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Online Outsourcing

Prospects for Increasing Youth Employment and Reducing Poverty in Indonesia

Rapid advances in computing and information technology (IT) are having profound effects on how economic activity is organized globally. Because of the widespread use of the internet, for many production activities, it is now possible for employers, workers, and customers or clients to be located almost anywhere in the world. Initially, this connectivity led to the growth of business process outsourcing, through which entire business activities, such as billing or customer service, can be shifted to another country. In recent years, the availability of remote or virtual work—whereby certain digital tasks or assignments are carried out for firms by individuals across the globe who are operating essentially as independent contractors—has risen rapidly, the only job requirements being access to a computer, a good internet connection, and the requisite skills. Such work, also known as online outsourcing, encompasses both *virtual freelancing*, which consists of skilled tasks such as website development and graphic design, and *micro-work*, a wide variety of less-skilled, repetitive tasks that can be accomplished online.

Abbreviations

GDP	gross domestic product
ILO	International Labour Office
IT	information technology
MTurk	Amazon Mechanical Turk

Online outsourcing has generated a great deal of interest among governments and researchers in economic development, for several reasons. One reason is simply that the work is becoming accessible to more and more people because internet connectivity has continued to expand in low- and middle-income countries. Another reason is that high unemployment, especially for youth, remains a persistent problem in many countries, and online outsourcing is seen as a way for individuals to access work opportunities beyond the confines of stagnant local labor markets, often for pay that is superior to that of local opportunities. A third reason is that online outsourcing—and lower-skilled microwork, in particular—might provide employment options for remote or vulnerable populations, including low-income rural residents, women in highly conservative social environments, and refugees, who face constraints to mobility and access to local employment. At the same time, serious questions have been raised about the actual benefits of online outsourcing to workers and the potential of online outsourcing to help reduce poverty. Areas of concern include low pay, constraints to advancement and skills development, lack of income security, and

lack of regulation to ensure workers' rights in the global digital labor market.

In this Perspective, we review the potential benefits and drawbacks of online outsourcing, particularly microwork, with special reference to its potential for youth employment and poverty reduction in Indonesia. Indonesia, a vast lower-middle-income country with a population of 261 million people that is spread out over thousands of large and small islands, has experienced rapid gross domestic product (GDP) growth since its emergence from the Asian financial crisis in 2000. However, this growth has been highly uneven geographically and has led to Indonesia having one of the highest levels of income inequality in the world (World Bank, 2016b). High youth unemployment—16 percent in 2016—is an urgent policy issue for the government (World Bank, undated c). With relatively high internet access and a well-educated population, Indonesia appears at first glance to have significant potential for developing, and obtaining significant benefits from, online outsourcing. For this study, we used publicly available data, interviews with experts,¹ and a literature review to assess this potential and to present policy options.

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Online Outsourcing: Definitions and Trends

As noted earlier, online outsourcing consists primarily of two kinds of work, which overlap: freelancing and microwork. *Freelancing* involves relatively sophisticated digital tasks that might be directly focused on information technology (webpage or app development, software development) or might not be (graphic design, content writing, translation, editing, market research). Online platforms, of which Upwork and Freelancer are among the most prominent, coordinate the connection of firms to workers. Freelancing clients (i.e., firms) tend to be small- or medium-sized enterprises that need specialized work done but are not large enough to hire full-time workers with these skills (Kuek et al., 2015). Freelancers, as in a standard contracting framework, generally are able to negotiate their own rates with their online clients, but they do so in a highly competitive process.

Although freelancers are found all over the world, the freelance workforce remains dominated by residents of the United States and India—though other countries, such as the Philippines, also have relatively high numbers of workers per capita. The World Bank estimated that 4.2 million freelancers were active in 2013, with ten times that number registered on the marketplaces but inactive (Kuek et al., 2015). (Given trends, both numbers are certainly significantly higher today.) The demand for freelance work has come primarily from firms in the United States and from other highly developed countries using platforms based in those countries. More and more frequently, however, firms in developing countries are contracting out through

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both these platforms and locally based platforms, such as WorknHire in India.

