Digitalization of Work and the Role of Universal Basic Income in Developing Asia

Ma. Diyina Gem Arbo and Aiko Kikkawa

8.1. Introduction

Many countries still lag on extending social protection to vulnerable segments of their populations, leaving many people exposed to poverty, inequality, and social exclusion. About 61.1% of the population in Asia and the Pacific remains uncovered by at least one form of social protection (ILO 2017). This situation is largely attributed to widespread informal employment in the region, which stood at 59.2% of non-agriculture employment in 2016 (ILO 2018a). Social protection coverage in developing Asia and the Pacific is not extended to all labor market participants (Campbell forthcoming). Only a few informal workers secure themselves through contributory schemes while the rest continue to rely on the limited and often targeted noncontributory schemes of governments (ILO 2018b).

At present, digitalization has not only made some jobs redundant by automation but also created new ways for individuals to participate in the labor market. This includes the digital platform economy, where individuals offer their labor and are contracted, typically, for a short duration (Campbell forthcoming). While one objective of the platform economy is to make idle resources productive, unemployed individuals in developing Asia tend to use it as a principal source of income. This may add to the numbers of people who work informally and leave them without social protection coverage.

Along with informal employment, poverty and economic inequality, population aging, and gender inequality generate an even greater need for inclusive social security systems in developing Asia. This has prompted some Asian countries to consider reforming public social security programs.

One discussion has focused on universal and unconditional cash-based assistance called universal basic income (UBI). Some see UBI as "the most radical social protection scheme" among all types of social protection programs (Ortiz et al. 2018). Usually, it involves an unconditional transfer of cash to all individuals in a population, which can be contrasted to prevailing social protection that provide *conditional, targeted, and in-kind* transfers. The main rationale for universal transfers rests on eliminating exclusion and inclusion errors and transaction costs associated with targeted transfers.

In a nutshell, UBI has the potential to deliver

- a guaranteed provision of benefits for all, including informal workers, unlike prevailing social protection programs either tied to employment or provided only to targeted groups;

- a quicker disbursement of benefits without the need for means-testing; and

- an overall improvement in work conditions because workers have the option to "quit" when they have suitable cash income.

However, concerns remain over the financial resources needed for a UBI, its redistributive effects, and its tendency to encourage informal workers to stay in informal employment.

This chapter

i. presents the emerging trends of platform-based work and the implications for social protection;

ii. discusses key UBI features, particularly in addressing new social protection challenges and its viability as an alternative to prevailing social protection programs in developing economies;

iii. reviews Mongolia's UBI scheme, the only full-fledged, nationwide UBI program implemented in Asia, and variants of the program in the region;

iv. provides an analytical framework for the assessment of UBI impacts, which can be useful for developing Asian economies in determining UBI feasibility; and

v. reviews empirical studies on selected Asian and developed countries.

8.2. Changing World of Work and Social Protection Implications in Developing Asia

Emergence of the Platform Economy

The rise of the platform economy in the region has generated modern forms of employment. Workers in these types of jobs enjoy a lot of flexibility, but also face issues related to regular income and social security. Digital platforms can be categorized by the online markets they create (Schmidt 2017). Figure 8.1 indicates that the labor generated through digital platforms is categorized into either cloud work or gig work, depending on whether the services and tasks are bound to a specific location or person.

Figure 8.1: Categorization of Digital Markets in the Platform Economy
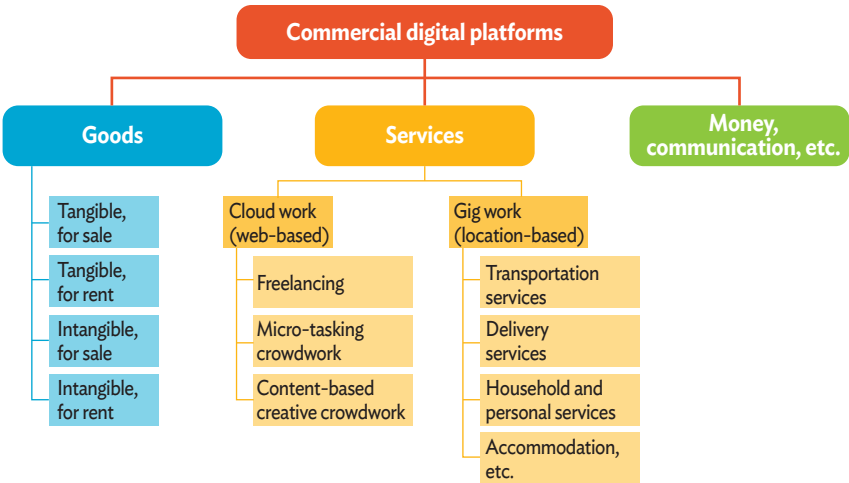
Source: Schmidt (2017).

Cloud work is web-based digital labor subdivided into freelancing, micro-tasking crowdwork, and contest-based creative crowdwork. Typically, workers find work engagements through digital platforms while workers, clients, and platforms are in different countries. In freelancing, a worker is selected based on skills and is engaged in a specific task for a pre-determined payment.[1]

Crowdwork involves several workers. In micro-tasking crowdwork, a group of unspecified crowd workers attend to different tiny repetitive tasks required by a single project.[2] In contest-based creative crowdwork involving several workers performing creative tasks, workers compete for remuneration.[3]

In both types of crowdwork, rejection of work output is possible. Using automated evaluation, an individual's output in a micro-tasking crowdwork can be rejected and thus receives no payment if it is observed to be different from the output of other project members. Similarly, in content-based creative crowdwork, payment is conditional on a worker's output being selected (ADB-ILO forthcoming (a), ADB-ILO forthcoming (b), and Schmidt 2017).

Aside from nonpayment, rejections may reduce chances of obtaining new tasks or lead to deactivation from the platform (Berg et al. 2018).[4] In an International Labour Organization (ILO) survey that covered workers in 75 countries participating in five micro-tasking platforms,[5] almost 9 out of 10 workers have had work rejected or payment refused. In such cases, workers endure longer periods of no income. In 2017, a typical crowdworker earned an average of $3.31 per hour, accounting for both paid and unpaid hours, based on the survey results.

Official data on the total number of crowdworkers are not typically collected in official labor force surveys; nevertheless, estimates based on ad hoc surveys and related efforts try to fill this information gap. In the Philippines, freelancers and crowdworkers are estimated to number around 1.5 million (PayPal 2018), representing 3.4% of the labor force and 7.1% of informal

---

[1]   Among platforms, freelancer.com, upwork.com, guru.com, talent.hubstaff.com, getcraft.com, and many others including domestic digital platforms are available in the Philippines and Indonesia (ADB-ILO forthcoming-a and forthcoming-b).

[2]   Amazon Mechanical Turk is available in the Philippines and Indonesia (ADB-ILO forthcoming-a and forthcoming-b).

[3]   Among platforms, designcrowd.com, crowdspring.com, 99designs.com and others are available in the Philippines and Indonesia (ADB-ILO 2020).

[4]   On microworkers, workers with approval rates of less than 75% are disqualified to participate in new tasks for the next 30 days.

[5]   AMT, Prolific Academic, Clickworker, CrowdFlower, and Microworkers.

employment (ADB-ILO forthcoming [b]).[6] In an ad hoc effort to gather data on the number of crowd workers by The iLabour Project to produce the Online Labour Index,[7] three Asian countries were found to lead on supplying labor for online gig work (Figure 8.2). This pattern continues over time with fluctuations (Figure 8.3).

