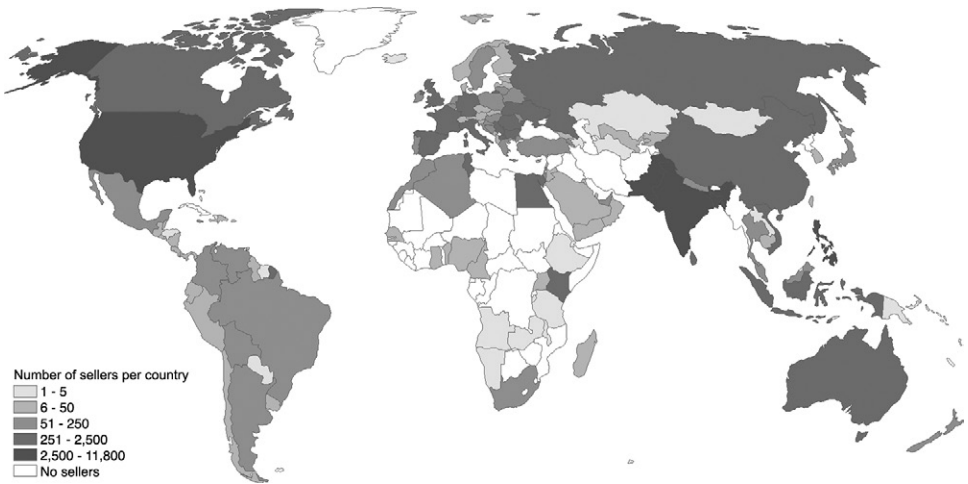


Figure 11.2

Number of sellers of digital work per country. *Source:* Authors.

million registered workers and only four million registered clients.) Not all of these registered workers and clients are active users. But we can also draw from evidence in Kuek et al. (2015) that demand for work far outstrips supply.

Finally, we can explore the spatial variance of hourly pay rates requested by digital workers. The cartogram in figure 11.3 depicts each country as a circle sized according to the dollar inflow over the course of a month (March 2013). The shading of the inner circle indicates the median hourly rate requested by digital workers (i.e., published on their individual online profiles on the platform) in that country; the rates published are not necessarily identical with actual hourly rates or pay received, as evidenced through our fieldwork. Nonetheless, the graphic broadly reveals that median wages are, perhaps unsurprisingly, low in low-income countries and significantly higher in medium- and high-income countries. The cartogram also reinforces that the market for work is highly international, with the United States being the only country in which a majority of work is commissioned by domestic clients.

Despite visions of global labor platforms rendering the locations of workers irrelevant, the differences between places seem to be precisely what encourage particular networks of digital work to be brought into being. As such, we wanted to explore how workers themselves, at some of the

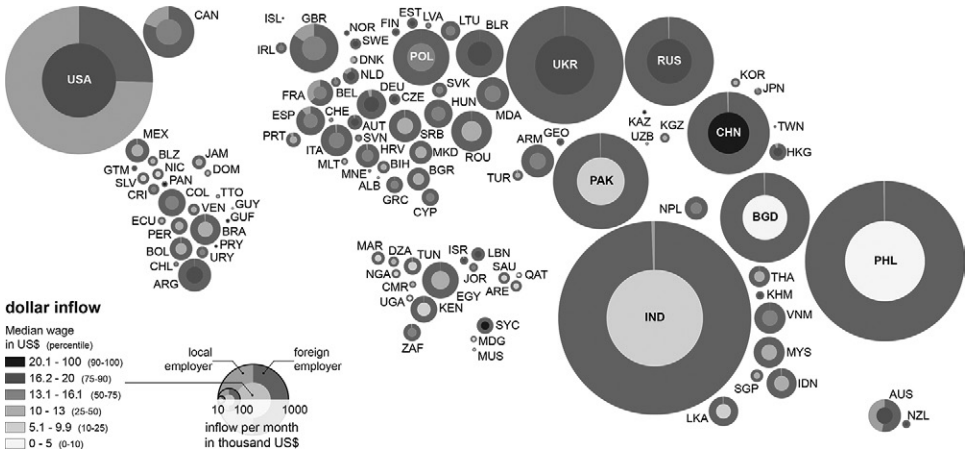


Figure 11.3

Dollar inflow and median requested hourly pay by country. *Source:* Authors.

world’s economic margins, experience digital practices in a platform with such global, but uneven, geographies.

