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YOUTH LIVELIHOODS IN THE CELLPHONE ERA: PERSPECTIVES FROM URBAN AFRICA

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Abstract: Issues surrounding youth employment and unemployment are central to the next development decade. Understanding how youth use mobile phones as a means of communicating and exchanging information about employment and livelihoods is particularly important given the prominence of mobile phone use in young lives. This paper explores and reflects on youth phone usage in Ghana, Malawi and South Africa, drawing on mixed-methods research with young people aged approximately 9–25 years, in 12 (high density) urban and peri-urban sites. Comparative work across these sites offers evidence of both positive and negative impacts. The final section of the paper considers policy implications. © 2018 The Authors Journal of International Development Published by John Wiley & Sons Ltd.

Keywords: livelihoods; urban; Ghana; Malawi; South Africa; mobile phones

1 INTRODUCTION

This paper is concerned with charting and comparing recent experiences of young people in urban and peri-urban Ghana, Malawi and South Africa, as they look to build livelihood repertoires in the cellphone era, and reflecting on possible wider implications for African development. Issues surrounding youth unemployment are central to the next development

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decade (Department for International Development, 2017).[1] Understanding how youth use mobile phones in the employment arena is particularly important, given the prominence of mobile phone use in young lives.

While extremely poor youth employment prospects are a central concern in the pressing debates surrounding Africa's urban futures, they are also increasingly implicated in a wider discourse around economic migrations from Africa to the Global North. Intertwined in both stories is growing evidence regarding the prominent role now being played by mobile phones in young people's efforts to generate new pathways towards better, more secure livelihoods, whether within or beyond the confines of the continent. The paper focuses on the first of those stories—youth livelihoods within urban Africa—but it is important to bear in mind the second story too, because it is youth's evident dissatisfaction and frustrations in their efforts to 'get by' in urban Africa that is helping to propel many journeys along alternative—albeit potentially more hazardous—route-ways towards a perceived better life in Europe (Jones & Chant, 2009).

Our extensive mixed-methods interdisciplinary research with young people approximately 9–25 years focuses on 12 poor urban and peri-urban sites across Ghana, Malawi and South Africa. In these sites, low-cost handsets (now including Internet-enabled smart phones) and highly attractive operator offers (associated with intense competition between network operators[2]) have been taken up rapidly. Following a review of literature to set the wider contexts of youth employment and mobile phone usage in Africa, and a description of the methodology employed, we outline current patterns of employment and phone ownership and use in the study sites, noting important country variations in poverty levels and the size of the informal sector. Four elements of the livelihoods nexus are then examined in turn: the conduct of job searches, phone-related work as a direct income source, phones in the organisation of micro-enterprise (including illicit enterprise) and the use of phones in building a safety net for unemployed youth (garnering resources and building network capital). This forms a base for comparative reflections regarding the role that the mobile phone is playing in youth efforts to secure better livelihoods in different urban places and the extent to which outcomes are proving beneficial.[3] The concluding section returns to the crucial importance of local context in shaping the way that livelihood opportunities play out on the ground and considers policy implications.

2 YOUTH EMPLOYMENT AND MOBILE PHONE USAGE IN AFRICA

This section briefly reviews two sets of literature that help provide context for the data presented and discussed subsequently: firstly, African youth employment patterns and associated urban migration issues and secondly, the impact of mobile phones on lives and livelihoods.

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[1]This document cites the President of the African Development Bank (The Financial Times, 30/08/2016): 'our growing population should be a positive if it's well harnessed but it's right now looking like a time bomb because of the high level of unemployment among the youth… It could heighten social, political and economic fragility for the continent'.

[2]With variable competition and effects on pricing across the three countries.

[3]The focus is principally on youth *per se*; word limit precludes a detailed gender analysis. Phones and female (dis) empowerment is the focus of another paper in preparation.