Figure 8.2: Top 15 Home Countries of Crowdworkers, June 2021
(% of total number of workers)
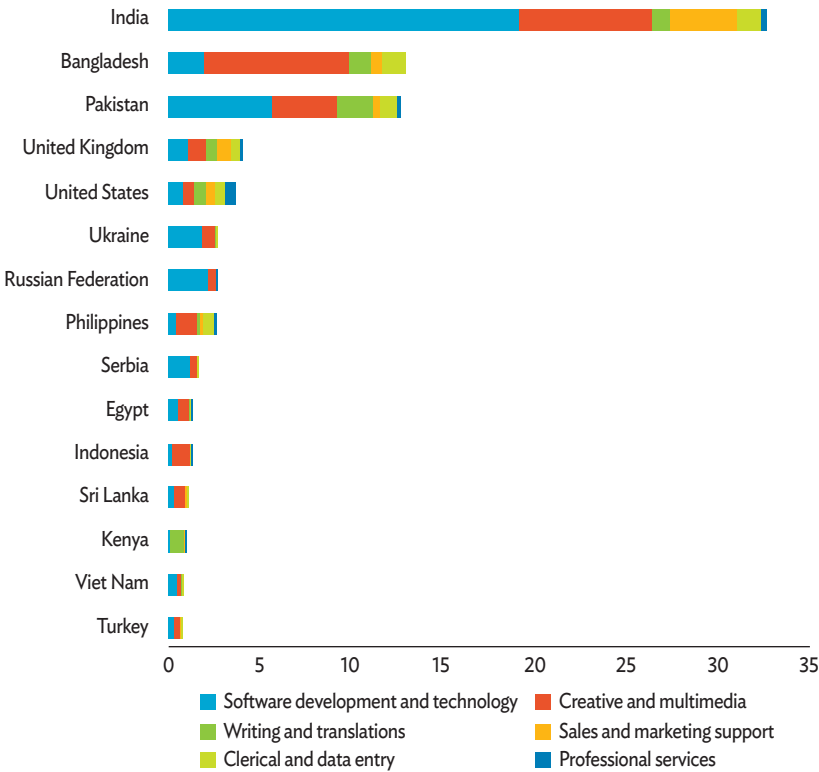
Note: Data is collected periodically (once every 24 hours) by sampling workers from four major online labour platforms: Fiverr, Freelancer, Guru, and PeoplePerHour.
Source: The iLabour Project, Oxford Internet Institute, https://ilabour.oii.ox.ac.uk/online-labour-index/ (accessed July 2021).

---

6   Apart from general survey design issues such as representativeness, ad hoc surveys raise additional reliability and comparability issues (Schwellnus et al. 2019) .
7   The Online Labour Index measures utilization of online labor platforms over time and across countries and occupations.

Figure 8.3: Number of Crowdworkers by Economy, July 2017 to June 2021
(28-day moving average of daily number of crowdworkers)

Top Suppliers of Online Freelance Labor

East Asia

South Asia

Southeast Asia
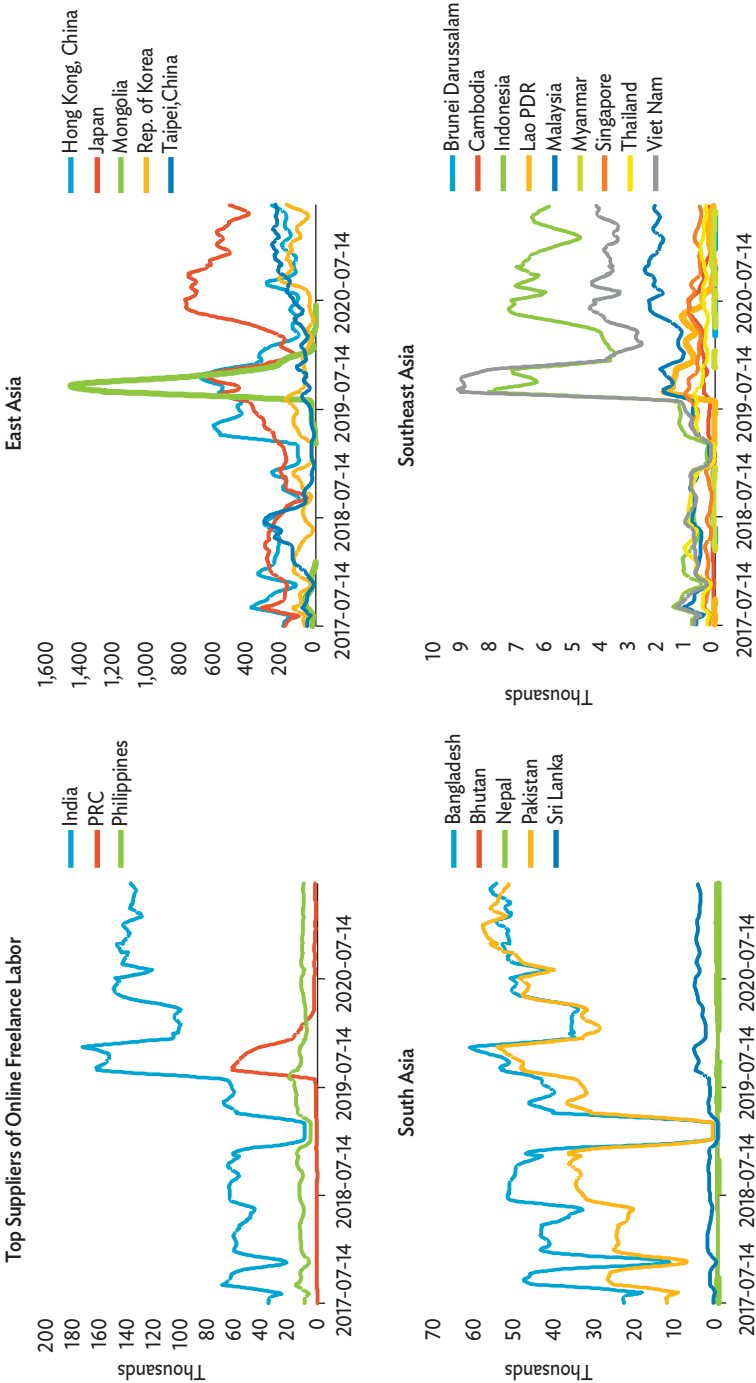
Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Online Labour Index, Oxford Internet Institute, https://ilabour.oii.ox.ac.uk/online-labour-index/ (accessed July 2021).

Based on the sample, an average of 258 workers in East Asian economies (excluding the PRC), 14,282 workers in South Asian economies (excluding India), and 1,564 workers in Southeast Asian economies (excluding the Philippines), supply online labor and compete for available cloud work projects per day in online platforms (Table 8.1).

Table 8.1: Average Online Labor Supply for Crowdwork per Day, March 2019 to March 2020

Subregion/Country	Average Number of Workers per Day
East Asia (excluding PRC)	258
South Asia (excluding India)	14,282
Southeast Asia (excluding Philippines)	1,564
PRC	20,700
India	103,408
Philippines	13,450

PRC = People's Republic of China.
Source: Author's computation based on data from the Online Labour Index, Oxford Internet Institute, https://ilabour.oii.ox.ac.uk/online-labour-index/ (accessed July 2021).

Persisting Work Informality and Social Protection

The emergence of the platform economy turned some informal jobs and tasks into formal ones, but it has also partly contributed to work informality in Asia and the Pacific. Many digital platform workers who self-enlist in online platforms may be classified as informal workers who often have no or insufficient social security coverage afforded by formal employment arrangements.[8] This highlights the need for inclusive, government-provided social security schemes that are not dependent on employment.

Work informality is high among the self-employed or own-account workers (86.2% of self-employed workers in Asia and the Pacific are informal workers), and more prevalent among youth aged 15–24 as well as those aged 65 and above (both 86.3% of total youth and total elderly employment, respectively) (ILO 2018a). Informal employment, meanwhile, decreases with higher educational level.

---

[8] Only 15 out of 100 driver-partners of Grab benefit from one or more of the company-provided insurance systems (health insurance, life insurance, motor insurance, and prolonged medical leave insurance) (Grab 2019).

Informal workers usually lack coverage from social insurance or contributory schemes due to exclusion from legal coverage, lack of contributory capacity, low and inconsistent earnings, and complicated administrative processes. They also tend to be excluded from social assistance or noncontributory schemes typically targeted to the poor. Hence, the case of the "missing middle" exists (ILO 2017, ILO 2019a, and Ulrichs 2016). Digital platform workers remain vulnerable as fulfillment of contributions is often contingent on having gainful employment. When they do have social protection, it often stems from previous formal employment or from the extension of family members' social protection coverage (ILO 2019a).

Digital platform workers are among those who have faced risk of job loss and employment uncertainty during the COVID-19 pandemic. Indeed, Howson et al. (2021) note that while digital labor platforms are widely promoted to remedy COVID-19-induced unemployment, the pandemic has also exposed platform workers to income loss and infection while being excluded from labor protections. Freelancers and crowdworkers not on location may still conduct remote work online. However, for location-based gig workers, the impacts tend to differ depending on the type of service offered. For example, gig workers involved in household services may have seen a decline in income opportunities given the lockdown measures. Meanwhile, demand increased for transport and delivery gig workers in some countries as most people who self-isolate rely on digital platforms to access goods and services.[9] They have been at the forefront during the pandemic and are among those with relatively high health risks. The impacts of the crisis on digital platform workers have stirred global discussion of health insurance, sick pay, and other work-related benefits; and underscore the need for the extension of social protection (PYMNTS 2020).