Feelings of disempowerment in the context of rate setting are a key theme in many of our interviews with digital workers. The fierce competition between digital workers seeking earning opportunities through digital labor platforms has directly influenced many workers’ strategies for securing work, often resulting in underbidding practices. These patterns relate to the skewed distributions of supply and demand for digital work, when digital labor platforms can significantly expand the pool of potential workers available to employers (Beerepoot and Lambregts 2014). No longer limited to the local market, or to physically moving to a lower-cost labor market, many employers can easily practice “labor arbitrage,” that is, buy labor from where it is cheapest. This can reduce the market power of workers relative to employers and put downward pressure on labor prices.

Numerous workers framed their digital work experiences within these dynamics of downward spiraling wages. For example, Nu, a Vietnamese software tester, explained that she would look at bids offered by other freelancers from different geographic locations to ensure her rate was lower.² Asked how she secures digital work, she explained: “Actually it’s very simple, and I think that if I set the minimum [hourly rate] so I will have more job to do. ... There are many freelancers from around the world. I see a

country like Philippines—they have very low rate so I need to compare to them.”

Narratives of a race to the bottom emerge from interview data even when participants have explicitly reflected on what they consider to be a fair rate for the services they offer. We heard stories in Southeast Asia from workers who have been willing to lower their rates beyond what they considered fair given their qualifications and experiences. For instance, Vi, a Vietnamese translator, was often willing to lower his fee, despite having set his hourly rate based on digital research and careful consideration: “I think five cents [US\$0.05 per word] is the right one. I don’t want to work for less. Sometimes I will, if I really need, if I really want the job, I will ask for less. Maybe, three cents.” Similarly, the twenty-six-year-old Filipina virtual assistant Tala explained: “I first set it [hourly rate] at US\$8 because that’s what my previous client was paying me. But I found it quite difficult to find jobs. So I set it at US\$4. And I think I even set it at US\$3.50 currently. So I mean, if you don’t get a lot of invitations, you don’t have any other choice but to lower down your expectations, I guess.” These and other examples point to the potential for a pronounced lack of bargaining power for digital workers. When explaining factors that go into decisions to lower rates, interviewees often mention the visibility of the global pool of supply within digital labor platforms (i.e., competitors).

Our qualitative data thus reveal stories of disempowerment, an inability of workers to exert any significant bargaining power, and a “race to the bottom” in wage rates. These factors sometimes have a negative impact on the lives of workers. Jocelyn, a Filipina transcriber, noted, “Sometimes, I feel really worried where I can get work. What only consoles me is the thought that it’s not me who is to blame why I don’t get work. ... It’s only that there’s no client available—no project available. ... it’s really unpredictable.”

Despite these challenges, the interviews offer limited evidence of digital workers seeking to strengthen their position through collective action or acts of solidarity. Interviewees often described the global supply pool of digital workers in terms of “competition” rather than “colleagues,” being fearful that other workers will take clients away from them. The imbalance between the supply and demand of work thus seems to disempower many digital workers. Concomitantly, the dispersed geography of digital work reveals examples of employment being disembedded from local norms and local moral economies that would traditionally regulate an employment

relationship, and that lean toward what might be seen as a more internationally operating entrepreneurial moral economy based more singularly on competition.

Economic Exclusion

In geographically circumscribed labor markets, certain groups of people may be excluded entirely from the market or from one of its segments as a result of discrimination or occupational segregation. For example, workers may be discriminated against based on religion, ethnicity, or disability (Reskin 2000), or segregated into certain segments of the market based on their gender or ethnicity (Maume 1999). Digital labor platforms can potentially change some of these dynamics in two ways. First, they can allow workers to access geographically distant markets where there is less discrimination or segregation. Second, they can allow workers to access their local market through a veil of anonymity provided by the digital medium, masking the characteristics likely to provoke discrimination. Indeed, the marketing literature produced by digital labor platforms describes cases when this has reportedly happened (e.g., Elance 2013). Our research revealed evidence of economic inclusion of this sort, as well as examples of exclusion and discrimination (detailed in Wood et al. 2016).

Some interviewees relayed stories of how they were unable to obtain employment or earning opportunities through their local labor markets. Temporary or permanent migrants (who moved for study or other reasons) were particularly likely to speak about how they could now do work from places where they could not legally work before because of a lack of appropriate visas or permits.