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Literature published to date on youth employment in Africa indicates that, across much of sub-Saharan Africa, open unemployment is relatively low: so-called 'working poverty' characterised by low-earning informal sector employment in household enterprises is widespread (World Bank, 2012, p. 206; World Bank, 2015, pp. 22–23). Even schoolgoing children are usually required to make (paid or unpaid) labour contributions from an early age (Andvig, 2001): as Filmer *et al.* (2014, p. 3) observe, 'most Africans simply cannot afford to be idle'. This is the case in Ghana and Malawi, but the situation in our third study country, middle-income South Africa, offers an important comparison: here, the informal sector is much smaller than elsewhere in Africa, and data for 2015 suggest that, for those aged 20–24 years, the 'expanded' unemployment rate (i.e., including not only those available and searching for work but also 'actively discouraged' youth who have given up looking for work) is as high as 61 per cent (though somewhat reducing to 42 per cent for those 25–29 years; Graham & Mlatsheni, 2015). We will explore the significance of this variation in the size of the informal sector for youth phone use and outcomes in livelihood contexts.

Despite differences in the nature of youth employment in the three countries, all continue to experience strong youth migration to urban areas (principally focused on perceived educational or employment opportunities). Many rural youth (and their elders) see youth's cityward movement as essential for improved opportunities in life, even though available urban employment is sparse. In the informal sector, employment is typically precarious: temporary, poorly paid, and offering poor work conditions. Hope flourishes, despite the evident frustrations of aspirant urban youth (Archambault, 2012; Chant & Jones, 2005; Hansen, 2005; Langevang & Gough, 2009; Mains, 2007; Weiss, 2005).

While diverse concerns associated with poor employment opportunities, constrained youth and urban drift in sub-Saharan Africa have been expressed over many decades, the advent of cellular telephony has brought a significant new force into play. A substantial literature now points to the potential or actual role of mobile phones in improving lives (if not livelihoods). Massively reduced costs of communication are allowing poor people access to connectivities they never before envisaged (Aker & Mbiti, 2010; Porter, 2012). Basic phones firstly facilitated rapid communication with family and friends across town but then increasingly, as networks extended, with those still resident in remoter rural areas. Today, Internet-enabled smart phones are also bringing a far wider network of contacts and new vistas of opportunity into view: social network sites such as Facebook offer potential contacts across the globe[4]: an exciting space for the 'enactment of imagined global identities' (McIntosh, 2010, p. 344).

In the context of such rapid developments, efforts to chart the impact of mobile phones across diverse aspects of life have been widespread. The potential of phones for supporting livelihoods and poverty alleviation is, unsurprisingly, a common focus of interest: their growing importance in job search (Klonner & Nolen, 2008; Muto, 2009; Samuel, Shah, & Hadingham, 2005), direct informal employment opportunities (hawking airtime and phone accessories; renting out, repairing and charging phones) (Burrell, 2010; Etzo & Collender, 2010; Nkwi, 2009), facilitating micro-enterprise

[4]In June 2016, there were reportedly over 146 million Facebook users in Africa, up from 10.5 million in 2010 (http://www.internetworldstats.com/facebook.htm, last accessed 4/11/2016).

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through enabling development of new business contacts (Donner, 2006; Jiyane & Mostaert, 2010) and more broadly for the strengthening of social and human capital assets (enhancement of skills, increased self-confidence, participation of women, empowerment and security against income loss) (*UNCTAD*, 2010) and the support of social networks to enhance safety nets (Samuel *et al*., 2005). Although much of this evidence is broadly encouraging, some worryingly differentiated livelihood impacts within communities are also reported, with benefits accruing to richer, more educated people (Jagun, Heeks, & Whalley, 2008; Souter *et al*., 2005) and to men (Comfort & Dada, 2009).

Surprisingly, among all this research, there is little that specifically addresses the impact on young people's livelihoods, despite the fact that even very poor youth have adopted mobile phone technology and the Internet-enabled smart phone with remarkable alacrity (Porter *et al*., 2012; Chuma, 2014, p. 406). Duncombe (2014) makes the point that in the livelihoods arena, there is a lack of understanding of the interrelationship between mobile phones as technological artefact and socio-economic development processes and assessment of the outcomes that arise from their use. This issue is particularly evident in the conundrum of youth who are at the vanguard of phone adoption and use (Filmer *et al*., 2014, p. 175) and yet still appear to be consistently disadvantaged in access to employment and income. We clearly need a stronger understanding of how those relationships operate on the ground and the extent to which innovations associated with the cellphone can provide a viable platform for youth poverty alleviation and improved livelihoods.