Overall, properly functioning social security systems can help address challenges that continue alongside changes in the world of work brought by digitalization. Recently, governments have been adopting a long-term perspective on social protection. In fact, developing Asian economies have explored implementing various social assistance programs such as social support services, noncontributory health insurance, food subsidies, training, fuel and electricity subsidies, unconditional in-kind transfers, school feeding

---

[9]   Digital platforms offering delivery services like Grab, Lalamove, Food Panda, etc. supported demand of households during the crisis. Other digital platforms on transport services, like Didi, have disabled this channel and converted to delivery and grocery shopping services (Abacus 2020, Hung 2020, and Sukumaran 2020).

programs, educational fee waiver, and conditional and unconditional cash transfers (IPC-IG and UNICEF 2019). However, limited fiscal space can hinder the extension of social protection; hence, the extension would be subject to the existing social protection priorities.

In this context, some countries in developing Asia have been examining the feasibility of a universal and unconditional cash-based social assistance scheme known as universal basic income.[10] Some have also opted to implement UBI-like social protection measures in the short term to cope with the pandemic.

8.3. Universal Basic Income: An Overview of Advantages and Disadvantages

UBI can be considered a type of social assistance among the whole range of programs with variations in selectivity, conditionality, and the modality of transfer. UBI can provide digital platform workers with a guaranteed income, unlike other social protection programs linked to employment. Despite the lack of employment-associated social protection, UBI can provide these types of workers a cushion during unexpected lifetime shocks. UBI can also offer a quicker way to disburse benefits without the need for means-testing. Further, UBI gives workers the option to quit unsatisfying jobs, given the guaranteed cash income.

The core features of a UBI can be discussed based on three dimensions: *universality, conditionality,* and *modality.*

Universality of UBI guarantees coverage for everyone. However, programs for all elderly people or children are also considered universal. In this context, universality means that eligibility does not involve any other requirement aside from age (Gentilini et al. 2020). From here on, this chapter will refer to UBI for certain age groups as "quasi-UBI." The universality of UBI upholds transparency in the public expenditure system, while preventing benefit fraud and non-reporting on income (Fitzpatrick 1999).

---

[10] In India, a wide range of proposals have emerged following decades of debate and concern over fragmentation (Banerjee 2016, Bardhan 2017, Ghatak 2016, Joshi 2017, and Ray 2016). UBI proposals from politicians were also part of electoral campaigns in 2019. In the PRC, recent studies were conducted to stir debate on UBI in the country and assess compatibility with the PRC's social and economic system (UNDP China 2020a and 2020b, Zheng et al. 2017). A UBI scheme is also currently ongoing in Macau, China.

Second, UBI involves provision of assistance *without conditions*. Imposition of conditionality is used to influence recipients' behaviors, typically toward nutrition, health, and education. Implementation of conditional social assistance requires institutional and administrative capacity and a proper coordination system across the whole government to monitor compliance.[11] In most developing countries where complex government systems often lack coherence, public development programs need a robust design to perform well. In this regard, UBI may prove compatible with the existing institutional and governance scenario in developing countries in Asia.

Finally, UBI is *cash-based*. Compared to in-kind transfers, cash transfers provide flexibility to individuals. It is also easier for governments to move cash to recipients. With digitalization, the use of electronic cash payments also reduces security concerns. In addition, cash transfers do not require procurement, storage, and physical distribution, making the scheme less prone to red tape and corruption and able to promote greater transparency than other types of social security programs (Gentilini et al. 2020).

Trade-offs on whether to choose UBI over other social protection programs include "generosity versus work disincentives, effective coverage of poor households versus leakages to richer individuals, alternative use of available resources versus fiscal cost, and implementation challenges versus objectives" (Francese and Prady 2018). The macroeconomic effects of UBI should also be considered.

The degree of potential trade-offs may differ across countries, depending on their respective fiscal situation, design of existing social security schemes, and government institutional environment. It is therefore crucial to discuss advantages and disadvantages of UBI by assessing compatibility with existing systems, i.e., social security, taxation, government institutions, and prevailing and emerging forms of employment. Nevertheless, a well-designed UBI may offer solutions to existing problems in targeted and in-kind social protection programs.

---

[11] Conditional cash transfers in the Philippines need to be coordinated with regional government offices, local government units, etc.

8.4. Universal Basic Income and Other Social Assistance Programs in Asia

In Asia, the UBI experience is still very limited. In India, some proposals for a UBI have recently emerged (Banerjee 2016; Banerjee, Niehaus, and Suri 2019; Bardhan 2017; Ghatak 2016; Joshi 2017; Ray 2016) with some UBI pilots implemented in selected regions or villages in the country. Proponents of UBI in India argue that it can reduce distribution leakages, empower individuals by utilizing money, and ultimately provide a more efficient way to alleviate poverty compared to existing schemes. However, critics maintain that UBI could lead to work disincentives, demand a huge fiscal space, and dismantle the whole social protection system in the long term (Aiyar 2018, Drèze 2017, and Ghosh 2017). To contribute to the debate, some studies (Cariappa and Srinivas 2019, Khosla 2018, Mookherjee 2018, and Radhakrishna 2017) have compared various proposals and assessed the merits and demerits of a UBI in India.

Some studies on UBI in the PRC were recently completed (UNDP China 2020b, Zheng et al. 2017). A small-scale UBI scheme called Wealth Partaking Scheme in Macau, China has been ongoing, while a UBI-like scheme recently ran in Hong Kong, China (Chong and Jing 2016 and Kwong 2013). However, UBI discussion in other economies in the region remains limited. In this regard, this chapter aims to contribute to the relatively scarce literature on UBI in developing Asian economies.

Mongolia is the only economy that has implemented a full-fledged UBI scheme at the domestic level.[12] Most of the social assistance programs in developing Asia are targeted schemes that incorporate some but not all three elements of UBI (universality, conditionality, and modality). Mongolia's UBI ran briefly, from 2010–2012, which entitled all citizens to a regular cash transfer funded by the dividends of their copper and other mineral resources (Table 8.2).

---

[12] A small-scale UBI scheme has also been ongoing in Macau, China called the Wealth Partaking Scheme, but studies assessing it are scarce.

Table 8.2: Experience and Lessons Learned from Mongolia's Universal Basic Income Program

Program	Universal Basic Income
Start date	2010; ended in 2012
Program typology	Universal basic income
Main objective	To evenly distribute the dividends of the nation's wealth to all citizens including the poor by providing cash assistance
Target area	Nationwide
Target group	All citizens
Coverage	All citizens
Type of benefit	Cash
Amount of benefit	Togrog (MNT) 70,000 in February 2010; MNT10,000 from August to December 2010; MNT21,000 from January 2011 to June 2012
Program expenditure	MNT324 billion (in the first year)

Note: MNT10,000 = $7.3 as of January 2012.
Source: Yeung and Howes (2015).

This was an upgraded and universalized version of the Child Money Program[13]—a cash transfer program that provided benefits to all eligible children and families with newborn children. However, the program was unsustainable, as its funding source, the Human Development Fund, was vulnerable to metal price fluctuations. Eventually, logistical delays and late payments hounded the program as citizens demanded transparent reporting and scheduled transfer distributions (Yeung and Howes 2015).

After the 2012 elections, the UBI program ceased to operate and the Child Money Program was reinstated (Yeung and Howes 2015). Despite the program closure, evidence suggests that Mongolia's UBI reduced poverty by almost a third and curbed inequality by up to 13% in 2011.[14]

The key policy lessons revolve around ensuring the sustainability of a resources-to-cash scheme. Some suggest that resource-to-cash transfers like

[13] The Child Money Program commenced in 2006 as copper and gold mining profits raised government revenues.

[14] Most studies on Mongolia's social assistance scheme are focused on the Child Money Program and not on the 2-year UBI scheme (ILO 2016 and Jackson et al. 2011). Earlier analysis by UNICEF estimated the extent to which the conditional Child Money Program (2005–2006) reduced poverty (Budragchaa et al 2007), and the effect of social transfers on children between 2002 and 2010 (Gankhuyag and Banzarch 2014).