The organization of microwork is quite different from that of freelancing. *Microwork* breaks down business processes into small tasks that require human intelligence (i.e., tasks that cannot be automated) and posts these “micro-tasks” to workers via an online service. The tasks, which are simple and generally require only literacy, basic numeracy, and basic digital skills, include data input, data verification, proofreading, image tagging, and text transcription. The microwork value chain consists of the clients (firms); the service providers, which break down the clients’ business processes into small tasks and provide an internet platform to recruit and pay workers for the tasks; and the microworkers themselves. Leading platforms include Amazon Mechanical Turk (MTurk), Crowd Factory, Figure Eight (formerly CrowdFlower), and Microworkers.

Usually, microworkers are paid small amounts, determined by the service provider, for each completed task. Unlike in freelancing, rates for a task are set by the client or the platform and tend to be the same for all workers, wherever they reside. The service provider typically plays a larger role in the relationship between firm and worker in microwork than in freelancing. This role can go beyond allocating tasks and setting rates to overseeing quality in what are called *managed* (as opposed to *open*) services platforms. Furthermore, locally based firms can facilitate the relationship between larger, foreign-based service providers and the domestic labor market, helping with payments and sometimes providing locations where workers can access computers and the internet and receive training.

In contrast to that of freelancing, the demand for microwork is dominated by large businesses. By one estimate, 80 percent of the companies using microwork platforms have more than \$10 million in annual revenue (Kuek et al., 2015). Most active microworkers in developing countries are engaged only part-time in this work (usually because of lack of continuous work on offer), so, for many or most of these workers, microwork is an important but

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not primary source of income (Ipeirotis, 2010; Berg, 2016; Kuek et al., 2015). The microwork market is significantly smaller than that of freelancing; in 2013, there were an estimated 580,000 active microworkers in the world, a number that was assumed by the World Bank to be about 10 percent of all the microworkers registered online (Kuek et al., 2015). As with freelancers, the number of microworkers is likely to have grown significantly since these estimates.

Online Outsourcing as a Development and Poverty Alleviation Strategy

Multilateral agencies, such as the World Bank, the United Nations, and some donors (Kuek et al., 2015; Jahan, 2015; Dalberg, 2013), have promoted microwork as a means of building skills and providing employment for disadvantaged individuals in low- and middle-income countries. This is because, as mentioned previously, microwork is relatively low-skilled and might be an option for those living in areas without a well-functioning labor market, or those who lack mobility or face discrimination or legal barriers to work. For example, microwork has been suggested as a source of employment for Palestinian youth (Paradi-Guilford, 2013) and Syrian refugees in Jordan and Lebanon (Meyers et al., 2017).

Impact sourcing refers to strategies for explicitly targeting microwork opportunities and other outsourcing opportunities to disadvantaged individuals or groups. A common impact-sourcing model that is in line with the focus on poorer and less-skilled individuals (and that reflects the need to ensure quality for clients) involves the provider or a local intermediary supplying workers with working spaces, computers, and internet access as well

as training and oversight. For example, Samasource, one of the largest service providers involved in impact sourcing, carries out these activities both directly and through intermediaries. Subsidization by clients or other funders is usually required, at least initially, to ensure access to and development of the necessary skills. Monitoring data from Samasource, Crowd Factory, and iMerit, among other platforms, suggests that impact sourcing allows microworkers to enjoy relatively high wages and income growth after their engagement with the programs, and several studies suggest improvements in income or skills, as well as social empowerment of female workers (Heeks and Arun, 2009; Malik et al., 2016; Madon and Sharanappa, 2013). However, rigorous evaluation research is needed on impact sourcing (including impact evaluations and cost-benefit analysis), and the potential for scaling up also remains to be assessed.

Country-Level Factors Affecting the Expansion of Online Outsourcing

Several country-level factors enable—or constrain—the growth of virtual freelancing and microwork. The following discussion is drawn in part from the World Bank (Kuek et al., 2015).

Infrastructure (Electricity, Internet Connectivity)

Obviously, online outsourcing requires workers to have access to reliable electricity, computers, and internet connections. Although connectivity has rapidly expanded in developing countries, rural areas typically lag behind. Still, the requirements for online outsourcing are less stringent

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than those for traditional business process outsourcing, which transfers whole business processes overseas and therefore requires round-the-clock reliable connectivity and modern office facilities

Education and Digital Skills

As noted, significantly more skills are needed for freelancing than for microwork. However, even for the latter, necessary digital skills go beyond merely being able to access the internet and use social media. And, of course, literacy and basic numeracy are needed. Therefore, the poorest populations and countries are not likely to benefit.

