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# WORK FUTURES

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Globalization, Planetary Markets, and Uneven Developments in the Gig Economy

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## **Abstract:**

The world of work is changing rapidly in myriad ways. The processes of digitization are enabling workers from different parts of the world to compete in a global market over the Internet without moving to different locations. Many employers are opting for hybrid working solutions in light of the COVID-19 pandemic. As a result, some commentators have suggested the end of globalization, while others are hoping that a fairer society will emerge. This paper departs from such rigid assessments of the future of work and instead attempts to understand the multi-dimensional transformations in the world of work through the lens of the global gig economy. It argues that the gig economy is the latest manifestation of the capitalism's drive to accumulate which in turn produces uneven geographical developments. It concludes by outlining some strategies to build better work futures in a globalized world.

**Keywords:** *Future of Work, Gig Economy, Platforms, Planetary Labour Markets, Uneven Geographical Development.*

## **Introduction**

The digital revolution is transforming the world of work in myriad ways. Automation-related job losses remain a major threat in the long run (Frey and Osborne, 2017). However, some observers and commentators hope that automation may lead to shared prosperity, fulfilling jobs and a fairer society (World Economic Forum, 2021; also Bastani, 2019). This paper departs from such rigid assessments of the future of work and instead attempts to understand the multi-dimensional and multi-directional transformations in the world of work through the lens of the new digital gig economy.

The digital gig economy can be understood as a system of economic exchange facilitated by digital labour platforms such as Upwork or Uber (Lehdonvirta et al., 2019). Broadly speaking, it can be divided into two categories: remote work and geographically tethered work (for details see Anwar, 2022). Whereas, geographically tethered work has to be done in specific locations (e.g., ride-hailing taxis), remote work can be done by workers irrespective of their locations (e.g., image tagging) (ibid). Platforms such as Upwork are enabling remote working solutions with employers and workers often based in different parts of the world globally. As Hayden Brown, the CEO of Upwork, one of the largest gig economy platforms, announced, 'Remote work has gone mainstream and the genie is not going back in the bottle' (CNBC, 2020). The overall aim of this paper is to examine the gig economy's spatial dynamics with reference to the remote work and the uneven outcomes it produces.

It draws on the concept of uneven geographical development (henceforth UGD) (Harvey, 2006b; also, Smith, 1984), which can be traced back to the works of Marx (e.g., in Grundrisse and the Capital). For Marx, capitalism is inherently crisis ridden and to overcome this and survive, capital continuously creates a physical landscape (Harvey, 2001; Smith, 1984). Think of the geographical expansion of economic activities (e.g., industrial production in the 1970s) or the investments in infrastructure (e.g., roads, railways, housing) which helped transcend the overaccumulation problem in capitalism (ibid). Harvey (2006a) building on this, argues that the continuous

production of space by capital is fundamental to our understanding of the emerging geographical landscapes. For example, over the last 100 years, capitalist social relations have expanded into many more places as new markets have opened up for goods and services. Samir Amin (2010), one of the pioneers within the Marxian school of thinking, argued that the geographical expansion of capitalism has created polarising tendencies both between and within regions. Extreme concentration of wealth exists in one place and poverty in another. Similarly, rapid urbanisation and environmental degradation go hand in hand. Put simply, capitalism generates uneven outcomes. Our main argument is that the global gig economy is the latest manifestation of the capitalism's drive to accumulate which in turn produces UGD.

In the next section, we first conceptualise the gig economy and platforms as part of the wider restructuring process within capitalism. Platforms are understood as new digital spaces of production (Anwar and Graham, 2022). We then outline the remote work's geographical and digital characteristics to explore how platforms make and remake space to produce uneven geographies. The third section then maps out in details the uneven developments in the gig economy, by focussing on the 'geographies of work' and 'labour geographies', which we argue should be central to the discussions around work futures. The question about the geographies of work holds clues to how platform capitalism is reshaping the global production landscape. While there is some discussion about the economic geographies of platforms (e.g. Kässä et al, 2021), in this paper we explore the gender, rural-urban and task-based distribution of work on platforms. This allows us to show the embedded nature of uneven developments taking place in platform capitalism. The focus on 'labour geographies' help us understand how various forms of worker struggles shape platform capitalism its spatio-temporal dynamics. The focus on labour geographies in particular is relevant here for two reasons. One is that worker movements have gained tremendous attention in the last five years (e.g. Woodcock, 2021; Bessa et al., 2022). Second, much of the platform economy scholarship has considered these two strands (i.e. geographies of work and labour geographies) separately. By bringing them together, this paper advances this body work by highlighting how uneven developments are shaped both from above and below. The paper makes two key contributions. One, it shows that while in the contemporary era of globalisation some forms of work can move freely across borders, platforms' attempt to create a planetary labour market is not to disregard geography but to take advantage of it (Graham and Anwar, 2019). The result is that the global gig economy unfolds unevenly. Secondly, we demonstrate that labour has the power to alter these geographies of the gig economy, despite capital's attempt to 'fix' the question of labour in capitalism via platforms.<sup>1</sup> By placing worker struggles at the centre of our discussion, we outline contradictions to capital's globalising tendencies. The underlying argument here is that the outcomes of varied labour movements will define whether fairer and more just work futures will emerge in the era of platform capitalism.

### **Platform capitalism and uneven geographical development**

Some observers argue that we live in an era of platform capitalism (Srnicek, 2016) where private corporate entities called 'platforms' have emerged as dominant players in contemporary capitalism (Sadowski, 2020) and are reorganising the production landscape (Kenney and Zysman, 2020). For Srnicek (2016) platforms can be best understood by historicising the wider

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<sup>1</sup> The concept of fixes in capitalism has two meanings. One is a literal meaning of fixing capital in physical forms and the second is metaphorical as in a solution to crises or contradictions in capitalism (See Harvey, 2001).

restructuring processes within capitalism. Srnicek (2016: 36) notes ‘capitalism, when a crisis hits, tends to be restructured. New technologies, new organisational forms, new modes of exploitation, new types of jobs, and new markets all emerge to create a new way of accumulating capital’. In fact, the periodical crises of 1970s, 1980s, and 1990s were followed by new developments such as the flexible specialisation, a regime of insecure employment and the era of digital and financial revolution (Harvey, 2011).<sup>2</sup> The 2008 crisis is often seen by many to be the watershed moment in terms of the emergence of platforms as the latest tools of accumulation (see Schor, 2020; Acquier, 2018).