Mongolia's should be taxed to guarantee sustainability (Moss 2011). More importantly, there should be a proper *ex ante* assessment to determine the feasible transfer amount.

8.5. Comparing Universal Basic Income to Targeted Social Assistance Schemes

Most of the weaknesses and limitations of social assistance programs in Asia revolve around targeting and coverage, fiscal cost, and institutional coordination, which UBI may help address. Governments typically adopt multiple social protection programs in their countries to make overall social protection systems inclusive, progressive, and adaptive. They also attempt to achieve other, specific goals through separate programs. Intended goals include income-smoothing, risk-pooling, human capital formation, increasing labor income, and redistributing resource dividends (Gentilini et al. 2020). Another reason for multiple programs is to cater services to specific target groups such as the unemployed, youth, elderly, migrants, and women. Overall, the number of programs in each country may not necessarily indicate inefficiency, as long as they complement each other and are well administered.

Nonetheless, individual targeted schemes can be costly to administer as they typically entail means testing and ongoing collection of data on the poor. For instance, means-testing cost $100 million in Indonesia (2015) and $60 million in Pakistan (2009) (Kidd and Wylde 2011). As the poverty status of individuals changes each year, data needs to be consistently collected on the poor and targeting adjusted to ensure the effectiveness of targeted schemes. However, frequent monitoring is not usually practiced in developing countries. This contributes to exclusion and inclusion errors in targeted schemes (Banerjee Niehaus, and Suri 2019).

One could argue that it may be more efficient to consolidate a multitude of schemes into one single social protection program such as UBI. The universality of UBI guarantees inclusiveness, making sure vulnerable sectors are covered. However, it is also inclusiveness that makes the progressivity of UBI uncertain.

For UBI to contribute effectively to poverty reduction, the transfer amount matters. Transfers can be set at different levels, and higher amounts up to the national poverty line can eventually eradicate poverty. Nevertheless, the

transfer amount largely depends on fiscal capacity. Indeed, UBI may be costly for some countries. This emphasizes the need to study the fiscal requirements of a UBI as well as its associated fiscal stress on a per-country basis.

UBI also benefits informal workers by providing them with guaranteed income whenever they are unemployed and during periods when they are employed but without social protection. Informal workers often get insured like formal workers, conditional to meeting minimum income and insurance contribution requirements. However, those who often switch jobs do not automatically fall under the framework of social insurance systems (Gentilini et al. 2020). In this regard, firms are incentivized to hire part-time or temporary workers who are provided with less benefits (OECD 2018). Further, social assistance schemes are often targeted at the poor and do not aptly cover informal workers. With UBI, transfers can act as top-up income during periods of employment, which people can use for any life-cycle shocks, including gaps in employment. Recently, Hong Kong, China and Singapore implemented UBI programs, while some Asian economies resorted to UBI-like measures as a policy response to the economic effects of the ongoing COVID-19 pandemic (Gentilini, Almenfi, and Orton 2020; ILO 2020a; IMF 2020).

Apart from considering the societal benefits of a UBI, thorough assessment remains crucial to determine whether UBI would perform better than an economy's portfolio of social protection schemes. In particular, it is crucial to assess the capacity of current social security systems, compare the administrative cost of managing a universal scheme with that of targeting beneficiaries, and estimate the fiscal space for extending or reforming social security schemes.

8.6. Challenges in Administering a Universal Social Protection Scheme

Current social protection systems in most Asian countries do not have sufficient capacity and experience to operate population-wide schemes such as UBI. For instance, social protection coverage in South Asia and Southeast Asia remains lower than in other subregions. Most social protection schemes are targeted noncontributory schemes and do not cover all life contingencies. Countries such as the Philippines, Thailand, and Viet Nam have more comprehensive contributory schemes, however, less than half of the labor force access these (United Nations 2021).

Administrative weaknesses often contribute to the ineffectiveness of existing social protection schemes. These include issues in beneficiary identification, registration, disbursement, and grievance processes. While most proponents argue that UBI removes administrative costs, the supposed administrative savings from shifting to a UBI depend on existing administrative capacity. In most mature welfare states, UBI tends to free-ride on the strong administrative systems already in place (Wispelaere and Stirton 2011). Arguably, the administrative capacity in many developing Asian economies may not yet be robust enough for a UBI-type program. However, broadening digitalization could enhance feasibility in coming years.

In as much as digitalization of the jobs market strengthens the impetus for UBI, digitalization of administrative systems can also help lessen the management cost of social programs, including the cost of leakage. Gaspar and Rhee (2018) purport that digitalization can make governments fairer and more efficient, including in the delivery of social services. At the same time, stronger e-governance is found to be associated with lower incidence of corruption (Ali et al. 2021, Lupu and Lazăr 2015).

In this respect, the increasing premium placed by the region's policy makers on digitalizing their governance systems is valuable. Based on the recent e-government development index data developed by the United Nations (UN), Asia is ahead of the other regions and only trails Europe, although Oceania is catching up (UN 2020).[15] The data further show that Asian economies have been steadily progressing in this area in recent years.

The rollout of national digital ID systems in a number of developing Asian economies is in line with this predisposition (Thales Group 2021, Lago 2019). National ID systems can structure data collection and validation. They can also support government efforts to ensure that social protection is provided to an individual whose employment, income, health, or civil status changes within life course. And with the data at hand, the system gives policy makers flexibility in the design of social protection interventions.

---

[15] The country groupings are based on the definitions of United Nations (2020).

As with other digital systems, however, digitalization of governance opens the public sector to cybersecurity risks. This calls for sustained improvement in the capacity and stability of the base ICT infrastructure to expand access and ensure reliability of service.

Overall, transforming the existing social protection system to one that supports UBI could help address the lack of social protection that stems from the changing nature of work. However, considerable administrative work remains. Continued digitalization of governance is a critical ingredient in expanding government administrative capacity for improving the feasibility of more universal social protection systems over those currently in place.

8.7. Challenges in Financing Social Protection in Developing Asia

The main objective for countries in the region is to close the social protection gap, but this entails fiscal risks and funding requirements. For example, Handayani, Cichon, and Carraro (2018) analyze the fiscal space in 16 developing Asian economies and find encouraging results.[16] If full spending is considered at the stationary state, an average of 3.5% to 8.5% of GDP of involved countries is needed to close the social protection gap from 2015 to 2030 through targeted or quasi-UBI schemes. Based on the share of the lower estimates of fiscal requirement to total government revenues, achieving the social protection agenda of the Sustainable Development Goals (SDGs) would require huge resource mobilization or re-budgeting among public social expenditure items in the countries studied.

If social protection spending in those countries were to progress gradually from 2015 to 2030,[17] the long-term resource requirement may be brought down to an average of 2.1% to 4.9% of GDP. If dynamic revenue development is considered,[18] the countries to expect major fiscal stress from closing the social protection gap through quasi-UBI schemes are Cambodia,

---

[16] Countries include Azerbaijan, Cambodia, the PRC, India, Indonesia, Kazakhstan, the Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand, Timor-Leste, and Viet Nam.

[17] The maturation function assumes a maturation pattern in which 20% of stationary state expenditure is reached in year 7, 40% in year 8, 60% in year 9, 80% in year 10, and gradual and slow increase to 100% maturity from year 10 to 15.

[18] Indeed, governments can raise revenues from increasing tax rates, reallocating energy subsidies, and reallocating natural resources taxes. For example, Nepal, the Philippines, and Thailand could generate considerable revenues from stricter tax enforcement (Handayani, Cichon, and Carraro 2018).

the Lao People's Democratic Republic (Lao PDR), and Timor-Leste. Countries to experience manageable fiscal stress are Azerbaijan, Malaysia, Mongolia, Nepal, and Viet Nam. Finally, countries without any or with low expected fiscal stress are the PRC, India, Indonesia, Kazakhstan, the Philippines, Sri Lanka, and Thailand. Nevertheless, the results from the dynamic analysis are conditional on long-term financial planning, raising resources immediately, and building reserves and reducing financial deficits (Handayani, Cichon, and Carraro 2018).

Compared to a UBI, universal social protection envisioned under the SDGs would give everyone adequate protection against any life-cycle risks, which does not essentially imply that *everyone* receives a regular benefit. Universal social protection can also be attained through a UBI as long as it has universal coverage and comprehensive and adequate protection (ILO 2019b). However, simply adopting a UBI program does not ensure universal social protection.

