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Digital Gig Work in Africa: An Exploratory Survey

Abstract

Digital gig work is becoming increasingly important as a potential pathway to socio-economic development and unemployment alleviation. This promise is important given Africa's simultaneous status as the continent with the youngest population but the highest youth unemployment rate – a potential socio-political time-bomb. This explorative study aims to survey the state of digital gig work in Africa through a systematic and pragmatic literature review approach. The study identifies a number of digital gig work types and presents the available macro-level statistics as well as selected country-level initiatives and dynamics. While it is evident from the literature that researchers, governments and organisations have bought into the promise of digital gig work, it appears that the actual incidence and impact of digital gig work has been rather limited in Africa. The study further explores academic research focusing on diverse and numerous macro- and micro-level barriers impacting digital gig work in Africa. From the exploration, it is evidenced that knowledge gaps exist in the understanding of digital gig work in Africa. Specific research directions are suggested to address some of these pertinent knowledge gaps in order to inform policy and initiatives aimed at positioning digital gig work as one pathway to socio-economic development in Africa.

Keywords

Digital Gig Work, Digital Labour, Unemployment, Development, Barriers

1. Introduction

Africa has the youngest and fastest-growing population of all continents; however, its formal employment figures are the lowest, with a particularly worrying high youth unemployment rate (WEF, 2017). The human, social, economic and political cost of this situation is staggering and set to increase further unless solutions are found. Of course, the problem is extremely complex and dynamic, and it would be extremely naïve to assume that silver bullets and quick fixes are possible. However, the rise of the digital economy, estimated to grow at between 15% to 25% annually in emerging countries (WEF, 2017) has been touted by governments, policy makers, researchers, social entrepreneurs and philanthropists as one of the pathways out of the downward spiral (Page and Shimeles, 2015).

Most African countries have a rapidly growing and therefore young population but are faced with high unemployment and under-employment rates. Although the World Economic Forum (2017) estimates a youth unemployment rate for the continent of 13% (men) to 15% (women), the actual figures are likely to be much higher (Trading Economics, 2017), and many Africans have no or little hope of earning a decent wage in the formal sector commensurate with their education. Sadly, although much of Africa has experienced economic growth, its “production structures” have largely failed to translate that into employment. Not only are unemployment ratios amongst the world highest, it hits the youth hardest who account for 60% of Africa’s unemployed; with 72% of them estimated to live on less than \$2 per day (Ramalingam, 2016).

A strong, locally-driven and growing digital economy could potentially provide employment to a young and dynamic generation of African digital labourers (Lehdonvirta, 2016). Internet connectivity varies hugely in cost, quality and capacity across Africa, but the International Telecommunication Union (ITU) (2016) estimates that up to 25% of Africa’s population is connected to the internet. About 40% of this connectivity is through mobile broadband and this type of access continues to increase (ITU, 2016). The World Bank/Dalberg report on global online outsourcing (Kuek et al, 2015) estimates that, across six of Africa’s largest economies alone (South Africa, Nigeria, Kenya, Egypt, Morocco and Ghana), 2 million youngsters enter the job market annually but only 41,000 digital jobs are being created, satisfying only 2% of the labour supply. The picture is somewhat better if the entire IT, financial services and outsourcing industries are taken into account, since these are estimated to create close to 100,000 jobs annually each.

The purpose of this paper is to assess the current status of digital gig work in Africa, raise some of its issues, and identify research and knowledge gaps which can inform the future debate on and research into how digital gig work can contribute to the economic and human development of the continent. This objective can be broken down into the following sub-objectives: 1) what is the current status of digital gig work in Africa i.e. what facts do we have about its uptake? 2) What are the current barriers, constraints and issues relating to the low level, and slow growth of digital gig work in Africa? 3) What are the main academic knowledge gaps around digital gig work in Africa?