In-depth research evidence specifically focused on phones in the context of urban young lives in Africa is limited but hardly encouraging. In small town Mozambique, Archambault (2012, pp. 394, 408) describes how 'young men harness communication to express and address experiences of constrained physical and social mobility' yet remain imprisoned within a space of frustration, pretence and thwarted dreams where 'most are actually going nowhere' (Archambault, 2012, , p. 408). In Nairobi's Kibera slum dwellings, youth similarly use the phone to ease communication and strengthen existent social ties, but Kibere (2016) argues that these do not enable youth to bypass the hierarchical class-based nature of Kenyan society (reinforcing earlier findings by Shrum *et al*., 2011). While neither Archambault nor Kibere focuses specifically on livelihood construction, there is not much hope expressed in either study that mobile phones will help youth make economic progress. They seem rather to confirm conclusions of earlier research that mobile phones strengthen strong ties at the expense of weak ties among the urban poor (thus, building bonding social capital rather than the bridging social capital that Rettie, 2008 argues is required for successful job search and economic advancement).

But to what extent do those stories represent conditions across urban Africa? There are, as noted previously, more positive arguments that suggest mobile phones are becoming increasingly embedded in informal micro-enterprise networks and can encourage new entrepreneurial activity or new forms of livelihood[5]: or are these simply inapplicable to the disadvantaged youth cohort—a neo-liberal fig-leaf that excuses state non-investment in core services, distracting from the persistent inequalities faced by poor

[5]That is through their facilitation of information dissemination and storage of value by accumulating call credit or in a mobile money transfer account (Duncombe, 2014).

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young people (Jeffrey & Dyson, 2013)? In essence, as Duncombe (2014) posits this question, are phones making markets more inclusive for the poor, or do market processes give rise to inbuilt inequalities of access and ownership that cannot be surmounted by youth?[6]

3 METHODOLOGY

The data presented in this article are drawn from an Economic and Social Research Council/Department for International Development-funded study of the impacts of mobile phones on young lives in Ghana, Malawi and South Africa (2012–2015) and builds on earlier work on child mobility (2006–2010) in the same field sites.[7] The research for both studies was conducted in poor communities across 24 sites, but here, we focus on the six urban and six peri-urban sites (two of each per country) where youth phone usage is particularly high. The Ghana sites were in the coastal and forest zones, the Malawi sites in the Lilongwe plains and Blantyre/Shire Highlands, and the South African sites in Eastern Cape and Gauteng/north-west provinces.

A mixed-methods approach was employed: young people aged approximately 9–25 years were interviewed about their phone use, firstly using a story-based approach covering a wide range of issues, including education, health, inter-generational relations and mobility/migration. This was followed by 'call register interviews' focused on contact lists and recent phone-based interactions (including calls, texts and chat on social network sites). Other qualitative research included focus groups (some with older people 40 years +), key informant interviews with settlement leaders and others, and life histories with a small number of people in their late 20s–30s. At least 50–80 interviews took place in most sites. Subsequently, we conducted a major survey in each country of approximately 1000 young people aged 9–18 years, plus 500 19–25 years, split as evenly as possible across sites (2365 in the urban and peri-urban sites). Survey respondents were selected by enumerators working along transects across each settlement.

Throughout the study, we worked not only with research assistants from in-country collaborating institutions but also with a small group of 'peer researchers': young people we initially trained in 2006/2007 as schoolchildren (approximately 11–19 years) and who played a valuable role in identifying important questions for further investigation by the academic team (Hampshire *et al*., 2012; Porter, 2016; Porter et al., 2010; Robson, Porter, Hampshire, & Bourdillon, 2009). They conducted interviews with their peers early in the research process and subsequently according to their availability.