Cost estimates in Handayani, Cichon, and Carraro (2018) represent the amount of additional resources needed to close the social protection gap through targeted and quasi-UBI schemes. These would extend social protection in line with the SDGs without providing benefits to all. Therefore, it is expected that a UBI would result in higher cost estimates. To illustrate this, Table 8.3 presents an indicative cost of the additional resources needed to achieve UBI.

The total cost estimate of a UBI (excluding administrative costs) that assumes a basic income transfer equivalent to 100% of the national poverty line for all adults and children (Scenario I)[19] is 23.4% of GDP on average in the 16 countries (Ortiz et al. 2018). Rather than dynamic state estimates, Table 8.3 presents the lower and upper estimates at the stationary state. These are more comparable to UBI cost estimates in Ortiz et al. (2018), which did not consider expenditure maturation from 2015 to 2030 as in Handayani, Cichon, and Carraro (2018). Further, both social protection schemes considered in the two studies achieve social protection in line with the SDGs.

Notably, the two studies differ in expenditure calculation such that, unlike Ortiz et al. (2018), estimates in Handayani, Cichon, and Carraro (2018) include administrative costs. To improve comparability, administrative costs must be deducted from the estimates of required additional resources

---

[19]   Scenario II assumes a basic income transfer at 100% of the national poverty line for all adults and 50% of the poverty line for children up to 15 years old. This scenario is not presented here, for ease of comparison.

Table 8.3: Comparison of Estimated Additional Resource Requirement to Achieve Social Protection in Sustainable Development Goals and Universal Basic Income
(% of GDP)

Country	Government Expenditure on Social Assistance and Social Insurance, 2015 (ADB 2019)	Total Cost Estimate of Scenario I UBI (Ortiz et al. 2018)	Indicative Cost of Additional Resources to Achieve Poverty Line UBI Based on (Ortiz et al. 2018)	Lower Cost Estimate of Additional Resources to Achieve SDGs Social Protection at Stationary State (Handayani, Cichon, and Carraro 2018)	Upper Cost Estimate of Additional Resources to Achieve SDGs Social Protection at Stationary State (Handayani, Cichon, and Carraro 2018)	Administrative Cost in the Upper Cost Estimate at Stationary State (Handayani, Cichon, and Carraro 2018)	Upper Cost Estimate Less Administrative Costs at Stationary State (Handayani, Cichon, and Carraro 2018)	Total Cost Estimate of Poverty Line UBI (Gentilini et al. 2020)	Indicative Cost of Additional Resources to Achieve Poverty Line UBI based on (Gentilini et al. 2020)
Azerbaijan	7.60	22.60	15.00	2.62	8.77	0.62	8.15	…	…
Cambodia	0.80	33.90	33.10	7.09	14.08	0.69	13.39	…	…
PRC	7.52	22.80	15.30	0.20	1.75	0.14	1.61	…	…
India	…	26.70	…	3.62	8.27	0.55	7.72	22.00	…
Indonesia	2.00	9.40	7.40	3.67	6.97	0.31	6.66	11.00	9.00
Kazakhstan	…	6.70	…	0.95	3.90	0.28	3.62	10.00	…
Lao PDR	0.80	20.10	19.30	6.47	10.25	0.42	9.83	…	…
Malaysia	4.20	37.10	32.90	0.10	6.01	0.54	5.47	…	…
Mongolia	8.80	3.50	5.30	2.45	7.73	0.49	7.24	…	…
Myanmar	0.10	56.70	56.60	7.25	13.63	0.77	12.86	…	…
Nepal	2.60	35.30	32.70	5.05	14.74	1.02	13.72	36.00	33.40
Philippines	2.90	8.50	5.60	5.94	9.59	0.35	9.24	…	…
Sri Lanka	3.20	9.70	6.50	0.62	2.87	0.20	2.67	…	…
Thailand	4.00	10.80	6.80	0.60	5.13	0.45	4.68	…	…
Timor-Leste	…	48.30	…	7.18	14.72	1.16	13.56	…	…
Viet Nam	6.10	21.70	15.60	1.37	7.37	0.60	6.77	…	…

… = not available, PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal, UBI = universal basic income.
Sources: ADB (2019), Gentilini et al. (2020), Handayani, Cichon, and Carraro (2018), and Ortiz et al. (2018).

at the stationary state in Handayani, Cichon, and Carraro (2018). However, this can be done only with the upper estimates, as this is only where the analysis explicitly distinguishes the additional administrative costs. Further, the two studies consider expenditure on dissimilar sets of social protection categories. In Handayani, Cichon, and Carraro (2018), spending is included on education, services, and health that counts toward extending social protection. Ortiz et al. (2018) accounts only for spending on cash transfers.

In most countries in the list, except for Mongolia and the Philippines, the indicative cost of extra resources needed for a UBI is higher than both the lower and upper cost estimates of additional financing to close the social protection gap through targeted and quasi-UBI schemes. Moreover, unsurprisingly, deducting the administrative costs from the upper cost estimates only widens the gap between the indicative cost of additional resources for a UBI and the upper cost estimate that assumes a quasi-UBI scheme with transfer amount less than 100% of poverty line. This implies that, for these countries (Azerbaijan, Cambodia, the PRC, the Lao PDR, Malaysia, Nepal, Sri Lanka, Thailand, and Viet Nam), closing the social protection gap without providing poverty line-equivalent transfers to all would likely be more fiscally attainable.

The lower and upper cost estimates in Handayani, Cichon, and Carraro (2018) can also be compared to an indicative cost based on the results in Gentilini et al. (2020). For the developing Asian economies covered in Gentilini et al. (2020), the indicative cost of additional resources for a UBI with transfer amounts equal to the poverty line do not differ greatly from the indicative cost based on Ortiz et al. (2018). Consequently, these indicative costs of additional resources for UBI are greater than the cost estimates of closing the social protection gap through quasi-UBI and targeted schemes. However, notably, the data years for the four countries in Gentilini et al. (2020) are not all the same with the data years (2015) in the other two studies.

To conclude, the results of this back-of-the-envelope calculation on the additional resource requirement to implement a UBI are only indicative. However, the main takeaway from this exercise rests on highlighting the need to answer key questions for government decision-making on whether to extend social protection by improving existing schemes through quasi-UBI and well-targeted schemes or by replacing them with a UBI.

Other studies assessed the viability and the impact of UBI (Table 8.4). In particular, two analyses evaluated UBI relative to existing schemes in terms of poverty and inequality reduction, fiscal costs (excluding administrative and other transaction costs), and financing options, based on partial static equilibrium simulation model, where only households are considered and behavioral responses are not incorporated.[20]

Table 8.4: Non-Exhaustive List of Studies on Universal Basic Income

Study	Method	Research focus	Countries
Nikiforos, Steinbaum, and Zezza (2017)	Levy Institute macro-econometric model	Macroeconomic effects (real GDP, price level, nominal wages, government deficit, employment rate, labor force)	United States (US)
University of Pennsylvania (2018) Penn Wharton Budget Model	Dynamic overlapping generations model	Macroeconomic effects	US
Van der Linden (2004)	Dynamic general equilibrium model	Labor supply effects, welfare effects	Not applicable
Fabre, Pallage, and Zimmermann (2014)	Dynamic general equilibrium model	Welfare effects	US
Yunker (2013)	Small-scale computable general equilibrium model	Welfare effects	US
Francese and Prady (2018) and IMF (2017)	Partial static equilibrium model	Distributional effects, fiscal costs	8 countries
Gentilini et al. (2020)	Partial static equilibrium model	Distributional effects, fiscal costs	10 countries including developing Asian economies
OECD (2017)	Partial static equilibrium model	Distributional effects, fiscal costs	4 OECD countries
Ortiz et al. (2018)	Costing model	Fiscal costs	130 countries
Coady and Prady (2018)	Subsidy cost estimation and incidence analysis	Distributional effects	India
Scutella (2004)	Behavioral microsimulation model	Labor supply effects, welfare effects	Australia
Clavet, Duclos, and Lacroix (2013)	Behavioral microsimulation model	Labor supply effects, welfare effects	Canada

---

[20] The simulations are not intended to give evidence on the macroeconomic effects of a UBI. Rather, the studies try to present a logical approach to understand UBI and its feasibility.