The research methodology followed is an intensive and systematic academic literature review using Google Scholar. The paucity of specific regional research necessitated the pragmatic inclusion of relevant grey literature including white papers, not-for-profit and supra-governmental studies, and media reports. To overcome bias and in an effort to ensure comprehensiveness, two senior research students were asked to perform a similar research review in parallel. This was complemented by the use of two fourth year students who were sub-tasked with a review of micro-work specifically. The next section the umbrella concept of digital labour, defines digital gig work and its types. The following section investigates the digital gig work landscape in Africa. The following section discusses the micro and macro barriers and issues facing digital gig work in Africa. The final section of the paper discusses research gaps and agenda for digital gig work on the African continent.

2. Digital Labour and Digital Gig Work

There are substantial differences in scholarly views as to the exact scope of what digital labour encompasses. This paper takes a fairly restricted view on digital labour even though, broadly speaking, two dimensions can be identified along which the definition can be extended. Fuchs (2014) provides an extensive view of digital labour that includes all labour that is integral part of the value chains producing digital products and services; this includes the mining of the raw materials and the manufacturing of digital infrastructure products such as computers and telecommunications equipment (Fuchs, 2013). It therefore also includes everyone employed in these industries such as telecommunications and their support industries, even if the nature of their job has only a small direct digital component. A second dimension refers to the amount of digital activity in one's work: most manufacturing and service industries have been revolutionised by IT and major components of traditional work processes have been digitalised, including most clerical tasks performed in larger traditional organisations.

In this paper we also distinguish between the more traditional digital labour i.e. digital labour in the context of existing industries and organisations using traditional employment structures, and the digital gig economy for more flexible online labour arrangements, typically platform-driven "one-job-per-contract" based labour, using Heeks' (2017b) taxonomy. Our discussion excludes the physical gig economy where the service is tangible or physical-location bound (e.g. Uber, AirBnB) even though these services are also part of the platform economy.

2.1 Categories of Digital Gig Work

2.1.1 *Online Freelancing*

Larger digital jobs can be offered in flexible contracting arrangements; better known as online freelancing jobs. These relate to clearly identifiable pieces of work such as web development, graphic design, document translations, report writing, book editing and similar, normally performed as one integral piece of work by one contractor. If these jobs are offered to an open market of potential contractors using an internet platform, this type of work forms part of the (digital) 'platform economy'.

2.1.2 *Crowdsourcing*

Crowdsourcing is "the practice of outsourcing work to an unknown group of people via the internet, instead of assigning it to internal employees" (Kucherbaev et al, 2014). Apart from cost-savings, it can help an organisation be more creative or innovative by soliciting outside ideas (Tripathi et al, 2014). It differs from online freelancing in that no single contractor is used. The complexity of the work varies and is normally constituted of tasks that cannot easily be automated such as translation, transcription, image object recognition, annotations and similar tasks (Ford et al, 2015). Crowdsourcing is a way of distributing a workload over a number of people (Mtsweni and Burge, 2014). A recent survey found the most popular tasks on Amazon Mechanical Turk (nominally no longer available to African 'turkers') to be (completing) academic surveys, categorisation, providing business feedback, sentiment rating, content review, data processing and tagging (Deng et al., 2016).

Crowdsourcing can be paid or unpaid (Pilz, 2013; Borromeo and Toyama, 2016) with the better-known platforms being used for paid crowdsourcing, e.g. Amazon Mechanical Turk (also called MTurk), CrowdFlower, Microworkers and more than 50 others (Samdaria, Mathur and Balakrishnan, 2012). Some platforms, such as Crowd4U and Zooniverse, focus on unpaid crowdworkers i.e. volunteers (Borromeo and Toyama, 2016) but unpaid digital labour falls outside the scope of this paper. Crowdsourcing categories include collective intelligence or 'the wisdom of the crowds' (to solve complex problems or create innovations), crowd content creation, crowd voting, crowd funding and micro-work or micro-tasking (Chiu et al., 2014).