Today there are a wide variety of platforms. Google and Facebook are advertising platforms (Srnicek, 2016). Platforms like Upwork, Uber, Freelancer, Fiverr, etc. are ‘labour platforms’. Their business model is built around the extraction of data as raw material, which some scholars have labelled as data colonialism (Couldry and Meijas, 2019). Labour platforms can be defined as digital tools which bring together supply and demand of labour, including apps, digital infrastructure and algorithms for managing work (Woodcock & Graham, 2019). Work activities mediated by these labour platforms and characterized by independent contracting are what we understand as ‘gig economy’ (Woodcock & Graham, 2019). While labour platforms (henceforth platforms) are hailed by some as novel developments (e.g., World Bank, 2016), their emergence must be read within the broader history of the globalisation of work (see Stanford, 2017).

The globalisation of economic production has connected people, places, and firms in complex production networks (Henderson et al., 2002). Firms have been offshoring and outsourcing production (both manufacturing and services) on a global scale for decades to tap into cheaper raw materials, intermediary goods, and workers from various parts of the world (see a detailed history in Peck, 2017). With the increasing digitalisation of the world economy, firms can now tap into more places and workers than ever before (Foster and Graham, 2017).

Many of the labour platforms are now connecting clients/employers and workers globally (Lehdonvirta et al., 2019). The term ‘on-demand economy’ is often used to describe the economic activities on platforms (Shapiro, 2018). Some of the Fortune 500 firms also utilise platforms to organise economic activities in their global value chains (see Corporaal and Lehdonvirta, 2017). Whereas, previously outsourcing and offshoring of production took place between firms (e.g., lead firms and supplier firms), platforms are essentially allowing firms and/or clients to also source individual labour for a variety of activities (Anwar and Graham, 2022). It is, therefore, important here to distinguish between several types of gig economy activities on platforms.

The gig economy has been variously defined by scholars (e.g., Woodcock and Graham, 2019; Anwar and Graham, 2022). Different monikers are used, such as the sharing economy (Sundarajan, 2016), microwork (tasks such as image tagging) and macrowork (e.g., online freelancing with longer term projects such as virtual assistant) (see Howcroft and Bergvall-Kaåreborn, 2019). Amazon Mechanical Turk is considered a microwork platform (see Irani, 2015), while Upwork is considered an online freelancing platform (Kuek et al., 2015). Other typologies used are crowdwork or cloudwork (see Howcroft and Bergvall-Kaåreborn, 2019). The International Labour Organisation has recently started distinguishing between online web-based platforms and location-based platforms (ILO, 2021). While these conceptualizations and typologies can be helpful in some respects, they blur the [non]digital nature of the work done

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<sup>2</sup> Here we are mindful of the variegated nature of capitalist developments around the world (Peck and Theodore, 2007).

through the platforms and tells us little about the inherent geographies of work done via platforms. For example, all platforms depend on the critical infrastructure of the internet, smartphones, and laptops. Essentially, then all platforms are web-based. However, the work does not necessarily get done in an 'online' or 'virtual' space. It gets done in a particular place or location, since workers are always place-based (see Harvey, 1989). In other words, there is a geographical rootedness in work done through platforms. We, therefore, build on (Anwar and Graham, 2022) and Woodcock and Graham's (2019) conceptualizations of the gig economy into two broad types of activities: remote work and geographically-tethered work. Remote work is understood to be digitally-intensive and hence can be performed irrespective of the location of the workers, as long as they have access to the digital infrastructure (a computer or smartphone and an internet connection). Key examples include image tagging, transcription, search engine optimization, and software development. A restaurant in the US can source a web-designer in India through platforms like Upwork to design their website and source a virtual assistant in the Philippines to help with customer queries. These jobs can take a few minutes (e.g., image tagging) to weeks or months (e.g., virtual assistance or web design) to complete. Geographically-tethered work, on the other hand, can be digitally mediated and has to be performed by workers in certain locations. It may not be digitally-intensive. Examples include care work, food delivery, and ride-hailing services. For example, an Uber driver or Glovo worker in Belgrade must be close to their clients to offer their services.

This kind of conceptualization offers a window into the globalisation of work via platforms and the geographies they create. While remote work can in theory be done on a planetary scale, geographically tethered work is primarily local. The focus of this paper is the 'remote gig economy'. It shows that platforms are enabling planetary networks of work (Anwar and Graham, 2022). However, this does not mean that all work gets done everywhere. Instead, only a handful of locations participate in the remote gig economy (Kässi and Lehdonvirta, 2018). The point is that the digital gig economy remains unevenly distributed.

To this end we find it useful to draw on the concept of UGD (Harvey, 2006b) to understand the landscapes of the global gig economy. Uneven geographical development is the process by which the capitalist social relations take spatial forms resulting in some places benefiting at the expense of others (Smith, 1984). In order to overcome crises, capitalism expands spatially or produces space in its own image (Smith 1984; Lefebvre, 1991). Harvey (2006a) argues that capital continuously produces space on which our social and ecological life gets constructed (also Smith, 1984). This can be also understood as 'spatial fix' for accumulation, which plays out across space and time (Harvey, 2001). Let us explain.

All economic activities are embedded in specific locations (Hess, 2004) and each of these locations have distinct social, political, environmental, and cultural conditions. These conditions, therefore, influence the accumulation processes which generate different spatial outcomes (Harvey, 2006b). For example, the relocation of industrial manufacturing in the 1960s onwards from the high-income countries such as the US and the EU to low-income regions such as Latin America and East Asia (see Fröbel et al., 1981). This transformation is best captured in Doreen Massey's (1995) powerful thesis on 'spatial division of labour'. Massey notes that space is socially constructed (also Lefebvre, 1991) and an understanding of spatial must involve an analysis of economy and society. Not only the economic relations get stretched out over space but also the social relations as well which in turn shape uneven development (Massey, 1995). From the 1960s

onwards, investments flowing from high income countries helped create dedicated special economic zones (SEZs) in several low-income countries, enclaves for cheaper industrial production (Anwar, 2014). Even though SEZs can now be found in many countries, most famously in China but also India, Mexico, Ethiopia, and Jordan, their forms, functions and resulting outcomes vary (UNCTAD, 2019; Anwar, 2014; Azmeh, 2014). In China and Mexico, SEZs are primarily dedicated to spur the industrial manufacturing, while in India services sector activities have developed in the SEZs (Anwar and Carmody, 2016). In other words, the accumulation processes are materially embedded in the distinct socio-political and ecological environments (Harvey, 2006b).