Equally, digital labor platforms may, to some extent, offer economic inclusion for individuals who do not hold the educational qualifications necessary to secure traditional employment in local labor markets. For example, Jean, a Filipina transcriber in her late twenties, became pregnant while studying for a university degree in mass communication. As a consequence, she had to give up her studies and she found herself having to rely on financial support from her extended family. She explained how she had applied for jobs in the business process outsourcing (BPO) sector in Manila over the course of seven years without ever being shortlisted for an interview. Jean explicitly stated that her inability to secure a job in the industry was because she did not meet the requirement of having a university

degree. When she received her first transcription contract through a digital labor platform in 2012, it thus marked her first experience of professional work since her late teens.

Some of the women we spoke to lived at home with their parents or extended families. They were able to combine wage labor with caring labor (see McDowell 2015), though it was difficult to ascertain whether they were being paid a full reproductive wage. Digital labor platforms can thus improve economic inclusion by allowing people to combine paid work with other commitments, though this can also indirectly support the continuation of gendered divisions of labor.

Besides examples of increased economic inclusion in the contexts of digital work, we also found evidence of different types of economic exclusion and discrimination. Some of the discrimination was explicit (for instance, the blatant request for South Asians not to apply for the vacancy shown in figure 11.4). Other instances were somewhat less explicit. For example, Martin, a thirty-one-year-old content writer from Lagos, believed that workers from the United States or UK were far more likely to get job offers and thus spoke about ways to mask his Nigerian profile location in digital work platforms. Similarly, William, a twenty-six-year-old SEO writer from the Nairobi slums often changed the geographic location listed on his profile. He explained, “It’s very discriminatory. ... It forces you sometimes to realign your profile to fit that job description.” Many of William’s clients continue to believe he is based in Australia. This is a necessity, he feels: “You have to create an identity that is not you. If you want to survive

looking for short task worker for small writing task

The screenshot shows a job listing interface. At the top, there are three statistics: 'Bids' with a value of 13, 'Avg Bid (USD)' with a value of \$20, and 'Project Budget (USD)' with a range of \$10 - \$30. To the right of these statistics is a large 'OPEN' button. Below the statistics is the 'Project Description:' section, which contains the text: 'please if you are from India, Pakistan, Bangladesh than you dont bid here.' and 'i am looking for people who can write short not, review for my website... its a simple task... let me know if interested..'. To the right of the description is the 'About the employer:' section, which shows a 5.0 star rating based on 92 reviews and a 'VERIFIED' badge. Below the description is the 'Skills required:' section, which lists 'Article Rewriting, Articles, Copywriting, Forum Posting, Product Descriptions'. The word 'Advertisement' is visible in the bottom right corner of the listing area.

Bids	Avg Bid (USD)	Project Budget (USD)
13	\$20	\$10 - \$30

Project Description:

please if you are from India, Pakistan, Bangladesh than you dont bid here.

i am looking for people who can write short not, review for my website... its a simple task... let me know if interested..

Skills required:

Article Rewriting, Articles, Copywriting, Forum Posting, Product Descriptions

About the employer:

★★★★★ 5.0 (92 Reviews)

VERIFIED

Advertisement

Figure 11.4

Screenshot from a major digital labor platform. *Source:* Authors.

online, you have to do that. If you don't do that, I'm telling you, nothing will come."

Other types of discrimination are even less obvious. In South Africa, Kenya, and Nigeria, some digital workers highlighted clients who had a poorly informed understanding of the African context. Specifically, workers mentioned clients who were unable to distinguish one African country from another; who assumed that African workers did not speak international languages fluently, like English or French; who assumed that African digital workers were uneducated; and who assumed that African workers would be willing to work for whatever pay was offered. When asked what she would change about digital work, Janette, a South African administrative assistant in her early thirties, responded: "People's perception of Africa. ... I have come up against people whose perception of this continent as a whole is just, it's downright ignorant. ... You'll talk to people and they think Nigeria is next door to South Africa, or we're all neighborly, or the whole continent has got Ebola." Tatiana, a Cameroonian virtual assistant living in Johannesburg with her husband and four children, encountered similar misperceptions: "People think that when you're from Africa ... whenever they hear Africa, Africa is somewhere where people are poor, people can't even afford [an] Internet connection. ... That is why when I applied for a job, I never send my resume."