2.1.3 *Micro-work or Micro-tasking*

Although some authors use the terms micro-tasking and crowdsourcing interchangeably, the former is really a sub-category of crowdsourcing (Kietzmann, 2016). Micro-tasking involves splitting a job up

into small or even tiny manageable pieces work (the micro-tasks) and allocating them to a large number of workers using an internet-based platform (Kobayashi et al., 2014). Micro tasks are usually generated from larger tasks such as translating an entire book, which are broken up into smaller pieces (translating a few pages); most micro-tasks require few skills or training (Mtsweni and Burge, 2014). Tasks that are considered as micro tasks can be analysed in terms of the task itself, the targeted workers and the compensation that workers receive for the microwork (Paolacci and Chandler, 2014). Factors that drive micro-workers include the financial reward that is received but often also other intrinsic (fun, learning, experience) and extrinsic (status, networking) motivators (Paolacci and Chandler, 2014).

As mobile phones are the sole technology platform for most potential workers in Africa, some platforms have focussed on micro-tasks which can be performed on mobile phones only, with selected tasks arguably even being feasible on feature phones using SMS functionality only (Murugesan, 2013). The categories discussed in this section are not necessarily fully exclusive as there are also other terms in use delineating work categories differently. The terms gig economy and platform economy include different combinations of the above, although the use of a technology platform which brings demand and supply for digital work together is explicitly required for the latter, but can also drive physical or location-specific services. Standardising the terminology around digital labour is an ongoing academic discussion although Heeks (2017b) has summarised the literature and proposed some consensus views.

3. Digital Gig Work in Africa

3.1 Online Freelancing

Little is known about digital freelancers and the size of their contribution to the economy. The global online outsourcing market was estimated at \$2 billion in 2013 and growing faster than the global economy, with about 5 million active workers (Kuek et al, 2015). Although this is only a small fraction of the corporate offshoring and outsourcing market, it is still about ten times the size of the microwork economy. It is growing fast, was expected to have more than doubled to \$4.4 billion in 2016 and is estimated to more than triple in size by 2020 (Kuek et al, 2015). One statistic shows that 40,000 Kenyans alone were registered on Elance in 2014, one of the online freelancing platforms (Melampy, 2015). Another more recent statistic claims that the Kenyan-owned KuHustle platform alone provide work to 21,000 Kenyans (Miriri, 2017). However, the overall participation rates in Africa are a tiny fraction of the ‘up to 8% of Americans’ online gig-participation reported in a US survey (Smith, 2016).

Recent fieldwork in Kenya and South Africa, the two leading African countries in this space, confirmed that digital gig workers (including crowd-sourced and micro-task workers) face intense competition within their countries and globally. This contributes to high employment insecurity and very uneven income streams. However, a significant minority of these workers appear to have overcome the barriers of prejudice, technological and other issues mentioned to earn decent income, suggesting that digital gig work can indeed be a vector for net African employment generation (Anwar, 2017). Popular gig platforms include Upwork and Fiverr (Smith, 2016).

A recent trend is to open up more traditional professions and occupations for offshoring and remote work, including radiography, medical diagnosis, accountancy and the like (Beerepoot and Lambregts, 2015). Unfortunately, it appears that Africa is losing in terms of its relative position globally in respect of knowledge economy, with other developing (especially Asian) countries improving faster than most African countries; reasons given include lack of R&D funding, eroding educational systems, brain-drain and corruption (Asongo, 2017). This is reflected in the very low participation rates of African contractors on sites such as oDesk (now Upwork) and similar (Beerepoot and Lambregts, 2015) when compared to e.g. Asian countries.

In a completely different category are the cybercriminals. Although their impact is usually seen in terms of the cost to the economy lost through cybercrime (scamming, phishing, digital piracy, SIM box fraud), it must be realised that the other side of the equation constitutes employment and revenue to the operators. Popular perceptions of Nigerian online scams must be moderated by the fact that the huge majority of Nigerians are law-abiding, moral citizens and many of the scams attributed to them are actually operating from other, better connected centres including South Africa. Although estimates of the cost to various economies exist – e.g. upwards of US\$500 million for Nigeria and South Africa each

(IDC, 2013) – the *income* side for African countries has not been reliably estimated (Boateng et al, 2017).