English Language Capability

Most international online outsourcing platforms require English language capability, reflecting the fact that global demand originates largely from businesses in anglophone countries (the United States, Australia, Canada, and the United Kingdom) and India. Furthermore, with respect to freelancing, English is the lingua franca of the IT sector.

These factors explain why the workforce for freelancing and microwork is dominated by countries where English is widely used; in the developing world, this means India, the Philippines, and, increasingly, South Africa and Kenya. Some non-English platforms, such as Zhubajie and Witmart in China or Nabesh in the Middle East, have emerged to serve particularly large domestic markets or regions. However, countries that lack English capabilities remain at a disadvantage.

Regulatory, Tax, and Business Environment

Country-level factors that can promote or inhibit business activity are less relevant for online outsourcing than for direct physical or financial investments in a country, at least when the online outsourcing involves international platforms interacting directly with workers in the country. In theory, labor regulations and minimum wage laws would apply to online outsourcing work, but in practice,

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they usually do not because this work effectively takes place in the informal economy (so that the *lack* of regulation is, in fact, a concern, as is discussed later in this Perspective). However, for developing local demand for freelancing, the overall business environment toward start-ups and IT-related businesses—which are most likely to demand freelancers—is highly relevant. Overall government support for the IT industry matters, especially for generating both local firm demand for and supply of skilled freelance workers. Finally, the success of online outsourcing will be strongly affected by the ease with which individual workers and firms can make international payments and transactions (e.g., through PayPal or mobile banking). Government policies can advance infrastructure for international payments to individuals.

Security and Trust

In the typical model, firms, through service providers, hire online workers with little screening, and they exercise little oversight. Therefore, fears of cyberattack and for the security of proprietary data are important concerns. This problem is somewhat alleviated if providers can rely on in-country intermediaries to screen and manage workers in dedicated centers that can institute data security and confidentiality protection measures, although doing so raises costs to firms. The growth and expansion of online outsourcing can be inhibited by the lack of provisions to address these concerns or the prohibitive costs of implementing screening mechanisms.

Concerns About Online Outsourcing Benefits

Although online outsourcing is viewed by many as a potential generator of significant benefits for large numbers of workers, there are important limitations and concerns that must be considered. The extent of the benefits is dependent on the growth of demand from firms and, potentially, governments for online workers. Demand is certainly expanding. The Oxford Internet Institute's Online Labour Index, which since 2016 has compiled data on posted vacancies for online tasks on the five largest English-language platforms, indicates that the number of such vacancies rose about 25 percent in just over two years, from May 2016 to August 2018 (Kassi, 2018). Although this rise suggests that there will be substantial increases in the number of individuals worldwide who will gain access to online work in the years ahead, it is not clear that the growth in opportunities will keep up with the supply of individuals seeking this work. Indeed, some evidence suggests that the supply of online labor services currently exceeds the demand. The number of individuals registered

on platforms for freelance work far exceeds the number actively working; consistent with this disparity, in interviews, online workers often report difficulty finding adequate amounts of work (Graham, Hjorth, and Lehdonvirta, 2017; Graham, Lehdonvirta, et al., 2017; Kuek et al., 2015). Similarly, many more microworkers are registered on sites than are actively working. This might be caused in part by individuals not actively seeking continuous assignments for various reasons, including the low quality of the work (Berg, 2016). However, in surveys, microworkers, like freelancers, frequently report wanting more work than they can get. Almost all CrowdFlower and Indian MTurk workers indicate that they are not able to work as much as they would like, with most citing lack of available work as the reason (Berg, 2016). The expansion of high-speed internet into new countries or new areas within countries is certain to add significantly to the numbers of individuals seeking online work in the future, at the same time that it facilitates greater supply of such work. If the number of job seekers grows faster than the number of vacancies, as evidence suggests has been the pattern so far, there will be negative

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consequences for the ability of job seekers to secure online work or adequate levels of remuneration, or both.