Digital labor platforms clearly do allow many people who are disadvantaged in their local labor markets to obtain earning opportunities. Given their limited opportunities for more conventional forms of employment, however, these workers may have little choice but to accept unfavorable positions in their digital work. As illustrated above, discrimination and economic exclusion can also play out in digital labor markets and can be experienced by a range of workers supplying their labor to global clients.

Intermediation

In development studies, significant attention has been paid to how value chain structures influence outcomes from international trade. A consistent finding has been that value capture is the most important imperative for actors in production chains (Coe and Yeung 2015), and that a significant part of the value of trade in terms of earnings is captured not by producers themselves, but by intermediaries who use geographic location, networks, and other positional advantages to mediate between buyers and sellers,

potentially contributing to (and reinforcing) global inequalities (Pietrobelli and Saliola 2008). Although ICTs have contributed to the reintermediation of some commodity chains of physical products (Graham 2011; Murphy and Carmody 2015), because of the direct worker-client interactions that digital labor platforms facilitate, they are often expected to allow workers to circumvent some intermediaries and obtain more direct access to foreign demand (Beerepoot and Lambregts 2014; Lehdonvirta and Ernkvist 2011). This could allow workers to capture a larger share of the revenues created. In our research, we identified evidence of disintermediation but also more surprising network patterns, such as reintermediation. These findings are presented in Lehdonvirta et al. (2015); what follows is a summary of selected findings.

Some of the digital workers we interviewed have been able to take advantage of disintermediation, for example, by evading the unfair practices of locally based companies. A more surprising finding to emerge from the interviews, however, were numerous stories about reintermediation, often leading to exploitation of digital workers with limited visible experience and feedback on digital platforms. Interviewees suggested that, in many cases, the relatively direct connection between the client and the worker is only temporary. Some successful digital workers become intermediaries themselves, taking on more work than a single person can handle and hiring other workers on the platform to carry out the work for them.

Dalale, a twenty-six-year-old Mauritian woman, studying for a master's degree in English literature at a university in Kuala Lumpur, offered an example of this. She had done digital work for the past two years, writing articles and blog posts to improve the search engine optimization of various businesses. Yet, Dalale rarely worked directly with the end clients. Her clients were, for the most part, other digital freelancers who had developed strong digital profiles, characterized by high numbers of positive feedback ratings, making them able to attract a much larger number of tasks at much higher rates than Dalale was able to.³ Dalale knew this because she often noticed that jobs she had unsuccessfully applied for were reintroduced to the market by another digital freelancer. For example, once she applied for an SEO writing task, suggesting a price of US\$15 rather than the listed suggestion of US\$50. She later discovered that the job went to another digital freelancer who had requested a price of US\$23. This contractor subsequently offered the job to Dalale for just US\$3.50. While Dalale accepted

tasks from these reintermediaries (although not without explicitly pointing out that they were unfair), she found that the lack of direct interaction and communication with end clients made it very difficult to understand the full task requirements, making the writing process more challenging.

There are two ways to interpret these types of reintermediation of work. They can be viewed as rent-seeking behaviors, where contractors who have a competitive advantage in attracting clients use that advantage to position themselves between the end client and the digital worker who delivers the actual work. Many digital workers suggested that the greatest source of such competitive advantage on digital labor platforms is the official track record automatically displayed in each contractor's profile, namely their reputation score and list of previous projects completed. Given the limited means to evaluate candidates over the Internet, clients are very likely to pick a candidate with the most impressive track record. That candidate can then forward the task to a competitor with less reputational capital, adding no value to the process but gaining yet another entry into his or her own track record. This creates a positive reinforcement loop that greatly favors the first mover.

Sometimes the new intermediaries do add value to the process. For instance, they can perform quality control over the subcontractors' deliverables to retain a strong reputation rating. They also have to break larger tasks into smaller pieces, find subcontractors for each piece, and manage work schedules.