3.2 Crowdsourcing

Although crowdsourcing in Africa brings many opportunities, it is still a relatively small phenomenon (Chuene and Mtsweni, 2015). A recent Dalberg/Rockefeller Foundation report on digital jobs in Africa provides World Bank estimates of a market of US\$300 million accessed by approximately one million African workers, of which many are inactive. This translates to an average income of only US\$300 per worker. Although there is a predominance of providers from the global North, Africa's share is slowly growing with an estimated 10,000 providers from Nigeria and 22,000 from Kenya (Dalberg et al 2015). Much of the crowdsourcing in Africa takes place using global platforms, which typically originated in the USA. For instance, the uTest global testing and quality assurance platform claimed to have QA professionals in Morocco, Algeria, Tunisia, Egypt, Mali, Senegal, Kenya, Ethiopia, and Uganda with over 100 testers in Kenya alone (Chiura, 2012). However, there are a few African-born platforms, mostly limited to specific countries. For instance, the Ushahidi platform in Kenya was initially used to monitor and report violence in the 2002 elections but then morphed into a popular crowdsourcing platform. Since then other African crowdsourcing platforms have been developed; Chuene and Mtsweni (2015) list a number of crowdsourcing platforms although almost all are related to voluntary crowdwork or crowdfunding instead of digital labour. A noteworthy exception is TxtEagle, now called Jana, for mobile-based microwork.

However, it is difficult to assess the awareness, popularity, activity levels and impact of these. So far, relatively little empirical research has been conducted on crowdsourcing in Africa (Chuene and Mtsweni, 2015), although support for mobile phones and lack of awareness are argued as key issues for African platforms. Apart from baseline studies looking at the major actors, crowdsourcing studies generally discuss its (potential) benefits to Africa, mainly its potential to help in alleviating socio-economic problems such as high youth unemployment and poverty (van Etten, 2011). “[...] *digital initiatives such as crowdsourcing and on-demand mobile microwork services are emerging as potential solutions in minimizing the high unemployment rate in developing and under-developed economies*” (Mtsweni and Burge, 2014:2). Research conducted by Graham et al. (2017) found digital workers in South Africa who originated from other sub-Saharan African countries (Kenya, Mauritius, Lesotho and Cameroon) who see digital gig work as their only way of overcoming the regulatory constraints that they faced with finding work in their temporary country of residence (South Africa).

Other researchers have looked at the challenges around online work (Melampy, 2015). Scholz (2011:48) suggests that “[crowdsourcing] *simultaneously inspires unambiguous excitement about the potentials of the Open Web and moral indignation about the exploitation of new forms of labor.*” Similarly, Anwar (2017) argues: “*Digital freelancers face intense competition and employment insecurity. We are also seeing workers experiencing a complex interplay of historical and socio-political constraints, technological challenges, prejudices (gender, racial and national identity), and class relations, thereby, giving rise to very complex forms of precarious work.*”

Very little analysis has gone into understanding the aforementioned challenges. Hardly anything is known about how this form of labour affects the livelihoods of African workers (Chuene and Mtsweni, 2015). This means that there is currently also a dearth of empirically-based recommendations towards informing and formulating national policy frameworks (Brown and Adolwa, 2017).

Sadly, crowdsourcing initiatives and their advantages appear to be not very well-known or accessible in developing countries (Thies et al., 2011). Primary constraints appear to be the lack of ICT infrastructure and development and insufficient awareness of crowdsourcing (Mtsweni and Burge, 2014).