A growing literature raises concerns about the quality of online work and the potentially limited benefits, and even harms, to those engaged in it. Both freelancers and microworkers can gain access to work that they would have been unable to obtain otherwise and that is attractive for its flexibility—factors that no doubt fuel the growing supply of microworkers. However, like other emerging forms of gig work, online outsourcing work usually is precarious and only part-time, with no job security. The typical outsourcing operation does not provide skills training or skills upgrading, so benefits in terms of human capital development and future earnings growth could be limited. Microworkers (unlike freelancers) typically engage in simple, repetitive tasks with little or no connection to their employer or understanding of the larger project of which they are a part, and this can have negative effects on workers that might be subtle but are nonetheless real. For those engaged in content moderation, which involves screening out offensive and disturbing material from social media

platforms or the interactive parts of other websites, the work can be psychologically damaging (Roberts, 2016), but online workers generally are not provided with any form of counseling that could prevent or deal with these effects.

Finally, online workers usually lack the kinds of benefits, protections, or minimum pay rates that are afforded to other workers—at least, those in the formal economy. Online work is not only unregulated and informal but also essentially invisible to governments; the only regulation is that exerted by the platforms themselves (Berg, 2016). The dispersion of the workforce makes any form of collective action among workers very difficult. Surveys indicate that microworkers—especially women—in developing countries appear to genuinely benefit from the flexibility of this work and are happy for the additional income it provides, but find the pay or task rates quite low. Stressful overwork (when work is available) is common (Berg, 2016; Graham, Hjorth, and Lehdonvirta, 2017).

When services are managed by an in-country intermediary—which can entail provision of physical facilities and equipment—the work can take on characteristics

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of more-formal wage employment, including being steadier and longer term. In part because these businesses are visible to host governments, these workers also could gain protections associated with formal employment, including prevailing minimum wage laws, social security contributions, and other benefits.

In freelancing, a different form of intermediation has been observed, arising from the fact that work offers flow disproportionately to experienced freelancers who have generated strong client feedback and high ratings (see Pallais, 2014). In a process called *reintermediation*, these more-experienced individuals outsource work to others at substantially lower rates than they are paid, keeping the difference (Lehdonvirta et al., 2015). In some sense, this arrangement is potentially efficient because the intermediary is incentivized to manage the quality of those to whom he or she outsources, compensating for the lack of direct information about these workers on the part of the clients. However, reintermediation also is an opportunity for the intermediary to gain a degree of market power and drive down pay rates for others who lack experience and have not built reputations, and to create further distance between these workers and the client firms. The evidence to date of such reintermediation comes from qualitative interviews with freelancers, and its precise extent is not clear.

Regarding the potential effects of microwork on poverty, a key limitation is the fact that in developing countries, those engaged in this work—not just those engaged in more-skilled freelancing—are well educated, and are therefore unlikely to be poor (Berg, 2016; Ipeirotis, 2010; Khanna et al., 2010). In a 2010 survey of MTurk microworkers, more than 80 percent of those from India had a completed bachelor's degree or higher, and few were

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low-income (Khanna et al., 2010). This suggests that many microwork jobs currently go to overqualified individuals who are unable to find anything better or who seek to supplement their incomes from other jobs. This finding, of course, reflects a broader problem of lack of opportunities for those with such skills.

Country and donor strategies can, in principle, address many of the concerns over the quality of online jobs, particularly through impact-sourcing approaches.² Cloud Factory, MobileWorks, and Samasource, to varying degrees, use a model that brings the workforce together in dedicated centers, providing training and some level of integration into the production process and often offering full-time work and benefits. Impact sourcing, as noted previously, is explicitly designed to target less-educated or more-vulnerable groups than those the market would select on its own. Although research cited earlier suggests significant benefits to disadvantaged workers, it remains

an open question whether national strategies of using microwork or impact sourcing can play a significant role in poverty reduction or youth employment. It does seem clear, however, that deliberate actions are needed if governments wish to ensure that such groups get access to, and benefit from, microwork.

Online Outsourcing in Indonesia

Although Indonesia has yet to become a leading player in the field, online freelancing has grown rapidly in just a short time. Because most platforms do not release information on the nationalities of registered workers, it is difficult to assess the overall size of the market in Indonesia. However, as of March 2016, one of the leading platforms, Freelancer, had about one million registered users in Indonesia (flJulls, 2016). As early as 2013, data from Elance-oDesk (a leading platform at the time, now part of Upwork), indicated that the country had a high number of freelance contractors relative to its population, second only to that of the Philippines in the East Asia and Pacific region (World Bank, 2016c). Before 2014, freelancing activity in Indonesia took place only on international platforms,

but several local competitors have since emerged—notably, Sribulancer and Projects.co.id. Sribulancer currently has about 189,000 registered freelancers. Interviews with local observers for this Perspective indicated that most of the clients for these Indonesian platforms are local technology-oriented startups. There is evidence of high quality among Indonesian freelancers; on Enlace-oDesk, Indonesian workers earned an average feedback rating of 4.5 (on a scale of 1 to 5), the highest rating among all countries with more than a threshold number of assignments completed (cited in Cosseboom, 2014).