As Smith (1984) notes different places crystallise into distinct territorial entities in a hierarchy of spatial scales resulting in uneven development. The point is that uneven development is a fundamental feature of capitalism which is articulated at various geographical scales (i.e., at the local, regional, national, and global). Unlike doctrines of globalisation or modernisation, which suggest failure to adopt certain models of development produces spatially uneven outcomes (see World Bank's 2009 World Development Report; and for its critique Harvey, 2009), UGD is a result of the capital accumulation.

More recently, the emergence of platforms in the 21<sup>st</sup> century is reconfiguring the divisions of labour and producing new forms of spatiality. Work on platforms can be digitally intensive. Thus, eliminating the need for workers to be close to their employers or the objects of their labour. The relative lack of fixed organisational infrastructure needed for remote work also means that it remains relatively footloose.<sup>3</sup> Instead of workers relocating for work, it is work that moves across borders.

Platforms have also reduced the need for firms to build new physical infrastructure or space. However, the advancements made in digital technologies bring into being a new ontic space: 'a world that is everywhere and nowhere, but it is not where bodies live' (Barlow, 1996). To put it differently, we are witnessing the emergence of a digitally distinct space (i.e., platform) that is fixed in distinct digital location and yet accessible from anywhere (Graham, 2015: 870). Platforms allow clients and firms to access cheap labour in different parts of the world. In other words, platforms are enabling many more regions of the world to connect with the global digital production networks (Foster and Graham, 2017). Hence, platforms can be understood as 'new digital spaces of production' facilitating planetary networks of work with clients and employers connected to labour on on-demand basis (Anwar and Graham, 2022).

Thomas Friedman (2005) referred to this globalised world of work where geography becomes irrelevant. However, as we argue in this paper, instead of doing away with geography, platforms take advantage of it. Despite platforms enabling clients to bring remote work to any parts of the world, only a handful of countries (such as India, Philippines and Bangladesh) supply a majority of the labour on platforms such as Upwork. In other words, platforms' networks are characterised by both asymmetrical scalar relationships and spatially uneven ones (Graham and Anwar, 2019). Another way of putting this is to say that not every everyone participates in platforms' networks

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<sup>3</sup> Lack of infrastructure on part of the employers means workers bear the costs and risks of infrastructure such as smartphone, laptop, internet.

and instead only certain places and people benefit from these digital spaces of production: i.e., uneven geographical developments in the gig economy.

To further illustrate this point, the next section of the paper takes up a multi-scalar outlook and outlines the uneven developments in the gig economy. The focus will be on: (1) 'the geographies of work' and (2) 'labour geographies. The empirical material is drawn from secondary sources of data such as Online Labour Index, Online Labour Observatory (OLO), published surveys by the ILO and other reports by think tanks and governments.<sup>4</sup> Some primary material is collected by authors from one of the main platforms, Upwork. This includes data on the number of registered workers and job listings on Upwork.

## **Uneven developments in the gig economy**

### *1. Geographies of work*

The geographies of work here refers to the multi-scalar and spatial distribution of productive activities. In the gig economy, the spatial distribution relates to the demand and supply of work on platforms. The supply and demand in the gig economy unfolds in a specific geographical pattern characterized by a clear division between high- vs. low-income countries. According to the data from the Online Labour Index, most employers in the gig economy are in high-income countries whereas a majority of the workers reside in the low- or middle-income regions (Kässi & Lehdonvirta, 2018).

On Upwork, one of the biggest platforms in the world in terms of registered workers, there were a total of 200,166 open projects listed on 4th April 2022.<sup>5</sup> Figure 1 provides the distribution of projects listed on Upwork from selected countries that account for 76% of the total projects listed on Upwork at the time of the data collection. The demand for work primarily comes from four countries, the US, the UK, India, and Canada. India is a unique case here. There is evidence of re-intermediated work transacted on platforms from India, which originates primarily from the US (Anwar and Graham, 2022).

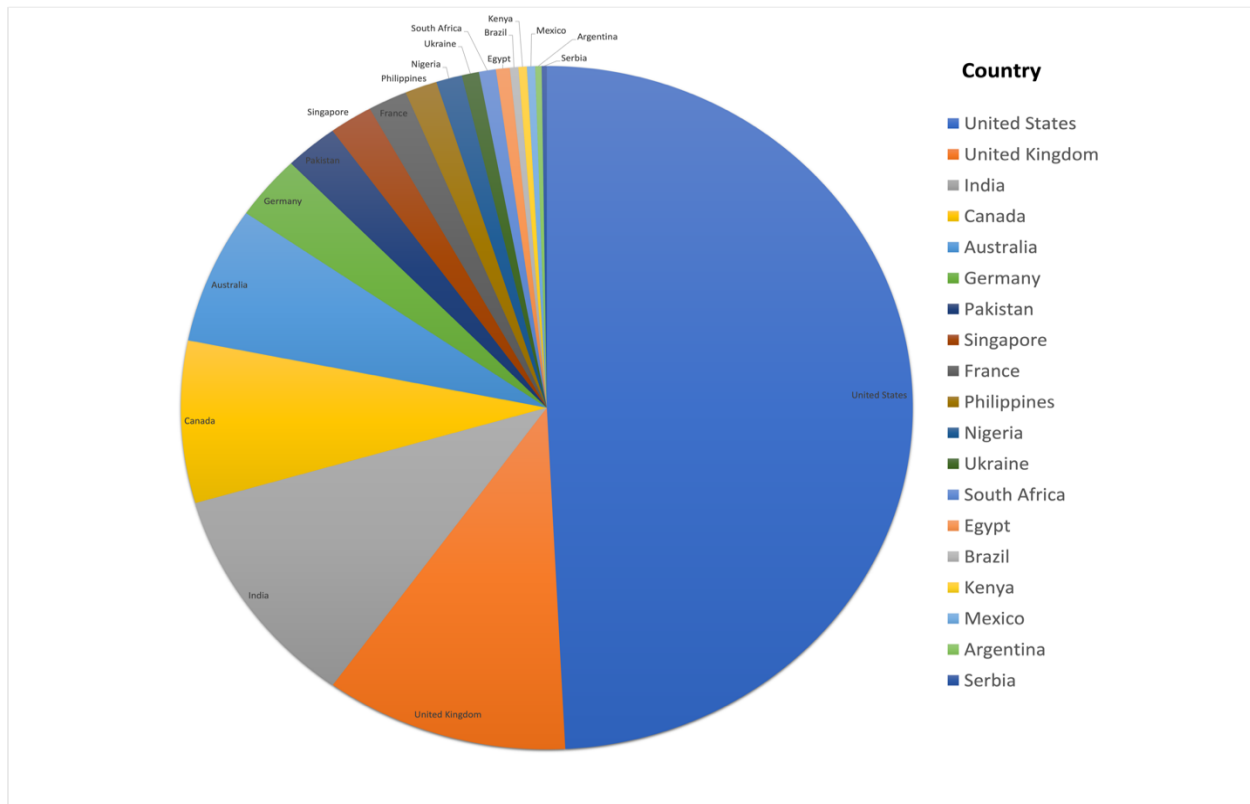
**[Insert Here Figure 1]:** *Jobs listed on Upwork by clients in selected countries.*