[6]Burrell's (2014) observations among a small group of 29 Ghanaian market women, contrasting the high usage of phones by older women for commercial purposes compared with their daughters' non-use for trade-related activities, phones might seem apposite—but her argument suggests that many of these market 'daughters' are from a more affluent group from those on which we focus. They use the phone as a social networking tool not because they lack hope of surmounting inequities of access in the market but because social networking offers the prospect of exit to more exciting opportunities elsewhere.

[7]The wide age range (9–25 years) encompassed in this paper stems from our desire to build on our earlier study with children 9–18 years in the 24 sites, thus following our older cohort 6 years on. The terms 'youth' and 'young people' are used interchangeably when referring to this study population.

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Table 1. Phone ownership and use in urban and peri-urban sites: all respondents 9–25 years

	Malawi		Ghana		South Africa	
	Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
	$N = 385$	$N = 382$	$N = 403$	$N = 393$	$N = 408$	$N = 394$
	(%)	(%)	(%)	(%)	(%)	(%)
Mobile phone in household	79.5	92.7	94.5	97.4	100	99.7
Currently owning mobile phone in working order	24.2	36.1	39.7	51.4	62.5	68.5
Ever owned a mobile phone	42.9	52.6	55.1	64.6	80.8	84.5
Mobile phone used in preceding 4 weeks	73.0	84.6	80.4	84.5	90.4	92.4

4 BACKGROUND INFORMATION FROM THE SURVEY

4.1 Patterns of Phone Ownership and Use

Our survey data provide a useful outline of patterns of phone ownership and use across the urban and peri-urban sites (Table 1). There are significant contrasts, reflecting the countries' differing wealth status (with Malawi ranked 184th out of 189 countries in the world, Ghana 138th and South Africa 99th).[8]

The vast majority of phones were still basic phones, particularly in Malawi and Ghana. Only 5 per cent of young Malawians and 9 per cent of Ghanaians—compared with 33 per cent of South Africans—had accessed phone-based Internet in the 4 weeks prior to the survey.

4.2 Employment Data

Employment data (Table 2) closely mirrors World Bank observations (World Bank, 2012) noted previously. In the poorest of the three countries, Malawi, most young people who were no longer enrolled in education reported they had obtained at least some employment during the year prior to survey, albeit such jobs were principally of the 'working poverty' type. In richer Ghana, figures are lower but still suggest nearly three-quarters of youth had some work. For many young people in both countries, the combination of a relatively early move out of education, possibly in their mid-teens or at an even younger age, coupled with at least occasional prior experience of employment in the informal sector (paid or unpaid) while still in school, is likely to have built some familiarity with the employment market and its potential by the time they reach their late teens. By contrast, in South Africa, only about half of those no longer enrolled in education had obtained any employment in the year preceding the survey. This may to some extent reflect insufficient preparation for the world of work: although school enrolment typically extends over a longer period of years than in Ghana and Malawi,[9] encounters with the employment market during school years are likely to have been less frequent given the sparsity of informal sector work.

[8]Projected GDP per capita, October 2016, from International Monetary Fund World Economic Outlook (October-2016) http://statisticstimes.com/economy/countries-by-projected-gdp-capita.php.

[9]Only one-quarter of our 9- to 25-year respondents in South African peri-urban sites and just 17 per cent in the urban sites were out of school, compared with one-third in the Ghana and Malawi urban and peri-urban sites.

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Table 2. Percentage of those 9–25 years no longer enrolled in education who had some livelihood activity within the 12 months prior to the survey

Malawi		Ghana		South Africa	
Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
N = 129	*N* = 139	*N* = 143	*N* = 144	*N* = 108	*N* = 64
88.4%	84.2%	74.1%	74.3%	49.1%	51.6%

Table 3 shows that the informal sector, and self-employment within that sector, dominates employment patterns in Malawi and Ghana. By comparison, in South Africa (among a much smaller set of young people in employment), the formal sector is much more in evidence as an employer; there is some informal sector employment working for family members but remarkably little self-employment reported, and not one of those surveyed employed others.