The growth of online freelancing in Indonesia points to a vibrant community of skilled digital and IT workers. Microwork, at the lower end of the skill scale, seems to have made fewer inroads in the country. Evidence of the extent of microwork, coming from online surveys of workers or analysis of transactions data for one or another of the large platforms, suggests a relatively small role for Indonesia. For example, in a 2015 International Labour Office (ILO) survey open to all CrowdFlower workers, only ten of 353 surveyed workers (3 percent) identified themselves as Indonesian (Berg, 2016).³ It also is noteworthy that all but one member of this small group had at least a college education. In line with general findings for microwork

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platforms noted previously, this sample, although obviously limited, suggests that those Indonesians who engage in microwork are well educated and unlikely to be poor.

It should be noted that, although we are focusing here on online outsourcing, the digital revolution and the spread of the internet are having significant—likely, even more significant—effects on livelihoods in Indonesia through other means as well. Particularly important is the rise of on-demand services, whereby an internet platform is used to arrange for the provision of various services, such as transportation, deliveries, and domestic cleaning. The rise of Gojek—a motorcycle-based on-demand transportation and delivery service operating in 50 cities across the country, and Indonesia’s answer to Uber—has been remarkable, with the company achieving a valuation of \$3 billion in 2017 (Itani, 2017). Of note here is that those who rely on the on-demand economy as a source of livelihood experience some of the same advantages and disadvantages as with online outsourcing. The work provides flexibility and a way to earn additional income—or a means of getting any income in difficult economic environments. But it is precarious work that usually provides no benefits or integration into social protection schemes⁴ (Solutions for Youth Employment, 2018).

Factors Affecting the Expansion of Online Outsourcing in Indonesia

To interpret the limited expansion to date (especially of microwork) and assess the potential for future growth, we consider how Indonesia fares in terms of several of the key factors noted previously. Indicators are shown in Table 1.1, along with the same data from several comparator

countries that are noteworthy for having achieved considerable growth in online outsourcing. Three of these (the Philippines, India, and Kenya) are lower-middle-income countries like Indonesia, while two (Malaysia and South Africa) are upper-middle income.

First, with respect to general skills, Indonesia is a well-educated country, with a gross secondary enrollment ratio of 88 percent—comparable with or higher than those of Malaysia and the Philippines (Table 1.1). However, learning assessments suggest that the quality of education is not high; for example, Indonesians rank low compared with neighbors, such as Vietnam, on the Programme for International Student Assessment (PISA) math and science test for 15-year-olds (World Bank, 2016b).

Internet coverage is relatively high. According to the 2016 Google Connected Consumer Survey (see Google, 2016), slightly fewer than half of all adults reported using the internet in the past month, although this share is well below those of the Philippines and Malaysia (Table 1.1). It is important to note that much of this internet access comes through smartphones; only about 18 percent of households have a computer. The quality of internet infrastructure, measured by connection speed for those with internet, is on par with or higher than that of most of the comparator countries. However, interviewed experts noted that internet accessibility was much worse in rural and poorer areas than in large cities—which presents a barrier to using online work as an opportunity for many poor Indonesians. Anecdotal accounts provided by the experts interviewed suggest that even in urban areas, unreliable connections are common. Quality of electricity supply appears high, at least relative to comparators; household surveys indicate that electricity reaches about 95 percent of households in

TABLE 1.1
Selected Indicators for Indonesia and Comparator Countries

	Indonesia	Philippines	Malaysia	India	South Africa	Kenya
Gross secondary enrollment ratio (%)	86	88	78	74	98	60
Adults using internet (%) ^a	47	73	76	27	63	49
Households with a computer (%)	18	20	66	13	28	12
Quality of electricity supply (index)	4.2	4.0	5.8	4.3	3.0	3.9
Connectivity (peak connection speed [Mb/s]) ^b	31.0	25.3	38.3	18.7	18.9	13.6
Efficiency of legal framework in settling disputes (scale of 1–7) ^c	4.0	3.0	5.1	4.6	5.6	3.9
Global Services Location Index (GSLI) (rank) ^d	5	7	3	1	48	39