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<sup>4</sup> The Online Labour Index (OLI) measures the supply and demand of online platform labor across countries and occupations by tracking the number of projects and tasks across platforms in real times. Conclusions made from these data have a limited scope due to inclusion of only 4 English language digital platforms and potential errors in measurement of number of completed projects (Kässi & Lehdonvirta, 2018).

<sup>5</sup> The data was scraped by authors from Upwork.com manually using their filter menu on 4<sup>th</sup> April 2022.



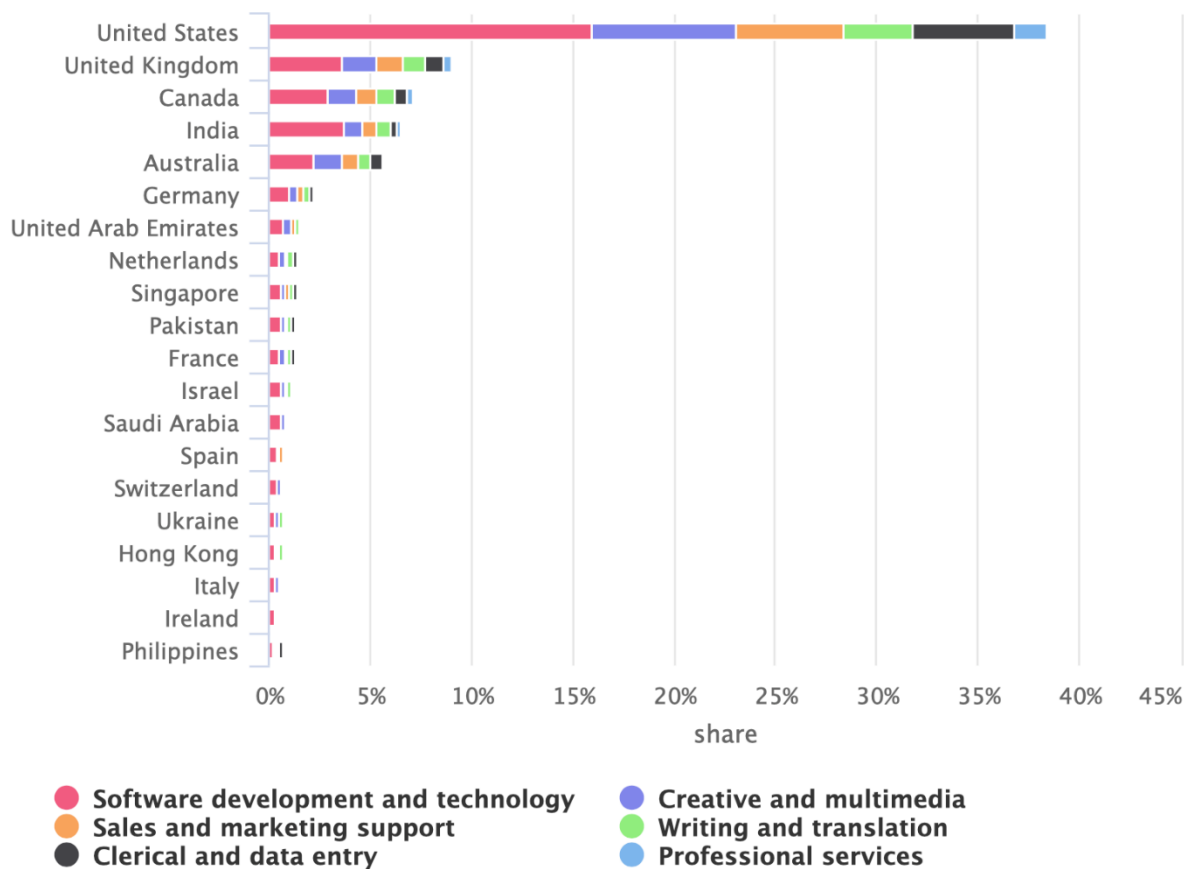


If we are to expand our analysis and include more platforms, this geographical spread remains more or less the same. For example, the OLO tracks all projects/tasks posted on five largest English-language platforms, representing at least 70% of the market by traffic (Kässi and Lehdonvirta, 2018).<sup>6</sup> The data from the OLO suggest that the biggest demand for remote work comes from the US, the UK, and Canada – accounting for more than half of the global demand (see Figure 2). The US alone accounts for almost 38 % of the global demand for remote work. To put this into context, these three countries with a high penetration of digital technologies are also key drivers of the global demand for outsourced information technology services (Beerepoot et al., 2017). In essence, what we are seeing with the remote gig economy is a replication of the uneven economic geographies of the business outsourcing industry.<sup>7</sup>

**[Insert Here Figure 2]:** *Global market share of employer country and work types*

<sup>6</sup> An important caveat here that the bulk of the remote gig economy is dominated by the English-language as shown by the OLO. There are significant non-English platforms, including Russian, French, Spanish, and Chinese ones. However, data on these platforms are rarely publicly available.