These country contrasts in urban youth phone ownership, school enrolment, overall urban youth employment and its sectoral distribution, especially between Ghana and Malawi on the one hand and South Africa on the other, are pertinent to the discussion which follows.

5 FINDING A JOB

This and the following sections explore areas where access to a mobile phone is implicated in urban young people's livelihood strategies. Obtaining a job is one of the most critical events in many young people's post-schooling transitions: the phone can clearly play a significant role in efforts to achieve this goal, both as a conduit for learning about new

Table 3. Main work activity by sector (9–25 years no longer enrolled in education)

	Public sector incl. teachers (%)	Large formal sector company/ organisation (%)	Self-employed (%)	Work for family in informal sector (%)	Work for non-family in informal sector (including casual labour) (%)	Own business employing others (%)
Malawi PU *N* = 113	0.0	5.3	36.3	4.4	51.3	2.7
Malawi U *N* = 116	2.6	4.3	42.2	9.5	39.7	1.7
Ghana PU *N* = 105	5.7	8.6	38.1	9.5	35.2	2.9
Ghana U *N* = 108	2.8	4.6	38.1	14.8	38.0	3.7
South Africa PU *N* = 47	17.0	23.4	2.1	34.0	23.4	0
RSA U *N* = 34	11.8	11.8	11.8	44.1	20.6	0

PU, peri-urban; U, urban.

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Table 4. Percentage of those 9–25 years no longer enrolled in education who used a phone in the 12 months prior to survey in their efforts to find work

Malawi		Ghana		South Africa	
Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
(%)	(%)	(%)	(%)	(%)	(%)
$N = 120$	$N = 136$	$N = 141$	$N = 144$	$N = 108$	$N = 63$
20.0	25.0	27.0	26.4	54.5	49.2

opportunities and for contacting potential employers, thus reducing search costs (Samuel *et al*., 2005).

In the survey, young people were asked if they had used a phone to search for a job at some point(s) in the previous year. In the urban and peri-urban sites, among those no longer enrolled in education, approximately half of South Africans, compared with only around one-quarter of Ghanaians and Malawians, said they had done so (Table 4).

References to the route-ways that are used to search for job openings through phones are particularly enlightening. Direct phone communication to personal contacts was the prime route for at least 95 per cent of Malawians and Ghanaians in all the urban and peri-urban sites. The following is a typical example (closely mirroring Muto, 2009, where network expansion increased the chance of rural dwellers choosing migration to the city to find jobs): a 20-year-old (illiterate) woman currently working as a housemaid in urban Malawi had received a call from her older city-based sister who had found her a potential opening and '*as soon as I got the information about the job I started off the very same morning*'. Her sister met her at the bus depot and took her immediately to the employer's house. This overwhelming focus on personal contacts in Ghana and Malawi when using a phone to search for jobs can be linked to the high dependence on informal sector openings and a tradition within that sector of appointment through kin (and, to a lesser extent, friendship) networks.[10] Additionally, even formal sector enterprises may still rely substantially on informal networks (compared with those in South Africa, discussed in the next paragraph) and also put less focus on formal application through the Internet (because Internet-enabled phone ownership, as noted previously, was still much lower at the time of survey in both countries compared with South Africa).

By contrast with Ghana and Malawi, only 49 per cent of South Africans in the urban sites and 60 per cent in peri-urban sites reported a *principal* focus on personal contacts. Here, Internet searches were the principal route for 38 per cent of our peri-urban and 46 per cent of urban survey respondents (compared with under 5 per cent among Malawians and Ghanaians in all urban and peri-urban sites).[11] Young people's actions are firmly embedded in their specific local context: the far higher usage of phones for job search in South Africa (Table 4) is a function of diverse factors—higher outright unemployment

[10]As described by Hanson (2005) for urban Ghana.
[11]Subscriptions to sites providing job alerts were of much lesser importance, even in South Africa (where they were the main route for only 3 per cent).