SOURCES: Data for gross secondary enrollment ratio are from the latest year available (World Bank, undated b). Data for adults using internet are taken from the Google Connected Consumer Survey, 2016 (cited in Google, 2016). Data for households with a computer are from 2016 (TCdata360, undated). Data for quality of electricity supply are taken from Schwab, 2016. Data for connectivity are taken from Akamai, 2015. Data for efficiency of legal framework in settling disputes are taken from Schwab, 2016. Data for GSLI are from Sethi and Gott, 2016.

NOTES:

^a This indicator is the share of individuals over age 15 who reported accessing the internet in the past month.

^b These numbers are average peak connection speeds. Mb/s = Megabytes per second.

^c On the scale of 1–7, 1 = poorest and 7 = best.

^d The GSLI measures financial attractiveness, people skills, availability and business environment for foreign investment in offshoring. This table shows a country's rank among 55 countries assessed.

the country. However, other measures suggest that the share with *reliable* power is much lower (World Bank, 2016b).

Furthermore, even though the data suggest that a substantial share of Indonesians access the internet and possess overall high levels of general education, interviewed experts stressed that these factors do not translate into widespread basic digital skills. For a great many Indonesians with access to the internet through computers or smartphones, use of the internet, even among members of the younger generation, is limited to simple social media activity that does not entail or impart any real skills. As

evidence of this lack of digital literacy, one expert cited the case of Gojek, the online ride-sharing service. This technology-based company finds it better to recruit its drivers by traditional, offline means, and its new hires require ample training to learn how to use the app for work, despite the fact that they already use social media. This suggests that, at least anecdotally, many internet users in Indonesia might not be ready even for microwork tasks without some digital training. Such training is supposed to be provided by the education system; senior secondary schools and vocational schools are mandated to provide instruction in the basics of Microsoft Office (i.e., word

processing, spreadsheets, PowerPoint presentations). However, the ability of schools to meet this requirement is highly variable, with schools outside large cities doing particularly poorly. As noted earlier, the education system is struggling to provide adequate basic math and science skills, so it is perhaps not surprising that digital skills training is also weak.

Still, the most important skill-related limiting factor for Indonesia might be lack of strong English-language capability. Although comparable cross-country data on this factor are not available, Indonesia fares poorly in terms of English skills compared with countries in the region that have done well in digital outsourcing, such as Malaysia and the Philippines. This factor is certainly a constraint on access to work on international platforms, whether for microwork or freelancing, as noted earlier (as it is for business process outsourcing). Expansion of Indonesian platforms serving domestic firms that offer tasks in Bahasa (Indonesia's national language) would offer at least a partial way around this limitation.

Issues with payment processes are also likely acting as a barrier to entry into online work for some potential online workers, especially poorer or less-educated individuals who would be candidates for microwork. The most common mechanism for payment is through a PayPal account, from which money is transferred, for a fee, to the user's bank account. However, Indonesians remain significantly unbanked, with only 36 percent of those ages 15 and older having an account in a financial institution (World Bank, undated a). An alternative, Payoneer, transfers money to a debit card usable at stores and ATMs. It is not clear how widely used Payoneer is among freelancers or microworkers in Indonesia.

Finally, the business environment is considered to be favorable in Indonesia. In the Global Services Location Index™ developed by the consulting firm A. T. Kearney, Indonesia ranked fifth in the attractiveness of its offshore business potential, behind India, China, Malaysia, and Brazil (Sethi and Gott, 2016). Although, as noted, the requirements for business process outsourcing and other offshoring are different from and more significant than for online outsourcing, this ranking—and other measures, such as the efficiency of the legal system in settling legal disputes (Table 1.1)—suggests that the business environment is not a major constraining factor relative to other countries. Still, several interviewed experts suggested that the government of Indonesia should be doing more to assist entrepreneurs and new firms, which, as noted, are the main domestic source of demand for freelancers. In 2016, the government unveiled its “1,000 Startups” campaign to foster such enterprises through training, workshops, and incubation programs. However, the program, at least initially, lacked actual funding to directly support entrepreneurs (Freischlad, 2016), so its potential impact is unclear.