<sup>7</sup> Worth noting here that adverse working conditions in the outsourced services sector such as the call centers are well known (e.g. Taylor et al., 2005). A strand of literature is also emerging that highlight poor working conditions found in the remote gig economy (e.g. Graham et al., 2017; Wood et al., 2019).



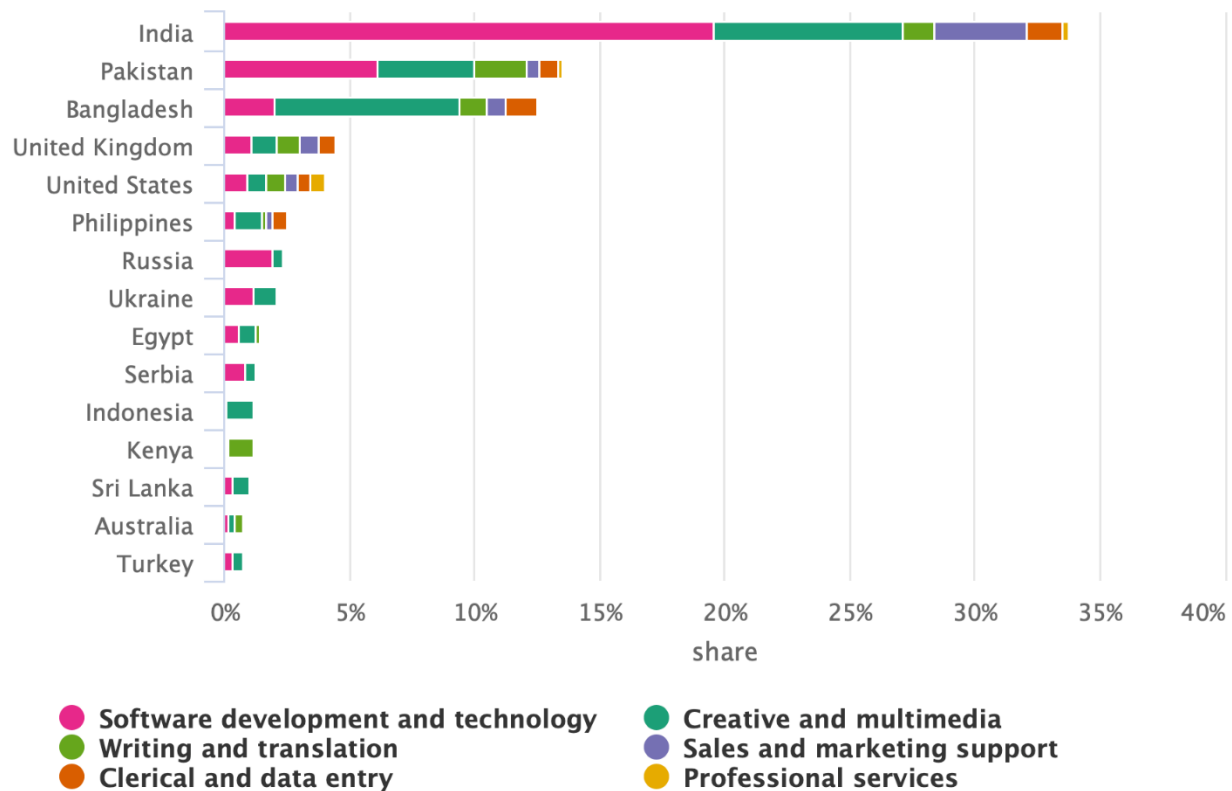
Source: (Kässi & Lehdonvirta, 2018)

On the supply-side, there are estimated 165 million workers registered on various remote gig economy platforms (Kässi et al., 2021). However, these figures should be read with caution: workers not only register themselves on multiple platforms, but also enter and leave platforms regularly. Furthermore, there is reintermediation of work, i.e., workers with registered accounts on platforms sub-contracting work to other workers. Much of this takes place outside of the platforms by workers who are not registered on platforms themselves (Anwar and Graham, 2021, 2020). Hence, it is likely that there are several million more workers hidden within the global gig economy.

Low- and middle-income countries supply a majority of the workforce in the global gig economy. Just four countries: India, Pakistan, Bangladesh, and the Philippines, supply more than half of the world's remote workers (Figure 3). India and the Philippines are also the market leaders in terms of delivering global services with millions of workers employed in their outsourced services sector (Beerepoot et al., 2017). It is likely that workers in both countries have developed and fine-tuned their customer services and cognitive skills (key aspects within remote work), enabling them to succeed in finding work on the remote gig economy platforms.

**[Insert Here Figure 3]:** Global market share of supplier country and work types

Source: (Kässi & Lehdonvirta, 2018)



### Types of tasks

If we shift the focus towards different types of tasks in the remote gig economy, there are geographical variations in terms of where these tasks are performed, an example of distinct division of labour. The OLO categorizes six major types of tasks conducted on various platforms (see Kässi & Lehdonvirta, 2018). Software development and technology is the dominant sector in most Asian countries, again highlighting the significant role of India and the Philippines in the IT services sector. In South America, most jobs undertaken by workers are in the creative and multimedia sector. In South-Eastern Europe, remote workers mostly do creative, multimedia, along with software development and technology work, with Ukraine, Serbia, and Russia as major supplier. On the African continent, while creative and multimedia tasks are common, there is a great deal of intra-regional variations, e.g., in Kenya writing and translation is the main tasks, while sales and marketing is common in neighbouring Tanzania. This could be attributed to relatively less developed education sector in the IT and engineering fields in most countries in Africa. There is also a significant variation within countries in terms of jobs performed by workers. For example, while US-based workers are well distributed across professions, Russian and Ukrainian workers mostly do software development and technology jobs, and Indonesian workers mainly do creative and multimedia tasks (Figure 3).