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and greater access to mobile phones, including Internet-enabled phones (albeit with high data costs), are certainly part of the equation, as is also the fact that the social capital available to young South Africans is often not very 'productive' (Graham & de Lannoy, 2016). The necessity of focusing more on job search in the formal sector and following its more formalised employment procedures (given the relatively small informal sector) also probably figures significantly in this story. This is well-reflected in interviews, such as the following:

> *Job hunting was really difficult (without a phone) because I had to rely only on buying newspapers and even (then needed to give) my mother's cell number when I was requested to give my contact details*. (man 23 years, Eastern Cape, currently undertaking an NGO internship)

> I check the Internet once a week for any vacancies. If I find any vacancy, even if it has passed, I take phone contact … I call the numbers … (and) I normally ask the person if I can send my CV. (Woman 25 years, Gauteng, volunteering; recent in-migrant from rural Limpopo)

Those relatively few we interviewed in urban South Africa with jobs or volunteer posts regularly attributed success partly to owning/using a phone. For many, however, hope eventually fails because, even with good information on available jobs, there is still the need to be able to offer the skills required for the post, and clearly, many do not have those skills.

> *I subscribe to many websites: Job Mail, Career 24 ... they send me emails with job alerts. There is no fee to sign up. Every day I get emails about jobs…. We are applying, applying, applying. My friends too. Every day we apply but we don't get any feedback. That's what I hate about this system*. (Woman 22 years, North-West Province)

This latter statement strongly resonates with Graham and Mlatsheni's (2015) assessment of South African youth's difficulties: sadly, preliminary optimism in the early post-school years is often replaced by hopelessness of ever finding work such that 'actively discouraged' youth not seeking work reportedly reach as high as 61 per cent in the 20–24 years cohort. The experience mirrors that of the young people in urban Mozambique and Kenya presented earlier (Archambault, 2012; Kibere, 2016). In South Africa, however, this reflects a somewhat different employment market context where the provision of quality education for the Black majority remains woefully poor, and there are few opportunities to obtain on-the-job training; ironically, the country has a shortfall of highly skilled labour and an oversupply of low-skilled labour (Graham & Mlatsheni, 2015, p. 53). Young people who have been encouraged to move to the city by hopeful family members then face enormous stress as they struggle to send money home to the village where a large body of chronically unemployed adults of all ages are calling for assistance.

One final note regarding job search: in all three countries, only a very small proportion of enrolled pupils said they were using phones for job search—2 per cent in Ghana and Malawi and 6 per cent in South Africa. This suggests more support in schools in preparation for job search (along with better skills development/training) would be valuable in all three countries.

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6 MOBILE PHONES AS A DIRECT SOURCE OF INCOME

Across Ghana and Malawi (and as reported elsewhere across sub-Saharan Africa), young people are widely in evidence selling handsets, sim cards and airtime, battery-charging and repair services and, increasingly, mobile money services; this is an attractive opportunity because it requires little entry capital or formal skill (Burrell, 2010; Etzo & Collender, 2010; Nkwi, 2009) and is frequently initiated with material support from family members (Porter, 2012). Usually, however, such work takes place alongside other petty trade and services, such as a combined enterprise of battery charging with barbering, and could not be adequately identified in our survey. Thus, only 19 young people in the Ghana survey and 23 in Malawi said they owned their own business selling airtime, with a further five in Ghana and seven in Malawi with their own business selling mobile phones.

In many cases, however, qualitative data indicate that such activities have contributed to providing an acceptable income, at least in the short term (probably because airtime sales so often are run alongside other petty trade). A 20-year-old woman in Ghana, for instance, reported that selling airtime has '*taken care of my needs up to now*'. She had made enough money from selling airtime to pay for her Senior High School education and continues to sell as she saves towards her entrance to nursing college. Another girl had saved enough to continue her education at teacher training college: with great pride, she observed that she had put GH¢500.00 (approximately £128 at the time) in the bank from her mobile phone credit sales. Meanwhile, a young man (23 years) observed that his average monthly airtime earnings (around GH¢150.00, approximately £38) were more than the salary he earns as a pupil teacher.