Regarding both freelancing and microwork, several interviewed experts noted that established businesses in Indonesia are generally unaware of the potential for online outsourcing. These businesses are not very technologically savvy, and the local platforms, for their part, have not conducted much outreach toward such businesses. The same applies to government agencies. Therefore, significant potential local demand for online outsourcing for microworkers and freelancers—which would not be limited by the language factor that would limit global demand—remains largely untapped.

Conclusions and Implications for Policy

In many respects, Indonesia is fertile ground for a significant expansion of online outsourcing. Internet access is fairly high, and the very large size of the economy implies the potential for a large, internally generated demand for microwork and freelancing in the local language. However, there are currently various constraints to the growth of outsourcing—especially of microwork, which has not made significant inroads in Indonesia to date. On the supply side, despite the reasonably high share of Indonesians who are connected to the internet, digital skills are likely to be very rudimentary (especially among workers with less education). Therefore, basic digital training will be required for many, even for microwork tasks. Connectivity and access to computers remain limited in rural areas, where many lower-income people live. Finally, even with a potentially large internal market, the lack of high-level English-language capability among Indonesians will remain a significant constraint because it will limit access to work on the giant international (English-language) platforms.

On the demand side, other than smaller, technologically savvy startups, local firms remain largely unaware or unconvinced of the potential for online work. As evidenced by what has occurred in other developing countries, it is likely that reliance on market forces alone will result in microwork in Indonesia drawing on relatively educated workers who have digital skills but lack better employment options. Hence, expansion of microwork might have little benefit for poorer Indonesians. Finally, even for those among the poor who are able to access microwork, the

benefits of work that is typically precarious, part-time, and completely unregulated are open to debate.

It should be pointed out, however, that these conditions also characterize the best conventional work alternatives open to most Indonesians, especially those with less education; for example, in 2018, the most recent data year available, some 77 percent of employment was characterized as informal (World Bank, undated c). Furthermore, the situation regarding worker protections in online work, although currently problematic, is not a fixed one; efforts can be made to introduce or expand protections and benefits while facilitating the development of online work. However, progress will likely rely heavily on developing international rather than national conventions on these issues, given the global nature of the market.

Despite these constraints and concerns, the right policies can facilitate the expansion of online outsourcing in Indonesia while also directing a good share of the benefits to lower-income Indonesians. A general approach to maximizing positive outcomes would be to consider policies that (1) enhance digital capabilities generally, not just for the purposes of online work, so that these capabilities can have broader benefits to the economy and individuals (World Bank, 2016a); (2) serve to offset potential negative aspects of online work, especially microwork; and (3) enhance access and benefits to such work, specifically for lower-income Indonesians and youth, without reducing the incentives for firms to use microwork platforms for outsourcing. In this section, we describe several potential policies. It should be noted that these recommendations, based on our review and interviews, are of a fairly general nature. Further research is needed to assess their relative importance and implementation in the Indonesian context.

Improve Infrastructure to Enhance Access to Reliable and Low-Cost Electricity and Internet Connectivity, Especially in More-Remote Provinces and Rural Areas of the Country

In addition to making online work possible, this policy will have broader economic benefits and improve equity. To facilitate online work in areas where connecting all households to the internet is not feasible, government (and non-governmental organizations) can provide coworking spaces to provide access to computers and the internet (Kuek et al., 2015)—something many provincial governments in Indonesia are already starting to do.

Expand Training in Digital Skills

Given the growing importance of such skills, not just for online work but throughout the economy (World Bank, 2016a), this policy is a smart investment for the government to make to raise both productivity and individual well-being. If sufficiently directed toward lower-income individuals, including youth, expanding training in digital skills can also be equity-enhancing. In late 2016, Indonesia's Ministry of Communication and Information announced a new initiative for digital literacy training in communities and schools. It will be challenging to ensure full coverage of this program across the country, but the payoff should be significant.