Perhaps, the most telling attribute of the unevenness in the remote gig economy is the proportion of people who are able to earn any income on platforms. Existing research has shown that only a fraction of the workforce is economically active on platforms, i.e., have earned any

income (Kässi et al., 2021). Table 1 provides data on workers in selected countries registered on Upwork, who earned at least US\$1 on Upwork. As we can see, less than 10 % of the total workers at any time are able to earn any income on the platform. Workers from certain countries e.g., India, Pakistan, Ukraine and the Philippines have a higher success rate in earning money on platforms compared to workers from Egypt, Brazil, and Ghana. Some scholars have identified racial discrimination by clients in the gig economy, which is likely to explain why workers from certain countries are unable to get their first job on platforms (Anwar and Graham, 2022). Governments have also become actively involved to promote platforms as means of bringing workers to the platforms (e.g. Kenyan government’s Ajira programme). While these programmes are seen by governments as means of employment generation, they result in increasing the supply of labour on platforms further dampening the prospects of workers to winning a contract. Uneven developments in the gig economy are also to be found between rural and urban areas as well as among gender groups.

**[Insert Here Table 1]:** *Workers’ ability to earn income on Upwork in selected countries.*

*Source:* Adapted from Anwar and Graham, 2022; Table 3.3, p.71. Data from June 2019, collected via manual web-scraping by one of the authors. *Notes:* a — Total searchable worker profiles; b — Searchable worker profiles with at least one hour worked and US\$1 earned; c — Potential workforce minus successful workers.

Country	Potential Workforce (a)	Workers with \$1 earned (b)	No Earnings (c)	Unsuccessful (%)
United States	758845	40214	718631	94.7
India	271460	32692	238768	87.9
Philippines	179689	24339	155350	86.5
Pakistan	82217	10189	72028	87.6
United Kingdom	71413	5166	66247	92.8
Ukraine	69076	12531	56545	81.9
Russia	65514	6418	59096	90.2
Bangladesh	59002	6793	52209	88.5
Canada	49113	3786	45327	92.3
Egypt	44270	2091	42179	95.3
Serbia	31109	4169	26940	86.6
Brazil	27169	1490	25679	94.5
Kenya	21412	1616	19796	92.5
Romania	20842	2087	18755	89.9
Italy	18201	1477	16724	91.9
Germany	16137	1529	14608	90.5
South Africa	15474	957	14517	93.8
France	15250	1269	13981	91.7
Mexico	14709	1140	13569	92.2
Argentina	14337	1475	12862	89.7
Spain	13964	1461	12503	89.5
Poland	11837	1311	10526	88.9
Nigeria	9499	827	8672	91.3
China	9446	814	8632	91.4
Morocco	9041	376	8665	95.8
Algeria	4383	165	4218	96.2
Ghana	1799	94	1705	94.8

### *Rural vs Urban Divide*

The existing socio-economic inequalities between rural and urban areas are also reflected in the way gig economy is organised. Gig work is dependent on information technology tools such as the Internet, laptops, and smartphones (Graham and Anwar, 2018). Urban areas have better internet connectivity and higher penetration rates of digital tools than rural areas (ITU, 2019). This corresponds with pointedly higher numbers of remote workers in urban areas, especially in the low- and middle-income countries (ILO, 2021). However, a recent study by Braesemann et al. (2022) in the US found that rural areas supply more remote gig workers in proportion to their population compared to urban areas. In other words, workers in rural American counties made more use of platforms than those in urban areas. Thus, it is likely that in some parts of the world, platforms might help bridge the rural-urban economic divide. Comparatively, Serbia, is one of the major labour suppliers in Europe for platforms. The majority of platform workers are concentrated in urban areas. The capital, Belgrade, is the largest city accounts for over 20 % of the total population and the only city with over a million inhabitants. All four major cities in Serbia (Belgrade, Novi Sad, Niš, Kragujevac) account for roughly 35 % of the population while they host around 70 % of all freelancers. Belgrade alone hosts around 44 % of gig workers in the country (Anđelković et al, 2020). Similar patterns are expected in other regions of the world such as Cairo in Egypt, Manilla in the Philippines and Nairobi in Kenya. These are major urban centres in their respective countries, with better access to digital connectivity infrastructure compared to rural areas and therefore likely to have high concentration of remote workers.

### *Gender dimensions*

Although in theory, the remote gig economy was expected to empower women and alleviate some of the existing gender-based exclusions commonly found in the local labour markets (Graham et al., 2017), empirical research with regard to participation and income underlines that digital platforms are highly gender-segregated (Anwar, 2022; Churchill & Craig, 2019; Vyas, 2021) and reproduce gendered hierarchies (James, 2022; Zhou, 2022). Globally, only one in every three remote workers is a woman according to the survey conducted by the ILO (2021). Men are more likely to participate in the remote gig economy than women in the US (Farrell, et al., 2018), Australia (Churchill and Craig, 2019) and many other countries in the European Union and in the UK (Huws et al., 2017). The same is true for the low- and middle-income countries, where women participation rates are lower than those of men (ILO, 2021). This could be attributed to men having better access to digital tools than women (ITU, 2019) but more importantly caused by the economic, social, and cultural divide in society.

The burden of both productive and reproductive labour on women as a deterrent to their participation has been identified in a number of recent studies (Anwar, 2022; James, 2022; Hunt et al., 2019). There are gender-based prejudices which negatively affects women's access to paid work (Leung and Koppman, 2018). These prejudices relate to what work women can and cannot do. Women are generally overrepresented in low-income professions such as writing, translation, tutoring and administrative work, while men work more in the high-income sectors such as information technology and creative sectors (ILO, 2021). A recent study on multiple countries in Africa has found that clients favour women for article writing while web-design and software development are considered for men (Anwar and Graham, 2022). Put simply, women are less likely to be hired for male-types jobs (e.g., software development) but more likely to be hired for

female-typed jobs (Galperin, 2021). According to Galperin (2021), the specific platform characteristics ‘trigger the use of cognitive shortcuts about intrinsic gender characteristics linked to different skills and occupation’. Besides gender stereotypes, female workers are affected by inherent bias of algorithms (Vyas, 2021).

Consequently, women face gender pay gaps on these platforms (Cook, Diamond, Hall, List, & Oyer, 2021). Adams-Prassl and Berg (2017) found that women earn only 82 per cent of what men earned, despite working similar hours, and having similar levels of education and experience on platforms. As a result, platforms are implicated in producing gender division of labour and has ramifications for the already existing inequalities between men and women.

The overall point is that remote gig economy does not unfold globally. Because work is still tied locally in places where workers are located, the gig economy remains embedded in specific socio-institutional and cultural landscapes generating uneven geographies. While platforms act as a fix for capital’s search for cheaper labour, workers also create their own fixes and shape platform’s economic geographies, to which we turn now.