Broadly, reintermediation appears to be important for the completion of high volumes of tasks that require a high level of trust. And while online labor markets attempt to treat labor as a commodity, often they are mediating labor power. In other words, buyers need a way of ensuring that labor power can actually be translated into labor. The reintermediations that we have observed thus appear to be part of a process of capital transforming labor markets, which have been designed with ideological views of how markets should operate (something that Marx [1867] 1990 and many after him have observed). Those transformations provide clients with a trusted intermediary, while intermediaries take on the role of project manager, supervising the tasks of lower-level workers. These examples of functional upgrading (a supplier taking on new roles in the chain at higher added value) are desirable inasmuch as they allow low-income workers to capture more value. But if only a small number of functionally upgraded suppliers

are able to establish themselves as chokepoints in the chain, the developmental effects of this sort of work can be highly uneven.

Skill and Capability Development

Disintermediation is conceptually linked to functional upgrading, or increasing the scope of functions performed by the producer in the value chain (Kaplinsky and Morris 2001). In other words, disintermediation provides producers with the opportunity to attempt to perform higher-value-added services. Simply being positioned closer to customers can give producers opportunities to learn more about customer needs and to develop corresponding skills and capabilities (Dicken 2015). Since work carried out through digital labor platforms is usually associated with disintermediation and the potential to link up with customers more directly, it is often expected to result in functional upgrading and movement toward higher-value-added work in service chains (Graham and Mann 2013; Lehdonvirta and Ernkvist 2011).

One example of functional upgrading in our data is the case of twenty-seven-year-old Joseph living in Nairobi. After completing his university degree, Joseph was never able to get a job relating to his expertise area, procurement. The only job he could get was as a cashier in a supermarket, where he worked for two years (twelve to fourteen hours per day, seven days a week) earning a monthly salary of US\$300. Since 2012, he has been doing “lead generation” and currency (Forex) trading. Asked if he had learned anything from his digital work, he responded, “Yeah, like the forex knowledge. I have learnt new skills on computers. ... I am considering trading with my own account since I consider myself now qualified. ... For the Forex client, I have seen him make a lot of money.”

ICT-enabled outsourcing however, can also make it easier for workers to be kept at arm’s length from core business processes, hindering knowledge flow from the core to the periphery and thus perpetuating rather than erasing skill and capability disparities (Pietrobelli and Rabellotti 2011). A key theme to emerge in interviews with digital workers was the common practice of clients withholding contextual information about their business or the tasks they outsource through digital labor platforms. Many digital workers explained that they know very little about the clients they are working for. Mindo, a Filipino data entry worker in his midtwenties, for example, said about his client, “I really don’t have any idea on what kind

of e-commerce site that he has. ... We only talked about how it will be done and the output that he needs.”

Some workers also expressed a pronounced reluctance to probe clients for information relating to their core businesses, suggesting that they are only entitled to the knowledge volunteered by clients in task descriptions. Moreover, in numerous cases when digital workers have asked their clients for further clarification, they report on being met with silence.

Digital workers are thus, in many cases, kept at arm’s length, unable to access information about the wider chain their labor forms part of. Those digital workers are unsure of what function their tasks serve, what the tasks mean, or how their work is used by end clients. Furthermore, only some digital workers were able to articulate or make qualified guesses as to how their clients derived value from the labor they performed. Despite the theoretical potentials for digital markets to afford disintermediated connections between workers and end clients, many workers remain unaware about not just the purpose of the work they do, but also who exactly ultimately requests it.

These information asymmetries afford little in terms of providing digital workers with opportunities to upgrade their skills so that they can take on new functions or positions in the value chains in which they are embedded. Rather, information asymmetries enforced by clients inhibit workers’ ability to increase their skill sets, something they are able to do only if knowledge is available about the end uses to which their labor is being put.

Possible Implications for Policy and Practice: Four Strategies

This chapter has shown that a global, but uneven, market for digital labor exists, with a significant imbalance between the supply and demand of work. Frictions of distance have not been eliminated (Graham, Andersen, and Mann 2015); they have rather been warped to enable new spatial fixes for digital work. As Harvey (2008, n.p.) notes, “The perpetual need to find profitable terrains for capital-surplus production and absorption shapes the politics of capitalism.” In the contexts of scarce labor and high wages, capital needs to find ways of disciplining labor power. Digital labor is effective in this regard because it encourages both “technologically induced unemployment” in high-wage economies (through the offshoring of work) and,

in some cases, the “proletarianization of hitherto independent elements of the population” (Harvey 2008, n.p.).