Table 8.4 *continued*

Study	Method	Research focus	Countries
Jessen (2017)	Behavioral microsimulation model	Labor supply effects, welfare effects	Germany
Colombino (2015), and Colombino and Narazani (2013)	Behavioral microsimulation model	Labor supply effects, welfare effects	Italy
Islam and Colombino (2018)	Behavioral microsimulation model	Labor supply effects, welfare effects	6 OECD countries
UNDP China (2020a)	Regression analysis (based on UBI survey and game)	Behavioral effects, willingness to receive UBI	PRC
Brown, Ravallion, and van de Walle (2016)	Regression analysis	Comparison of various program targeting methods	9 African countries
Hanna and Olken (2018)	Simulation model	Comparison of various program targeting methods	Indonesia and Peru
Haushofer and Shapiro (2016)	Experimental model	Impacts on economic outcomes and psychological well-being	Kenya
Blattman, Fiala, and Martinez (2012)	Experimental model	Impacts on employment and poverty	Uganda

GDP = gross domestic product, OECD = Organisation for Economic Co-operation and Development, PRC = People's Republic of China.
Source: Authors and Colombino (2019).

In general, UBI designs with greater generosity (i.e., larger transfer size and fiscal allocation) and larger coverage (i.e., covering all individuals) can reduce poverty and inequality better. Intuitively, fiscal cost is proportional to the generosity level and coverage of a UBI. Findings from Gentilini et al. (2020) suggest that the fiscal cost (not considering administration cost) increases with the generosity level of UBI schemes. In general, the fiscal cost of UBI would put more pressure on low-income countries. IMF (2017) estimates also show that the fiscal cost of a UBI is directly proportional to its coverage size. Therefore, determining the feasibility of a UBI depends on finding an effective, adequate, and progressive UBI design that entails reasonable fiscal cost.

However, a maximal social protection scheme like UBI would require additional resources to ensure adequacy and progressivity. Various financing options should be considered before determining the viability of adopting a UBI. Options include reallocating government budget, increasing tax revenues, lobbying for development aid or transfers, curtailing illicit financial

flows, utilizing fiscal and foreign reserves, borrowing from multilateral development banks, and adopting a more accommodating macroeconomic policy. Meanwhile, funding a UBI with a proportional increase in income tax would preserve the progressivity of social programs in these countries. Some studies suggest that regardless of a country's income status, financing a UBI to all individuals through a proportional increase in income tax can lead to more desirable and redistributive outcomes. Based on the two studies (Gentilini et al. 2020 and IMF 2017) that considered taxation options, a UBI funded by an increase in direct taxes, such as an income tax, delivers more redistributive outcomes than a UBI supported by indirect taxes or the same level of fiscal envelope as existing schemes.

Key findings on the country cases based on the previously presented analytical framework on assessing viability of UBI can be summarized as follows (Francese and Prady 2018, Gentilini et al. 2020, and IMF 2017):

i. When social assistance has substantial coverage and slight progressivity, barriers to access, eligibility and coverage, and delivery should be carefully studied and addressed. A UBI may better be motivated by other objectives other than to alleviate poverty.

ii. When social assistance has high coverage but is not progressive, a UBI may be feasible, especially if it is difficult to improve progressivity within the existing programs. However, the UBI should be combined with progressive financing.

iii. When social assistance has low coverage but is progressive, a UBI may extend coverage but also flatten the distribution, especially if budget neutral. Hence, a more generous UBI design is preferable to ensure adequacy of benefits, particularly at the bottom of the income distribution. UBI may also be considered as a complement to existing schemes to expand coverage and preserve progressivity of baseline programs.

iv. When social assistance is inconsistent and flat or regressive, a UBI may be a good option to extend coverage, especially if financed through progressive income taxation, elimination of energy subsidies, or redistribution of extra revenues.

v. When social assistance has low coverage, progressivity, and generosity due to very limited resources, a UBI may extend coverage but would entail huge financial pressure. Other social assistance schemes may be more compatible than a UBI.

8.8. Conclusion and Recommendation

Digitalization has altered business models and created new types of jobs in developing Asia. However, digital platform workers are typically non-standard workers falling outside of formal labor protection systems. These workers typically do not receive benefits from contributory social protection schemes through employment. As social assistance programs in Asia are mostly targeted for the poor, digital platform workers, like other informal workers, tend to be excluded from such schemes. In this context, UBI can deliver by ensuring the extension of social protection to all individuals, including digital platform workers.

UBI is a unique and maximal form of social assistance that involves an unconditional transfer of uniform amounts of cash to all individuals of a given country on a regular basis. Despite criticism, UBI may be able to play a crucial role in alleviating poverty, ensuring extension of social protection to informal workers including digital platform workers, empowering women, stimulating the macro-economy during crises, and redistributing natural wealth dividends. UBI has the potential to eliminate huge administrative costs and inclusion/exclusion errors associated with targeted social assistance schemes. However, it also faces considerable funding requirements and associated fiscal risks, especially in developing and low-income economies.

Initiatives assessing the potential impacts and viability of UBI remain limited in most developing countries in Asia. Future research studies may focus on Macau, China's Wealth Partaking Scheme, ongoing since 2008. However, data availability and access may be potential issues. Kwong (2013) finds that the Wealth Partaking Scheme provided financial relief to residents, especially during the global economic crisis. Future studies may evaluate the scheme in its effects on labor supply, poverty, as well as the overall macro-economy. Potential research may be conducted to assess the feasibility of UBI in other developing countries in Asia.

Future assessments should fill the information gap on the spillover effects and administrative costs of UBI. Haushofer and Shapiro (2016) and Özler (2018) studied spillover effects of the UBI pilot in Kenya on women's empowerment and consumption, but analysis of past and existing UBI schemes remains limited. Similarly, the literature on UBI rarely focuses on estimating administrative costs. In the US, Colombino (2019) estimates that the administrative cost of a UBI falls around 1%–2% of total UBI cost. In 16 countries in Asia, Handayani, Cichon, and Carraro (2018) estimate the administrative cost of a quasi-UBI scheme to be around 0.1%–1.2% of GDP. Although, one could argue that this estimate might be close to the administrative cost of a full UBI scheme, deeper analysis of the cost of administering a UBI could shed light on the argument that UBI requires less resources to administer than targeted social assistance schemes.

References

Abacus. 2020. Drivers for Ride-Hailing Giant Didi Will Now Go Grocery Shopping for You. 11 March. https://www.scmp.com/tech/article/3074709/drivers-ride-hailing-giant-didi-will-now-go-grocery-shopping-you.

Aiyar, S. S. A. 2018. Universal Basic Income: A Doleful, Wasteful Idea. *Indian Journal of Human Development*. https://doi.org/10.1177/0973703017730511.

Ali, M., S. A. Raza, C. H. Puah, and T. Arsalan. 2021. Does E-government Control Corruption? Evidence from South Asian Countries. *Journal of Financial Crime*. https://doi.org/10.1108/JFC-01-2021-0003.

Asian Development Bank (ADB). 2019. *The Social Protection Indicator for Asia: Assessing Progress*. Manila: ADB. http://dx.doi.org/10.22617/TCS190257-2.

ADB-International Labour Organization (ILO). Forthcoming (a). Challenges and Opportunities for the Extension of Social Protection Arising from the New Forms of Employment in Indonesia (preliminary draft).

Banerjee, A. 2016. The Best Way to Welfare. *The Indian Express*. 18 June. https://indianexpress.com/article/opinion/columns/swiss-voted-against-the-idea-of-a-universal-basic-income-but-the-debate-continues-2859528/.

Banerjee, A., P. Niehaus, and T. Suri. 2019. Universal Basic Income in the Developing World. *National Bureau of Economic Research (NBER) Working Paper* No. 25598. Cambridge, MA. https://doi.org/10.3386/w25598.

Bardhan, P. 2017. Universal Basic Income – Its Special Case for India. *Indian Journal of Human Development*. 11 (2). pp. 141–143. https://doi.org/10.1177/0973703017734719.

Berg, J., M. Furrer, E. Harmon, U. Rani, and M. S. Silberman. 2018. Digital Labour Platforms and the Future of Work: Towards Decent Work in the Online World. ILO report. http://www.ilo.org/global/publications/books/WCMS_645337/lang--en/index.htm.

Blattman, C., N. Fiala, and S. Martinez. 2012. Employment Generation in Rural Africa: Mid-Term Results from an Experimental Evaluation of the Youth Opportunities Program in Northern Uganda. *DIW Berlin Discussion Paper*. https://doi.org/10.2139/ssrn.2030866.