Promote Local Intermediaries for Microwork

Intermediaries can work with large international platforms to manage recruitment, allocate work, and manage payments. Intermediaries can provide facilities for workers who might lack access to computers and reliable internet connections and can also oversee the quality of work and ensure data security, thereby alleviating possible constraints to expansion of microwork in Indonesia. Furthermore, by receiving bundled payments from clients and distributing these payments to workers via cash, checks, or local transfer mechanisms, intermediaries would address the payment difficulties encountered by workers who lack bank accounts or credit cards (the majority of lower-income Indonesians, and youth). This policy would also serve to lower the fees that are being paid to private intermediaries, such as PayPal.

Work with Microwork Platforms, Nongovernmental Organizations, and Funders to Develop Impact-Sourcing Approaches to Microwork

The intermediary or managed services model can help disadvantaged Indonesians and young people—who might lack computers, home internet, or bank accounts—to access online work. However, policymakers should also consider efforts to specifically target youth and other populations, such as women, rural residents, and low-income groups, to enhance the impacts on these groups. This approach typically incorporates the managed model, but goes further to ensure benefits to targeted groups via

the choice of location (e.g., setting up centers in poorer or more-remote areas); by providing training to those who lack the necessary digital skills; and by ensuring more-reliable work and continued skills development and other supports. Thus, impact sourcing can target youth and other groups while also addressing many of the shortcomings associated with microwork. Impact sourcing will likely not be self-sustaining, at least initially, so specific support will be needed.

Generate Demand Among Local Firms for Online Workers

Government (and domestic service platforms themselves) should do more to publicize the benefits of both microwork and freelancing to Indonesian firms. These efforts need to persuade traditional firms of the feasibility, quality, and data security of the services. Managed services that ensure quality and data security would therefore be especially compelling. However, the objective of such promotion should be not only to increase efficiency for firms but also to have broader development benefits and positive outcomes for online workers. As discussed earlier, the question of whether, and to what extent, microwork benefits online workers is a complex one. That said, to maximize the benefits to online workers, the government should take steps to ensure that minimum conditions of work are met (for example, by overseeing managed services). To the extent that online work involves domestic firms and platforms (and not only international ones), such oversight and regulation will be more feasible.

Outsource Some Government Work Online

The multiple layers of government in Indonesia—central, provincial, and district—can themselves be a source of domestic demand for online workers. Governments traditionally are slower than the private sector to adopt new forms of work arrangements. For one thing, government agencies in Indonesia, as elsewhere, have specific procurement rules that can slow awards of contracts and inhibit flexibility. However, it might be possible for individual freelance and microwork arrangements to be exempted from these rules by virtue of their small size (public sector contracts under 50,000 Rupiah normally do not need to be competitively bid). If the online outsourcing is directed at less-advantaged groups—such as poorer youth, women, or rural residents—whose existing work opportunities might be limited, the case for outsourcing some government work online is more compelling. Ultimately, government decisionmakers would likely be focused primarily on the efficiency and cost savings to government agencies from online outsourcing. These gains, as well as the benefits to specific groups of online workers, would have to be weighed against the implications of outsourcing tasks that would normally be done by full-time, secure public employees to online workers who are presumably part-time and less secure. However, because the government itself would be doing the outsourcing, it would have the ability to ensure adequate compensation and benefits for the online workers, along the lines of impact sourcing. This policy might also serve as a model for the private sector.

Notes

¹ For this study, we interviewed Teguh Dartanto and Fithra Faisal of the University of Indonesia, Lina Noviandari of Tech in Asia, and Ronald Stefanus and Sheliagus Suyadi of Plan International Indonesia.

² We do not discuss here proposals for broader policy approaches, including those at the supranational level, to regulating the industry or enabling collective action on the part of workers. See Berg, 2016; Graham, Hjorth, and Lehdonvirta, 2017; and Graham, Lehdonvirta, et al., 2017 for discussions.

³ We thank Janine Berg for providing this information from the ILO survey data.

⁴ Because microworkers and freelancers also perform specific short-term tasks on assignment, they are sometimes also considered to be part of the on-demand economy; the significant difference is that markets for ride-hailing and other services involve direct interactions between buyers and sellers and hence are, by nature, local, whereas with microwork and freelancing, the relationship is remote (online).

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About This Perspective

In this Perspective, we review potential benefits and drawbacks of online outsourcing, particularly microwork, with special reference to its potential for youth employment and poverty reduction in Indonesia. Although there are many constraints to the growth of online outsourcing, Indonesia's favorable business environment and its large economy suggest that there is also significant potential for expansion.

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