In urban Malawi, there were similar stories of successful livelihoods being supported, at least in part, through phone-related business but principally phone repair and phone charging. A 20-year-old man who has been repairing phones and other electronic equipment for over 3 years reflected: '*I make a lot of money from this business … I am not complaining at all*'. He not only provides for himself but also proudly supports some of his extended family. He attributes his success partially to the influx of poor quality Chinese phones, which '*are not durable … that is good news to me … The mobile phone has given me an economic platform on which my future life will depend*'. This success has encouraged him to start training apprentices.

In these poorer urban areas of Malawi, few people have access to mains electricity, so charging phone batteries can also reportedly bring a good income. However, as much literature suggests (though particularly with reference to rural areas, e.g. Burrell, 2008 for Uganda), in the longer term, diminishing returns may set in as more people start selling the same goods and services: '*there is high competition here because there are a lot of people doing the same business … so this is the biggest challenge*' (man 24 years); '*the profits (from airtime sales) are just too little … to have any impact on one's life; maybe phone charging and phone repairing, but not airtime selling*' (man 18 years, hawker). The paucity of profits from airtime sales was observed by many others in urban Malawi, and contrast with Ghana, probably because the population is poorer.

In South Africa, far fewer young people we interviewed were involved in hawking phone-related goods and services (and no one in the survey reported they were working in a cellphone-related business). Here, the major supermarket chains sell airtime and various phone accoutrements, and access to mains electricity is much higher than in urban Ghana and Malawi. Most of the people we interviewed in the qualitative component of the research had only recently started up in phone businesses (mostly selling airtime in

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Table 5. Percentage of business owners/self-employed for whom cell phones played a role in starting their business

Malawi		Ghana		South Africa	
Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
(%)	(%)	(%)	(%)	(%)	(%)
$N = 58$	$N = 53$	$N = 41$	$N = 43$	$N = 8$	$N = 4$
28.8	31.6	34.7	51.0	50.0	40.0

conjunction with other petty trade), which may indicate potential difficulties regarding the longer term sustainability of such enterprises:

> I recently started to sell airtime in town ... I started 2 weeks back … In some days I make R300 (c. £17 at that time) but some other days I make R150. (woman 23 years, Eastern Cape)

> *I sell airtime for all networks ... I charge R6 for R5 airtime so I earn a 1R profit ... I have recently started this business (so) I don't have much experience as to how much profit I make*. (male 21 years, also sells fruit, etc., Eastern Cape)

7 USING THE PHONE IN WORK, INCLUDING BUSINESS START-UP

As noted earlier, evidence has been accumulating with reference to phone use in micro-enterprises, notably small-scale trade (though rarely with a specific focus on youth). Here, the argument tends to revolve around its potential to enable development of new business contacts, improve organisation of freight and personal travel (with time and cost benefits), improve profit margins and even support women's empowerment through improved skills and self-confidence (Overa, 2006; *UNCTAD*, 2010).[12]

We find that, for young people who have already obtained work of some type, the mobile phone can facilitate diverse activities (discussed further below in this section), but it has been more difficult to identify its specific value in business start-ups. In qualitative interviews, respondents tended to talk about ongoing use rather than the start-up process, and in our survey, only a very small number of respondents answered this question (Table 5). In the South African peri-urban and urban sites, overall numbers are far too small to allow for comment, except to note again how few respondents categorised themselves as currently self-employed or operating their own business. In Malawi and Ghana, the data suggest that mobile phones have played some part in over a quarter of respondent business start-ups in the Malawi peri-urban and urban sites and one-third to one-half of business start-ups in Ghana. The lower figure for Malawi may well reflect, at least in part, much lower phone ownership than Ghana (Table 1).

Table 6 indicates that, in most sites, a majority of the micro-entrepreneurs who responded had been using phones for business-related activities. Survey respondents were

[12]Also, see Ilahiane's (2013) argument from a Morrocan case study that mobile phones have potential to transform social and economic networks.