Brown, C., M. Ravallion, and D. van de Walle. 2016. A Poor Means Test? Econometric Targeting in Africa. NBER Working Paper No. 22919. Cambridge, MA. https://doi.org/10.3386/w22919.

Campbell, D. Forthcoming. Work and Social Protection in the Fourth Industrial Revolution. *ADB Sustainable Development Working Paper Series* (preliminary draft). Tokyo.

Cariappa, A. G. A. and A. Srinivas. 2019. Universal Basic Income for India: The Way Towards Right to Equality-A Review. *Indian Journal of Economics and Development*. 15 (1). pp. 142–149. https://doi.org/10.5958/2322-0430.2019.00016.7.

Chong, T. and H. Jing. 2016. An Analysis of the Issues and Potential Alternatives to Macau's 'Wealth Partaking Scheme' (in Chinese). *IGEF Working Paper* No. 43. https://doi.org/10.2139/ssrn.2748393.

Clavet, N. J., J. Y. Duclos, and G. Lacroix. 2013. Fighting Poverty: Assessing the Effect of Guaranteed Minimum Income Proposals in Québec. *Institute of Labor Economics (IZA) Discussion Papers* No. 7283. https://ideas.repec.org/p/iza/izadps/dp7283.html.

Coady, D. and D. Prady. 2018. Universal Basic Income in Developing Countries: Issues, Options, and Illustration for India. *International Monetary Fund Working Papers*. Washington, DC: IMF. https://www.imf.org/en/Publications/WP/Issues/2018/07/31/Universal-Basic-Income-in-Developing-Countries-Issues-Options-and-Illustration-for-India-46079.

Colombino, U. 2015. Five Crossroads on the Way to Basic Income. An Italian Tour. *Italian Economic Journal*. 1 (3). pp. 353–389. https://doi.org/10.1007/s40797-015-0018-3.

Colombino, U. 2019. Is Unconditional Basic Income a Viable Alternative to Other Social Welfare Measures? IZA World of Labor. https://doi.org/10.15185/izawol.128.

Colombino, U., M. Locatelli, E. Narazani, C. O'Donoghue, and I. Shima. 2008. Behavioural and Welfare Effects of Basic Income Policies: A Simulation for European Countries. *EUROMOD Working Papers* EM5/08; Institute for Social and Economic Research. https://ideas.repec.org/p/ese/emodwp/em5-08.html.

Colombino, U. and E. Narazani. 2013. Designing a Universal Income Support Mechanism for Italy: An Exploratory Tour. *Basic Income Studies*. 8 (1). pp. 1–17. https://doi.org/10.1515/bis-2012-0010.

Drèze, J. 2017. Decoding Universal Basic Income. *Indian Journal of Human Development*. 11 (2). pp. 163–166. https://doi.org/10.1177/0973703017733876.

Fabre, A., S. Pallage, and C. Zimmermann. 2014. Universal Basic Income versus Unemployment Insurance. Federal Reserve Bank of St. Louis, working paper. https://doi.org/10.20955/wp.2014.047.

Fitzpatrick, T. 1999. *Freedom and Security: An Introduction to the Basic Income Debate*. In J. Campling, ed. London: Palgrave Macmillan. https://doi.org/10.1057/9780333983287.

Francese, M. and D. Prady. 2018. Universal Basic Income: Debate and Impact Assessment. *IMF Working Papers. Washington, DC.* https://www.imf.org/en/Publications/WP/Issues/2018/12/10/Universal-Basic-Income-Debate-and-Impact-Assessment-46441.

Gaspar, V. and C.Y. Rhee. 2018. The Digital Accelerator: Revving Up Government in Asia. *IMF Blog*. 26 September. Washington, DC. https://blogs.imf.org/2018/09/26/the-digital-accelerator-revving-up-government-in-asia/.

Gentilini, U., M. Almenfi, and I. Orton. 2020. Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures. Paper, version 2. http://www.ugogentilini.net/wp-content/uploads/2020/03/Social-protection-responses-to-COVID19_March27.pdf.

Gentilini, U., M. E. Grosh, I. P. Rigolini, and R. G. Yemtsov. 2020. *Exploring Universal Basic Income: A Guide to Navigating Concepts, Evidence, and Practices*. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/993911574784667955/Exploring-Universal-Basic-Income-A-Guide-to-Navigating-Concepts-Evidence-and-Practices.

Ghatak, M. 2016. The Price of Basic Income. *The Indian Express*. 1 July. https://indianexpress.com/article/opinion/columns/basic-income-in-india-brexit-referendum-switzerland-basic-income-jan-dhan-yojana-guarantee-employment-programme-mgnrega-2879930/.

Ghosh, J. 2017. A Universal Basic Income in India? *International Development Economics Associates*. 3 February. https://www.networkideas.org/themes/economy-and-society/2017/02/a-universal-basic-income-in-india/ https://scholarworks.alaska.edu/handle/11122/4170.

Grab. 2019. Social Impact Report 2018/2019.

Handayani, S. W., M. Cichon, and L. Carraro. 2018. *Asia's Fiscal Challenge: Financing the Social Protection Agenda of the Sustainable Development Goals*. Manila: ADB. http://dx.doi.org/10.22617/TCS178935-2.

Hanna, R. and B. A. Olken. 2018. Universal Basic Incomes versus Targeted Transfers: Anti-Poverty Programs in Developing Countries. *Journal of Economic Perspectives*. 32 (4). pp. 201–226. https://doi.org/10.1257/jep.32.4.201.

Haushofer, J. and J. Shapiro. 2016. The Short-Term Impact of Unconditional Cash Transfers to the Poor: Experimental Evidence from Kenya. *The Quarterly Journal of Economics*. 131 (4). pp. 1973–2042. https://doi.org/10.1093/qje/qjw025.

Howson, K., F. Ustek Spilda, A. Bertolini, R. Heeks, F. Ferrari, S. Katta, M. Cole, P. Aguera Renese, N. Salem, D. Sutcliffe, S. Steward, and M. Graham 2021. Stripping Back the Mask: Working Conditions on Digital Labour Platforms during the COVID-19 Pandemic. *International Labour Review*. Article. 1 July. https://doi.org/10.1111/ilr.12222.

Hung, J. 2020. Delivery People Are Risking Their Lives to Keep Asia Running. Here's What People Are Doing to Say Thank You. *The Diplomat*. 1 April. https://thediplomat.com/2020/04/delivery-people-are-risking-their-lives-to-keep-asia-running-heres-what-people-are-doing-to-say-thank-you/.

International Labour Organization (ILO). 2016. The Universal Child Money Programme in Mongolia. Fact sheet. Geneva. http://www.ilo.org/beijing/what-we-do/publications/WCMS_534930/lang--en/index.htm.

_____. 2017. World Social Protection Report 2017–19: Universal Social Protection to Achieve the Sustainable Development Goals. Report. Geneva. http://www.ilo.org/global/publications/books/WCMS_604882/lang--en/index.htm.

_____. 2018a. *Women and Men in the Informal Economy: A Statistical Picture. Third Edition.* Geneva: http://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm.

_____. 2018b. Asia-Pacific Employment and Social Outlook 2018. International Labour Organization, Geneva. https://www.ilo.org/asia/publications/apeso/lang--en/index.htm.

_____. 2019a. Extending Social Security to Workers in the Informal Economy: Lessons from International Experience. Guidebook. Geneva. https://socialprotection.org/discover/publications/extending-social-security-workers-informal-economy-lessons-international.

_____. 2019b. Universal Social Protection: Key Concepts and International Framework Social Protection for All Issue Brief. April. Geneva. https://www.social-protection.org/gimi/RessourcePDF.action?id=55517.

_____. 2020a. Social Protection Responses to the COVID-19 Crisis: Country Responses in Asia and the Pacific. Spotlight Brief. Geneva. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/briefingnote/wcms_739587.pdf.

_____. 2020b. ILO Monitor: COVID-19 and the World of Work. Second Edition: Updated Estimates and Analysis. International Labour Organization, Geneva. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_740877.pdf.

International Monetary Fund (IMF). 2017. *IMF Fiscal Monitor: Tackling Inequality*. October. IMF, Washington, DC. https://www.imf.org/en/Publications/FM/Issues/2017/10/05/fiscal-monitor-october-2017.