3.3 Microwork

Similar to crowdsourcing, much research on microwork in Africa focusses on exploring its possibilities and barriers. Mtsweni and Burge (2014:2) conducted a literature review to establish “the potential benefits of mobile microwork services.” Table 1 below lists some of the possible benefits accruing to workers and ‘employers’ (Mtsweni and Burge, 2014).

<i>Micro worker</i>	<i>Micro employer</i>
Access to various job opportunities	Access to special skills (e.g. translation from Zulu to Afrikaans)
Work experience	Value co-creation
Profiling	Work-force identification
Financial gains	Costs savings
Recognition	Diverse solutions
Flexibility	Scalability
Channel agnostic access	Diverse channels
Improved productivity	Increased productivity

Table 1: Potential benefits of mobile microwork (Mtsweni and Burge, 2014)

In addition to providing employment, microwork allows workers to gain valuable work experience by participating in various tasks (Irani, 2015). These tasks tend to vary in complexity and this then provides microworkers with the opportunity to engage in work of varying levels of complexity which could lead to long-term job opportunities in the formal sector where microworkers could potentially earn higher wages (Jiang et al, 2015). Another benefit of microtasking for employers is that they can save costs as most tasks that are posted are for a very low wage (Chuene and Mtsweni, 2015).

Research on microwork has looked at how people who cannot afford computers often attempt microwork in cybercafes, e.g. the study on India and Kenya by Gawade, Vaish, Waihumbu and Davis (2012). Alternatively, there is the attractive option of mobile phone-based microwork (Narula and Kulkarni, 2011). Unsurprisingly, some research on microwork originates from organisations that have established the microtasking platforms. In South Africa, for example, an organisation like Money For Jam (M4JAM) provides statistics based on their own work. Nkabinde (2015) interviews the founder of M4JAM, Andre Hugo who states that up until 2015, M4JAM had about 87,000 users with ages between 25 and 35. However, little if any research looks at microwork in Africa in a realistic and holistic manner.

4. Issues and Barriers Facing Digital Labour in Africa

Despite the acclaimed benefits of digital work, developing countries also face significant barriers in respect of digital labour (Heeks, 2017a). Some of the challenges are related to the lack of/limited access to the internet, limited infrastructure, low education and lack of awareness of platforms. Kuek et al (2015) compare five leading frameworks for assessing country competitiveness in attracting offshoring and the criteria map onto many of the ones listed below.

However, authors such as Brown and Adolwa (2017) or Heeks (2017a) question even the potential of digital labour to provide sustainable employment and resilient economic growth or foster innovation within Africa given the global competition, thus warning that this policy pursuit should not be chased blindly. Thus it is important to contrast the macro-issues advanced by most digital-labour-for-development (DL4D?) advocates with issues at the micro-level. Macro-issues are here seen as those issues which can only addressed by national intervention, whereas micro-issues – although also affected by national policies and contexts – could possibly benefit from lower-level interventions, such as platform-based policies.

<i>Macro-Level Issues</i>	<i>Micro-Level Issues</i>
<ul style="list-style-type: none"> Low internet access and weak technology Infrastructure, including unreliable electricity supply (Chuene and Mtsweni, 2015; Murugesan, 2013). 	<ul style="list-style-type: none"> Low employee self-efficacy (Van Belle et al, 2017).
<ul style="list-style-type: none"> Low education levels and shallow IT skills pool (Sabbagh et al, 2013; Bornman, 2016). 	<ul style="list-style-type: none"> Lack of bargaining power, feelings of worker exploitation and job insecurity (Mann and Graham, 2016; Lehdonvirta, 2016).
<ul style="list-style-type: none"> Visibility and awareness of gig work platforms (Samdaria et al., 2012). 	<ul style="list-style-type: none"> Quality control of the work delivered (Ipeiotis et al., 2010).