Furthermore, the interviews we undertook have demonstrated that not only do market mechanisms seem to serve clients more effectively than workers, but the market itself is skewed in ways that can further exacerbate inequality among those seeking jobs. Those who make it through the barriers of reputation and ranking systems experience tangible benefits. Those who do not suffer harm. There is tedium, loneliness, alienation, but also empowerment. There are new jobs for many who crave and need them but inherent precariousness and nothing at all resembling job security. And structurally, there is a transfer of risk and responsibility. As Coe and Yeung (2015, 110) have argued, “Global production networks are fundamentally an organizational platform for economic actors to mitigate the different forms of risk.” Virtual production networks are no different; but in this case, the presence of a labor reserve of millions of potentially replaceable workers attempting to underbid each other through markets makes it easier to place the burden of risk on workers themselves. Clients absolve themselves of most of it, platforms absolve themselves of most of it, and workers are left as the ones most exposed to it.

The ultimate goal of the research on which this chapter is based is to allow for insights into who ultimately benefits from contemporary practices of digital labor. There is no simple story of exploitation, and many of the workers we spoke to were indeed happy to have a job and happy with the wages they received. But nor is digital work a straightforward pathway to economic development for a broad base of workers. If we accept that practices of work in the capitalist world system have always been characterized by exploitation and power imbalances between labor and capital, then it seems odd to even suggest that digital mediations of work would do anything other than amplify those processes.

Digital tools and digital connectivity have certainly allowed new digital divisions of labor to be brought into being. But this does not mean that a flat marketplace, in which all participants have access to a perfect amount of information, has been created. Rather, geography has been bridged in some key ways, allowing work and money to be almost seamlessly transferred and transacted between anywhere in the world. But, in other ways, this dispersed geography is used against workers: opaque production networks conceal exploitative work practices from end clients, and

an international labor pool of digital workers alongside a lack of copresence makes it hard to organize place-based struggles for worker rights (e.g., picket lines) or to enact solidarity with fellow workers on the other side of the planet (see Graham 2016; Lehdonvirta 2016). Furthermore, the ownership and control of labor platforms in just a few unaccountable hands means that work tends to be performed outside the purview of national governments: minimum wages, worker protections, and even taxes (which very few workers we interviewed admitted to paying) seem to be optional rather than required for both the platforms and the clients who source work through them.

But this is just one vision for the Internet and digital labor. Building on Peck's (2002) call to avoid painting the "global" as an unruly domain that is effectively beyond regulation, our mappings have shown digital work to be trans- and multiscalar but characterized by distinct networks and geographies: transnational, but never geographically disembedded. And that starting point is what is needed to rethink what alternate futures for digital labor might look like. To achieve better wages and ways of attaining more stable contracts, we outline below four broad possibilities (that combine class politics, occupational politics, identity politics, and reproduction politics) that might alter what Piven and Cloward (2000) refer to as the existing "power repertoires" between capital and labor.

Market-Based Strategies

Because transnational flows of commodities and work frequently involve long, complex, mediated, and opaque production networks, a range of infomediaries have emerged to analyze critically working and production conditions in upstream nodes on supply chains. For instance, consumer watchdog magazines like *Which?*, *Consumer Reports*, and *Stiftung Warentest* seek to reveal information that sellers of end products often wish to conceal. Organizations involved in certification schemes (such as Fair Trade and the Rainforest Alliance) attempt to ensure that minimum standards are adhered to, and activist organizations like Sourcemap and Wikichains aim to increase informational transparency in supply chains (Cook 2004; Kleine 2015).

The idea underpinning all this work has been that ICTs could be used to facilitate not just the easy geographic movement of products and services, but also a more transparent geographic flow of information about

those products and services. If consumers or buyers have more information about products and production practices, then firms are less likely to engage in ethically dubious practices (Hartwick 2000; Graham and Haarstad 2011).

Strategies of consumer watchdogs, certification schemes, and activist organizations could thus be emulated and applied to the contexts of digital work. The International Association of Outsourcing Professionals (IAOP) could, for instance, update its ethical standards to be more in line with the worker protections needed in a digital economy. An organization could also be established to certify that core ILO labor standards are obtained (see Burchell et al. 2014), but also that workers are paid living wages, have appropriate social and economic protections, and are not saddled with an undue amount of risk. It could be argued that a lot of exploitative digital labor occurs because end users and even private buyers of work are unaware of the nature of practices upstream in the production network. Organizations committed to transparency and identifying best practices could do much to improve working conditions (see Graham and Shaw 2017; Graham and Woodcock 2018; and some of the lead author of the chapter's initial efforts at <http://fair.work/>).