_____. 2020. Policy Responses to COVID-19. IMF Policy Tracker. Washington, DC. https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19.

International Policy Centre for Inclusive Growth and United Nations Children's Fund (IPC-IG and UNICEF). 2019. *Social Protection in Asia and the Pacific: Inventory of Non-Contributory Programmes*. New York. https://socialprotection.org/discover/publications/social-protection-asia-and-pacific-inventory-non-contributory-programmes.

Islam, N. and U. Colombino. 2018. The Case for NIT+FT in Europe. An Empirical Optimal Taxation Exercise. *Economic Modelling*. 75 (C). pp. 38–69. https://doi.org/10.1016/j.econmod.2018.06.004.

Jackson, C., S. Butters, E. Byambaa, M. Davies, and N. Perkins. 2011. Lessons from Social Protection Programme Implementation in Kenya, Zambia and Mongolia. *IDS Research Reports*. 69: pp. 1–39. https://doi.org/10.1111/j.2040-0217.2011.00069_2.x.

Jessen, R. 2017. Getting the Poor to Work: Three Welfare-Increasing Reforms for a Busy Germany. *FinanzArchiv*. 73 (1). pp. 1–41. https://doi.org/10.1628/001522117X14864674910065.

Joshi, V. 2017. Universal Basic Income Supplement for India: A Proposal. *Indian Journal of Human Development*. 11 (2). pp. 144–149. https://doi.org/10.1177/0973703017730513.

Khosla, S. 2018. *India's Universal Basic Income: Bedeviled by the Details*. Carnegie India. https://carnegieindia.org/2018/02/14/india-s-universal-basic-income-bedeviled-by-details-pub-75500.

Kidd, S. and E. Wylde. 2011. *Targeting the Poorest: An Assessment of the Proxy Means Test Methodology*. Canberra: Australian Agency for International Development.

Kwong, B. K. K. 2013. A Comparative Analysis of the Cash Handout Policy of Hong Kong and Macau. *Journal of Current Chinese Affairs*. 42 (3). pp. 87–100.

Lago, C. 2019. Which Countries are Implementing Digital IDs in SE Asia? *CIO*. 4 January. https://www.cio.com/article/3331296/which-countries-are-implementing-digital-ids-in-se-asia.html.

Lupu, D. and G. Lazăr. 2015. Influence of E-Government on the Level of Corruption in Some EU and Non-EU States. *Procedia Economics and Finance*. 20 (1). pp. 365–371. https://doi.org/10.1016/S2212-5671(15)00085-4.

Mookherjee, D. 2018. Towards a Comprehensive Social Security System: An Assessment of Recent UBI Proposals. *Indian Journal of Human Development*. 11 (2). 173–176. https://doi.org/10.1177/0973703017733880.

Moss, T. 2011. Oil to Cash: Fighting the Resource Curse through Cash Transfers. *Working Papers* 3489. https://ideas.repec.org/p/ess/wpaper/id3489.html.

Nikiforos, M., M. Steinbaum, and G. Zezza. 2017. Modeling the Macroeconomic Effects of a Universal Basic Income. Roosevelt Institute. https://rooseveltinstitute.org/modeling-macroeconomic-effects-ubi/.

Organisation for Economic Co-operation and Development (OECD). 2017. Basic Income as a Policy Option: Technical Background Note Illustrating Costs and Distributional Implications for Selected Countries. Social Protection and Human Rights. Paris. https://socialprotection-humanrights.org/resource/basic-income-policy-option-technical-background-note-illustrating-costs-distributional-implications-selected-countries/.

———. 2018. *The Future of Social Protection: What Works for Non-standard Workers?* Paris: OECD Publishing. https://www.oecd-ilibrary.org/social-issues-migration-health/the-future-of-social-protection_9789264306943-en.

———. 2019. Public Social Spending Is High in Many OECD Countries. Social Expenditure Update 2019. Paris. https://www.oecd.org/social/soc/OECD2019-Social-Expenditure-Update.pdf.

Ortiz, I., C. Behrendt, A. Acuña-Ulate, and N. Q. Anh. 2018. Universal Basic Income Proposals in Light of ILO Standards: Key Issues and Global Costing. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3208737.

Ortiz, I., M. Cummins, and K. Karunanethy. 2015. Fiscal Space for Social Protection and the SDGs Options to Expand Social Investments in 187 Countries. *ILO Working Papers* No. 994877663402676. Geneva. https://ideas.repec.org/p/ilo/ilowps/994877663402676.html.

Özler, B. (2018, March 30). *GiveDirectly Three-Year Impacts, Explained*. World Bank Blogs.

PayPal. 2018. PayPal Global Freelancer Survey. https://www.paypal.com/stories/sea/paypal-global-freelancer-survey.

PYMNTS. 2020. Gig Economy Tracker. https://www.pymnts.com/tracker/gig-economy-tracker-april-2020/.

Radhakrishna, R. 2017. Is India Ready to Implement Universal Basic Income Scheme? *Indian Journal of Human Development*. 11 (2). pp. 200–202. https://doi.org/10.1177/0973703017738666.

Ray, D. 2016. The Universal Basic Share. Ideas For India. 29 September. http://www.ideasforindia.in/topics/poverty-inequality/the-universal-basic-share.html.

Schmidt, F. A. 2017. Digital Labour Markets in the Platform Economy. p. 32. Friedrich-Ebert-Stiftung.

Schwellnus, C., A. Geva, M. Pak, and R. Veiel. 2019. Gig Economy Platforms: Boon or Bane? *OECD Economics Department Working Papers*. Paris. https://doi.org/10.1787/fdb0570b-en.

Scutella, R. 2004. Moves to a Basic Income-Flat Tax System in Australia: Implications for the Distribution Of Income and Supply of Labour. Melbourne Institute of Applied Economic and Social Research. http://minerva-access.unimelb.edu.au/handle/11343/33799.

Sukumaran, T. 2020. Food Delivery Workers Keep Malaysia Connected amid Virus Lockdown. 31 March. https://www.scmp.com/week-asia/health-environment/article/3077719/coronavirus-delivery-workers-keep-malaysia-connected.

Thales Group. 2021. National ID Cards: 2016-2021 Facts and Trends. Updated 6 June 2021. https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/identity/2016-national-id-card-trends.

Ulrichs, M. 2016. Informality, Women and Social Protection: Identifying Barriers to Provide Effective Coverage. *Overseas Development Institute Working Paper* No. 435: p. 55.

United Nations (UN). 2020. *E-Government Survey 2020 Digital Government in the Decade of Action for Sustainable Development*. New York: UN. https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20(Full%20Report).pdf.

United Nations Development Programme (UNDP) China. 2020a. *Universal Basic Income in China*. UNDP. https://www.cn.undp.org/content/china/en/home/library/innovation-/universal-basic-income-in-china.html.

UNDP China. 2020b. Issue Brief—Universal Basic Income – Findings from China and Implications for Responses in COVID-19. https://www.cn.undp.org/content/china/en/home/library/innovation-/issue-brief---universal-basic-income--findings-from-china---impl.html.

————. 2021. Social Outlook for Asia and the Pacific: The Protection We Want. Bangkok.

University of Pennsylvania. 2018. Options for Universal Basic Income: Dynamic Modeling. Penn Wharton Budget Model. https://budgetmodel.wharton.upenn.edu/issues/2018/3/29/options-for-universal-basic-income-dynamic-modeling.

Van der Linden, B. 2004. Active Citizen's Income, Unconditional Income and Participation under Imperfect Competition: A Welfare Analysis. *Oxford Economic Papers*. 56 (1). pp. 98–117. https://doi.org/10.1093/oep/56.1.98.

Wispelaere, J. and L. Stirton. 2011. The Administrative Efficiency of Basic Income. *Policy and Politics*. 39: pp. 115–132. https://doi.org/10.1332/030557311X546352.

Yeung, Y. and S. Howes. 2015. Resources-to-Cash: A Cautionary Tale from Mongolia. International Mining for Development Centre Action Research Report.

Yunker, J. A. 2013. The Basic Income Guarantee: A General Equilibrium Evaluation. *Basic Income Studies*. 8 (2). pp. 203–233. https://doi.org/10.1515/bis-2013-0014.

Zheng, Y., M. Guerriero, E. Lopez, and P. Haverman 2017. Universal Basic Income: A Policy Option for China beyond 2020? Working Paper. UNDP China Office.