<ul style="list-style-type: none"> • Lack of suitable payment systems (Samdaria et al., 2012; Mtsweni and Burge, 2014). 	<ul style="list-style-type: none"> • Inequitable task assignment, discrimination and economic exclusion of African gig workers (Graham et al., 2017). (Mtsweni et al., 2016)
<ul style="list-style-type: none"> • Lack of government policy and labour regulation issues regarding gig work (Luther et al., 2012; Kuek et al., 2015) 	<ul style="list-style-type: none"> • Exploitative intermediaries, potential (lack of) transparency, fairness, security, accountability and dignity (Benghozi and Paris, 2016, Deng et al., 2016; Mann and Graham, 2016)

Table 1: A summary of the macro-level and micro-level issues and barriers affecting digital gig work

5. Research Gaps and Agenda

Although ‘digital labour studies’ have been emerging since the 2000s, many of these focus on the macro issues or the Global North (Casilli, 2016). All of the issues discussed in Section 4 are deserving of more in-depth research through both systematic large-scale quantitative surveys and smaller mixed-method or qualitative research around the micro-issues (Mtsweni and Burge, 2014).

5.1 Macro-level research gap assessment

At the macro-scale, it is clear from the literature that very few hard facts are known. Despite the difficulties of collecting and harmonising statistics in a diverse, under-resourced continent where national statistics offices are under-resourced and often subject to political pressure, it should be possible to improve on the current statistics – possibly by focussing on some of the larger economies and some smaller stable countries which can serve as proxies for others. Identifying proxies, base lines, and trends is crucial to formulate policies around digital gig work.

Another research opportunity is exploring possibilities in harnessing the data revolution (particular mobile and internet-of-things-based sources) to obtain amounts and detail of data that would be previously prohibitively expensive to collect, but also looking at ways of harmonising, cleaning, anonymising, aggregating, integrating, sharing and validating micro-data for usable macro-level analysis. This research could also feed in directly into the UN’s Sustainable Developmental Goals (SDGs) progress measures.

Given the diversity of country, policy and cultural contexts in Africa, a crucial challenge is how to generalise findings from one country to other African contexts. Typically national policies are formulated in the absence of evidence, but even where they are evidence-based, often little impact analysis is done. Where impact or evaluation studies are conducted, the findings are normally unique and specific to the country context. Finding ways of conducting empirical policy review and impact studies that provide effective learning for other countries is needed; perhaps these are better modelled on qualitative best-practices and case study methodologies than quantitative economics-driven approaches.

5.2 Individual level assessment of gaps

From a more individual – but no less important – perspective, there is even less known, especially about the impacts. For instance, despite the fact at least one million workers in Africa are currently doing crowdsourced and micro-work, little is known about their experiences. This applies even more to the more formally employed digital labourers. Given Africa’s very high economic inequality in the labour market, with the relative shortage of high skills versus the over-supply of un-/semi-skilled labour, individual digital labour issues right across the spectrum are likely to be much more pronounced than in the developed world. Research is needed among highly skilled IT professionals to assess the unexpected and negative consequences of their privileged position in the market (such as overwork, life-work balance, quality of life, burn-out). But perhaps more importantly, research is needed on the impact of outsourcing and impact-sourcing to African countries and offshoring away from African countries on individual’s wellbeing, ideally using a partly qualitative and overall more holistic approach than just economic measures. The uniquely African cultural aspects of employees also need investigation, ranging from ‘family tax’ (a successful income earner is expected to support the rest of

the extended family), the “ubuntu” spirit, intra-personal power relationships, decolonisation issues, ethnic and inter-racial relations. Again, research methods are needed to allow for harmonising or generalising beyond individual country contexts to allow for productive learnings and applications in other countries. As an example of what could be done using a quantitative approach, the World IT project uses a standardised instrument to collect comparable data sets across as many as forty countries, in this case around organisational and individual IT issues within a cultural, but not Western-dominated context (Palvia et al. 2017). Unfortunately, there are likely to be only two or three African country datasets (disclosure: the first author is a PI for one of the African countries).