## *2. Labour Geographies*

In the field of economic geography, labour question has been studied for decades in the form of politics of production, class relations, industrial disputes, and workplace as a site of struggle (Peck, 2018). The idea is that labour is more than a mere factor of production. Much like capital, workers also ‘actively produce economic spaces’ and exert their agency (Herod, 2001: 46; also Herod, 1997). In other words, workers also generate fixes by actively reworking space and engaging in several actions and contests and in the process remake the landscape of capitalism (Herod, 2001).

Concretely, worker actions have taken the form of labour movements and worker organisation at various scales and have been directed both against the state and capital. While, historically organised labour has been at the forefront of defending workers’ rights (Webster et al., 2009), organising labour has become increasingly difficult in the contemporary era. Sub-contracted and extended production networks meant that work gets fragmented and performed in hundreds of locations globally, thereby making mobilising labour extremely difficult. Labour union membership has declined in many countries (e.g., in the US, the UK, South Africa, and India (Webster et al., 2009; Nowak, 2021). Platforms’ ability to distribute work across borders meant workers can be atomized and hence organising labour is even more challenging in the gig economy (Anwar and Graham, 2020; Vandaele, 2018).

This does not mean that organized labour and worker movements should be consigned to the history books. Researchers note labour movements and protests in the gig economy have increased over the last five years, with 1268 protests across 57 countries between 2017 and mid 2020 (i.e. roughly one every day) (Bessa et al., 2022). The United States is the country with most protests, followed by China, India, UK, Argentina, and Spain. One of the major drivers of the worker movements has been the precarious and vulnerable working conditions found the global gig economy (see Bessa et al., 2022; ILO, 2021; Anwar et al., 2022a, Anwar and Graham, 2020). While trade unions have long been considered as central actors for organising labour and labour movements, which Atzeni (2021) has referred as ‘trade union fetishism’, the self-organisation of

gig workers outside the domains of trade unions is becoming prevalent (Anwar et al., 2022b).<sup>8</sup> At the same time, these remote workers' actions have also been directed both against the platform and the state.

One of the biggest protests of online platform workers happened in Serbia, when the government announced in 2021 to tax remote workers' online income. Several thousand workers demonstrated on the streets of Belgrade against the government's tax scheme (Đorđević, 2021). A new self-organised Association of Internet Workers was registered in 2021 which emerged out of a Facebook group (Petrovic, 2021). After weeks of protests, the Association managed to get concessions from the government such as the scrapping of the interest rates on previous debts of remote workers and no income tax for those on low income (Peoples Dispatch, 2021). Such remote worker actions have precedents. In 2014, similar protests had taken place in North Macedonia where both platform and non-platform freelancers or self-employed took to the streets against the heavy tax burden imposed by the North Macedonian government (Stojanovski, 2014). Their movement ultimately forced the government to scrap social security contributions and low tax rates (10%) for freelancers (Paunović, 2020). There are also examples of a variety of actions by workers against platforms (Anwar and Graham, 2022).

The organizational attempt of the "Turker Nation", a discussion board established by workers from the Amazon Mechanical Turk aimed to provide an alternative infrastructure for socialising and collective organization (Zyskowski & Milland 2018). Another example is the unionizing of YouTube content creators and users who teamed up with the German Metalworker's Union IG Metall and launched a joint campaign to challenge the platform's governance decisions. Content creators recently formed the "FairTube" project (Fairtube, 2021), which aims to overcome the geographical dispersion of diverse types of platform workers and unionize them (Niebler 2020). To put this into perspective, there are also examples of workers trying to overcome the geographical constraints in other forms of digital work. The creation of the Alphabet Workers Union (AWU) - a trade union for workers who work either as direct employees of Alphabet or who are temporary workers or contractors, as part of Alphabet's global production networks.<sup>9</sup> Hence, there is a need to think about global workforce networks when it comes to organising and for labour movements to have transnational impact, there is a need to rethink about building solidarity differently.

A study on African remote workers found that workers deploy everyday resilience, reworking and resistance strategy against platforms (Anwar and Graham, 2020). For example, workers share computers and platform accounts (acts of resilience), using two monitors and creating multiple accounts on platforms, re-outsourcing jobs (strategies of reworking), and filter jobs and withhold outputs, exposing bad clients (acts of resistance) (Anwar and Graham, 2020). Workers also actively use digital communication channels such social networking sites for overcoming constraints of their work, in an effort that can be described as developing 'webs of care' (Katz, 2004: 246). In Kenya, there is now an association of remote workers called the Association of Online Professionals, a group of remote workers in Nairobi. Their main aim is to sensitize the

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<sup>8</sup> Self-organisation among ride-hailing and delivery workers is well acknowledged and studied, including in this journal. See Webster et al. 2020.

<sup>9</sup> Some of the Silicon Valley tech giants have a globally-distributed workforce that train their computers for advanced artificial intelligence-based tools such as driverless cars and search engines (e.g., citation hidden; Tubaro et al., 2020).

possibilities and constraints of remote work among Kenyan youths and offer guidance to new entrants to these labour markets. Wood et al., (2018) note workers use digital communication channels (telephones, Skype) to develop communities and networks of solidarity even when they are not in the same country. Remote gig worker communities can now be found in cities such as Los Angeles, New Delhi, Karachi, Manilla, Cairo, Nairobi, and Sao Paulo, connected via digital communications channels (e.g., Facebook communities and WhatsApp). In other words, remote workers have agency and they exert their power in unique and often innovative ways against capital. In doing so, they are actively reshaping the landscapes of platform capitalism.

## **Conclusions**

Historically, work has been tethered to a particular place e.g., a farm worker on the farm and an industrial worker on the factory floor. These activities required workers to be physically proximate to the object or output of their labour. However, recent trends suggest that there has been an increasing push towards digitalisation in different spheres of economic activities. Put simply, work is increasingly becoming digitally-intensive and digitally-mediated. This in turn has given impetus to firms and employers to find new ways of getting the work done. If work that can be done by a worker, in theory, be transmitted around the world, then that work can be done by anyone with access to digital tools (Graham and Anwar, 2018). As a result, we are witnessing a globalisation of work never seen before via platforms. In essence, we are looking at the emergence of planetary labour markets, which in theory, might represent capitalism's ultimate 'fix' with labour power sold on the globally as a commodity (Graham and Anwar, 2019). A system where capital no longer needs to be fixed to a particular place, where workers are atomized, and pitted against each other in one planetary labour market, and one where firms can outsource their tasks and source labour from infinite pool of tethered workers (Graham and Anwar, 2019).