Labor Rights Strategies

In the history of labor struggles, workers have been able to withdraw labor in order to secure improved working standards. Yet, the very nature of digital labor means that workers can find it hard to do so. Digital workers have been unable to build any large-scale or effective digital labor movements. This is not only because many of them simply don't know each other, but also because there is an understanding that if they withdraw their labor, then workers in other parts of the world are quickly able to replace them. Digital work platforms are always designed to remind workers that they are a market—and one in which workers from all over the world are supposed to compete with one another to offer the most favorable terms possible to clients.

What, then, can be done to counter systems that make it so challenging for workers to mount any sort of place-based activism? First, current conditions for workers mean that this could be a fruitful time for efforts that attempt to foster common class consciousness among digital workers (Huws 2009; Graham and Wood 2016), and perhaps even the creation of a

transnational digital workers union. Indeed, the uproar among workers in 2016 after Upwork unilaterally raised the commission that it takes for contracts reveals some of the channels that workers from very different parts of the world used to coordinate with one another. (They were, however, unable to mount any effective response.)

Current attempts at unionizing digital workers still often take geography as a starting point for organizing strategies (see, for instance, the app-based driver's association <http://www.teamstertnc.org/>) and have thus far been unable to empower a transnational group of workers to bargain collectively. But as Wright and Brown (2013) and Burawoy (2011) alternatively point out, the internationalizing of product markets has undermined the possibility for multiowner collective bargaining. Such strategies could alternatively follow Moody's (1997) vision of transnational "social movement unionism," which calls for loose, but inclusive, alliances among various social movements to campaign on single issues or causes. Large organizations that contract out digital work could be encouraged or pressured to work only with union workers. But this strategy will only get so far, as there will always be employers and clients threatened by such a tactic.

A second strategy could be built on what Hyman (1999, 94) refers to as "imagined solidarities" to enact digital "spaces" of resistance, or what Harvey (1995) terms "militant particularisms." Although a lack of physical copresence inhibits workers' ability to identify one another, the same networks that are mediating their work can be harnessed to create digital picket lines. In the same way that copresent picket lines aim to disrupt the ability to conduct business as usual, digital ones could be formed to disrupt the digital presence of employers. Digital workers already make extensive use of affordances like Facebook groups, subreddits, Zello (an Internet-based walkie-talkie app), and the innovative Turkopticon (a browser plugin that allows workers to rate employers using Amazon Mechanical Turk) to coordinate, share complaints, pass on work opportunities, and give feedback to one another. Those same networks could then potentially be used for practices like "Google-bombing" the web presence of irresponsible employers (that is, use search engine optimization strategies that are designed to manipulate the algorithmic filters to make certain topics more or less visible and findable); mass action to encourage other workers to avoid a particular employer temporarily, and the mass messaging of both workers and

business partners explaining the key reasons for the action—in short, a full and targeted attempt at digital disruption.

The question remains, however, whether proximity and physical copresence may indeed be needed for mass and effective forms of worker solidarity. The digital contexts in which digital disruption would need to take place are highly controlled, regulated, and algorithmically opaque—factors that make it challenging to disrupt or to picket any employer. Furthermore, because of the nontransparent nature of digital production networks, the strategies mentioned above are unlikely to work for larger employers. As such, what may be needed is a reconsideration of how the digital means of production are governed and regulated.

Regulatory Strategies

The dispersed and global nature of digital work platforms has made it extremely challenging for digital workers not only to organize effectively, but also to lobby politicians to represent their interests. Unlike global networks of digital work, policymakers are confined by political boundaries and can therefore only regulate a piece of a much larger network.

As figure 11.2 demonstrates, however, only a handful of countries are home to the majority of demand for digital work. In those strategic points (because of their network centrality), both labor and consumers potentially have more agency (Coe and Jordhus-Lier 2011; Selwyn 2012), thus opening up space in those places for regulations to be enacted that govern how clients should treat their workers irrespective of location. Regulations could cover minimum hourly rates based on a living wage in the worker's country of residence (see Galbraith 1995) and rights to additional protections and severance packages after workers have been employed for a predefined period. In short, regulations could be built on top of a more inclusive definition of employment and a vision that digital labor platforms should be re-embedded into the norms and moral economies of material labor markets. There is currently very little political will to achieve these objectives in core buyer countries, but that does not mean any of them are impossible.