If little research is being done on African employees, even less is known about the part-time and freelance workers. In a context in which many people access the internet via mobile phones, more research is needed to understand how people are using their devices to complete microtasks online. Apart from the ‘how’ or technological aspect, the personal aspect is entirely under-researched: what are the envisaged and experienced career trajectories of gig workers; what are the coping mechanisms of those who are largely unsuccessful in their attempt to participate in the digital economy (especially if significant financial and educational investments are made); what are the social networking mechanisms used in procuring work and sharing best practices (Heeks, 2015; Boateng et al, 2017). An interesting qualitative approach is the suggestion of seven stereotypical African online outsourcing worker archetypes such as the self-supporting Kenyan student or the Nigerian community leader (Kuek et al, 2015). The latter lists a number of additional areas requiring research (mainly but not exclusively limited to online outsourcing workers) including non-monetary impacts, drop-out causes, transitioning between full and part time work, and how to start and build a reputation (‘the cold start’ problem).

The views of the providers of the work, especially where the work originates from a dramatically different economic/social/cultural context, also need understanding; the motivations and experiences of those on impact sourcing platforms likely form a distinct sub-category.

5.3 Critical research gap assessment

Apart from empirical research, critical research is focussing on the humanistic aspects such as to what extent the phenomenon of gig economy, crowdsourcing and microtasking casualises labour, removes safety nets and traditional labour institutions and allows for exploitation under names as digital or neocolonisation, iSlavery or digital sweatshops (Casilli, 2016). A separate strand of critical research is possible around digital activism such as the formation of principles, standards and organisational forms to improve working conditions and employment outcomes for digital labour. In truth, both empowerment (optimistic) and exploitative (pessimistic) narratives are possible and their interplay should be further investigated (Fish and Srinivasan, 2012).

One other aspect that has not been researched well is focussing on more original digital tasks which are particularly suited to the continent’s circumstances, in particular conflict areas and least developing countries. For instance, the flexibility, low cost and scalability afforded by mobile microworkers in humanitarian and emergency relief situations or health epidemics is insufficiently explored in Africa. The use of crowdsourcing and microwork by national governments and supra-governmental development agencies working in Africa to kick-start initiatives and create local demand is another option that should be investigated; possibly this should include re-intermediators to handle the micro/crowdsourcing management. Another angle that remains almost wholly unexplored is the interrelation between digital labour and local innovation.

All of the above empirical research requires additional theoretical and academic insights as well. The digital labour domain needs better conceptualisation and theorising, in order to drive better ways of measuring the status and impacts of digital labour at the macro- and micro-level. Important is to not just focus on the financial-economic issues but also on the humanistic, social, psychological, ethical and political dimensions.

6. Conclusion

Digital gig work has been positioned as a potential pathway to socio-economic development and unemployment alleviation in Africa, especially under the assumed model where the work originates in the Global South. The promise is important given that Africa is simultaneously the continent with the

youngest population but the highest youth unemployment rate; this is likely to form a socio-political time-bomb. Many African governments and private organisations have bought into the promise of digital gig work, if not in action (or policy), then at least in words or promises; but, from the sparse and very approximate data available so far, the actual incidence and impact of digital gig work has been rather limited and is below what, for instance, many developing countries in Asia are experiencing. Apart from the lack of reliable or comparative statistics, the lack of critical and Africa-specific academic research also severely constrains both the macro- and micro-level understanding of the desirability, dynamics, promise and means to elevate digital gig work into a means for development. Although the overall macro-level barriers and issues to leveraging digital gig work have been enumerated and are widely understood, ways of addressing these through theoretical contingency models or pragmatic policy recommendations relevant to specific country contexts have not been forthcoming. At the micro-level, we have an even larger knowledge gap and our little empirical data is almost purely anecdotal; often biased by the researchers' objectives. This report aimed to expose the knowledge gaps and research challenges. However, the authors are still confident that digital gig work can indeed, in a significant way, help address some of the continent's urgent socio-economic challenges if more research can inform the way forward.

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