The fact that platforms are able to source workers globally does not mean that geography has become irrelevant. The supply and demand of labour is not mechanically determined by markets but socially produced and regulated (see Peck, 1996). In fact, this paper has shown that platforms leverage uneven geographies to facilitate labour arbitrage and cross border competition to create markets shaped by multi-scalar and asymmetrical technological, political, social, cultural, and institutional factors (citation hidden). In essence, platforms are enabling UGD and in some cases might be levelling up regional differences (e.g. rural vs urban).

However, as we pointed out in this paper, labour is not a passive actor in capitalism (Herod, 1997, 2001), instead it is actively shaping the geographies of platform capitalism. But for meaningful and long-lasting transformations in the world of work, there is an urgent need for unique multi-scalar and multi-dimensional strategies that utilise both space and place to workers' advantage. Below we outline some of the strategies for relevant actors to think more concretely on how to create better work futures.

Firstly, based on our discussion, in a globalised world of work, where economic transactions cross borders and extend on a global scale, there is a need for transnational solidarity of workers across sectors and borders (Munck, 2019). The solidarity networks of global labour depend on workers' ability to engage with local institutions and actors such as the state, unions, and the civil society (see Brookes, 2019) and to develop an ideological and material ground for labour movements in the remote gig economy. Just because structural constraints present in remote work (i.e., a globally distributed workforce) prevent workers to mobilise locally, it does not mean that workers



are unable to find connections and networks beyond their localities. If work is carried out on a global scale, then the organization of remote workers could take place globally too. What remote workers need is a broad working-class unity (based on shared experience of precarious employment relations) that extend beyond their locality, which may be difficult but not impossible to realize (see Paret, 2017). As we noted in the paper above, Turker Nation, FairTube, Kenyan Association of Online Professionals, demonstrate that workers are able to expand their networks to achieve working class unity in an effort to exercise their agency.

In this regard, remote workers can think of digital connectivity and tools to transcend space in which they exist, i.e., the stretching of social relations (see Massey, 1995). It worth reminding ourselves, that in a world of shifting scales of capital accumulation (i.e., local to global), labour remains connected both to the global networks and local places. While previously, much of the labour movements developed on the back of trade unions and the ability of leveraging physical spaces to their advantage, the gig economy is shifting the narrative towards self-organised forms of labour. Worker mobilisation in the gig economy also points towards labour's use of digital spaces to shape the geographies and scales of platform capitalism. Digital communication and infrastructure networks can be used by workers for international mobilization and leveraging various sources of worker power (Schradie, 2015). Some of the examples provided in this paper suggest that labour in the gig economy is already building those planetary scale networks of solidarity with some success. These efforts require strong regulatory frameworks to protect labour in the gig economy, which brings us to the second point.

At the heart of the gig economy is the issue of regulation which is a challenging task. Much of the remote work does not necessarily involve the physical movement of workers, it remains invisible to the public eye. Work is performed from locations often hidden away from public spaces such as people's homes. Gruszka and Böhm (2020: 7) refers to this as *perceptible invisibility*, i.e., 'the (in)ability to see and perceive platform workers "in the flesh" and their work "on the spot" - whether in the eyes of clients, other workers, or the surrounding public'. This '*invisibility*' of remote work to the naked eye also makes it hard for the state and its institutions to recognize and effectively regulate it in terms of worker rights or benefits.<sup>10</sup>

Platforms also disembed themselves from local jurisdictions and employ a mix of technological and legal manipulations to their advantage, i.e. classifying workers as independent contractors which allows them to shun any responsibilities for the workers' welfare and rights. (see De Stefano & Aloisi, 2018). As the gig economy has globalised, platforms have become emboldened to effectively ignore and/or circumvent existing regulations (see Ravenelle, 2019; Schor, 2020; Anwar et al., 2022b). We think that governments around the world should step up the efforts to regulate platforms so that they cannot violate labour regulations such as living wages, labour standards, and social insurance contributions. Work always falls under the jurisdiction of one place. Hence, the governments in countries where major gig economy platforms are based and where the demand is coming from (i.e. rich countries) have a duty to prevent malpractices of platforms and their clients' practices so that contingent employment relations are not globalized. We also want to emphasise that regulation requires greater multi-actor dialogues than are

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<sup>10</sup> Though some governments have attempted to regulate the remote gig economy, for example Kenya via its Digital Tax initiative (Itimu, 2019).

currently taking place in the context of remote work to ensure better job quality for gig workers.<sup>11</sup> Though, in December 2022, the European Union's Committee on Employment and Social Affairs adopted draft measures on new rules to improve the working conditions for gig workers (European Parliament, 2022).

Our world of work does not have to be structured in a way in which work is fragmented and workers remain invisible to the public eye and treated as commodities. The tasks for lawmakers, workers, civil society organizations, and activists is not just to make these workers visible again, but also to expose those actors who make these opaque networks of work possible to exploit labour and hold them accountable.

For researchers, several key questions could guide the future research agenda on the gig economy. Who participates and who does not in the gig economy? Who are the winners and losers? As the gig economy has grown over the last 10 years, how are labour markets being transformed. Similarly, intersectional studies on the gig economy are still limited. The issue of gender, race and class should gain more prominence. Comparative case study research could be one way of approaching these questions. Not necessarily comparing cases from similar contexts (e.g. comparing cases within the EU, though this is still valuable), but comparing different contexts (e.g. India and the US; South Africa and the UK; China and Australia). Furthermore, as we noted in the paper, labour protests in the platform economy have also grown recently. Future research could focus on empirically studying resistance strategies of workers to push back against platforms. While empirical research on platforms has been so far heavily informed by the Global North contexts (e.g. the US, UK, Australia, Germany, Italy, France), more research is needed from the Global South, which provides much of the labour supply on platforms.

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<sup>11</sup> Much of the efforts to regulate work on various platforms are centred around the geographically-tethered work where workers interact with people in their locality hence it is easier for their stories to generate public consciousness (e.g. Eurofond, 2019).

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