Political Economy Strategies

Finally, it is worth remembering that the existence of the global-scale many-to-many trading of labor is only possible because of the existence of

digital platforms. These platforms extract rents from every transaction and set key rules that govern how workers and clients interact with each other.⁴ (It is worth noting that the platform's power can usually trump that of not just workers, but also clients.) Platforms also design their digital contexts to provide some kinds of affordances and not others, encouraging competitive production relations through reverse auctions instead of cooperative production relations, but also potentially reducing inequalities, such as when prejudice based on nationality is overcome by the provision of verifiable information on workers' skills (Agrawal, Lacetera, and Lyons 2013).

More broadly, it is worth remembering that the existence of platforms themselves are not creating demand for digital work. Clients in some parts of the world need to complete certain tasks, and workers in other parts of the world need an income. Platforms play a key role in organizing relationships between the two parties. But other types of organization are possible.

It would therefore be feasible to reconsider who owns the digital means of production. Just as there have previously been both consumer- and worker-led pressures to transact with cooperative building societies and cooperative supermarkets instead of privately held banks and shops, there could similarly be movements to work with cooperatively managed platforms (see, for instance, Scholtz 2016). The desire to connect geographically disparate clients and workers is not one that will go away, and digital platforms are central nodes of control and extraction. We therefore can ask what greater democratic control over the production and use of surplus would look like.

Concluding Remarks

In this chapter, we have demonstrated that although digital work is now a global phenomenon, it is characterized by distinct geographies. Some workers are able to thrive in platforms that reward entrepreneurialism by skillfully building their ranking scores, aligning their self-presentation with the needs of clients, and re-outsourcing tasks to be performed for even lower wages. These positive effects on the lives of digital workers, which are often touted by promoters and supporters of digital labor in the contexts of international development, are grounded within discourses of individualization (Murphy and Carmody 2015) and are often framed in

contrast to the alternative: mass unemployment. Yet, we argue that a focus on structural issues is also needed. By highlighting four key concerns in a global, but uneven, marketplace for digital labor, we can begin to address some of the ways in which digital labor might not best serve economic development goals.

Some of the frictions we have identified here (for example, imperfect information and alienation, discrimination, and the liability of foreignness), discriminate against or otherwise harm workers who are unable to navigate the complexities of a digital work marketplace. The bargaining power of workers is undermined by the size and scope of the global market for labor. The anonymity that the digital medium affords is a double-edged sword, facilitating some types of economic inclusion, but also allowing employers to discriminate at will. Disintermediation is occurring in some instances, but the large pool of people willing to work for extremely low wages as well as the importance of rating and ranking systems are also encouraging enterprising individuals to create highly mediated chains. Those mediated and opaque chains are, in turn, restricting the abilities of workers to upgrade their skills within them.

These findings have important implications, as digital labor has been presented as a tool for economic development. Governments like those of Nigeria, Malaysia, and the Philippines, as well as large organizations like the World Bank, are increasingly coming to view digital labor as a mechanism for helping some of the world's poorest escape the limited opportunities for economic growth in their local contexts. As Coe and Yeung (2015, 193) note, however, uneven power relations existed long before global production networks were brought into being, and they are necessarily "enmeshed in relations of inequality." It is therefore worth asking why we might expect digital labor and the platforms mediating it to level the field. At this nascent stage, it is important to reflect not just on what we already know about the uneven geographies of digital labor and the frictions faced by digital workers, but also to envision alternatives and strategies that might bring into being a fairer world of work.

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Notes

1. This chapter is an abridged version of the following article (reprinted with permission): Mark Graham, Isis Hjorth, and Vili Lehdonvirta, "Digital Labor and Development: Impacts of Global Digital Labor Platforms and the Gig Economy on Worker Livelihoods," *Transfer: European Review of Labour and Research* 23, no. 2 (2017): 135–162.
2. All interviewee names have been changed.
3. It is hard to overstate just how important feedback scores are to the process of finding work. Some workers revealed that it took them years of constant effort to find their first job because most clients do not trust workers with no feedback.
4. We do not mean just financial rents. As Sipp (2015) notes, unlike almost any other type of work, digital work platforms do not allow workers to even own their own reputational capital.

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