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Table 6. Business owners/self-employed: percentage who used phones for business-related activities in the 12 months prior to survey

Malawi		Ghana		South Africa	
Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
(%)	(%)	(%)	(%)	(%)	(%)
$N = 43$	$N = 46$	$N = 74$	$N = 76$	$N = 14$	$N = 9$
50.0	59.2	53.5	69.6	50.0	44.0

also asked about the kind of activities where phone use had been important. In all countries, taking orders from or contacting customers or clients dominated. A small proportion of survey respondents in each country (only a few per cent at most) said they had experienced business loss because of mobile phones: this was principally a result of loss or failure of their phone but, sometimes, because competitors had better phone access.

Qualitative data add to this picture with stories from established micro-entrepreneurs, including numerous small service and trading enterprises that use the phone extensively and intensively to build relationships with customers and suppliers, pre-arrange meetings, book personal and freight travel, recruit temporary assistants when they are exceptionally busy (especially tailors, hairdressers, retail traders in diverse areas, though they are often operating within larger family business operations) through mobile money transfers and bank notifications of payments. The strongest examples of phone use among urban young people running small enterprises came from Ghana. However, even here, many are operating so close to the breadline that, while keeping a phone is seen as essential to business, this sometimes entails sacrifices elsewhere: '*At times I have to sacrifice the little money I have to buy units instead of food to feed myself*' (woman 22 years). Indeed, the vital importance of keeping the phone fed is a persistent story: '*I feed and care for my phone as my third son!*' (man 25 years).

Despite the importance of phone communication in Ghanaian micro-enterprises, in particular, there is often concern to maintain more direct, face-to-face interaction. Thus, a carpenter who has negotiated contracts with potential clients by phone (and now displays his phone number prominently on his shop wall) observed that, when purchasing building materials, he always goes in person to examine the materials and discuss prices: '*I do not transact business with them on phone because I think it can breed mistrust*'. This suggestion mirrors much work on African business relations, which stresses the importance of direct personal interaction for trust-building (Lyon, 2000) and more recent specific reference to questions of trust when phones, as opposed to face-to-face interaction, are employed in business communication (notably Molony, 2007). Nonetheless (as Donner, 2007 points out in an Indian context), there are potential synergies between mobile-mediated and face-to-face interactions where the two are combined: this seems to be the pattern of practice in Ghana.

In Malawi, examples of phone use among young people in micro-enterprise are mostly related to trading, as with the 16-year-old (already married) young woman who uses her phone to organise regular supplies of rum from an aunt for whom she works as a seller, or the 27-year-old fish retailer who organises his supplies from lake Malawi by phone. In the peri-urban sites, where there are many produce dealers, calls may also be made to compare retail prices offered by potential buyers. However, such businesses in Malawi

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are often extremely precarious and in the prevailing context of widespread poverty, many respondents suggested that, when conditions dictate, the phone will be relinquished, albeit reluctantly: '*I always buy a cell phone with a mind that I will re-sell it when I desperately need money to help my family… buy food, medication*' (man 28 years, runs a grocery store). Examples of distress sales in the other study countries are far rarer.

In South Africa, strong examples of young people using the phone in micro-enterprise were particularly sparse (except in transport businesses[13]). Here, youth self-employment in poor urban neighbourhoods is much less common than in Ghana or Malawi (Table 3): in the apartheid era, such activity was banned and that historical legacy continues to throw its shadow on contemporary urban life. The following are rare examples of phone use in this context:

> *The phone helps me a lot in my business of selling bead work (to tourists). Sometimes a customer asks me to make an item … then we exchange numbers. After I have finished the item I call (them) to pick it and pay … I think the cell phone has … improved my relationship with my customers … sometimes I'm able to make R200 a day*. (Woman 24 years, Eastern Cape)

> *When I started my hairdresser shop I posted my numbers on my shop so a lot of people got my numbers … If it wasn't for my phone, I wouldn't be where I am*. (Woman 20 years, Gauteng)

At this point, it is necessary to bring to the fore a negative thread to the story of phone use in livelihood support: the potential of phones to encourage or support illicit livelihood activities. Recent work, such as Hahn's (2012) observations of highway robbery in Burkina Faso, Newell (2012) on young men's phone fraud 'bizness' in urban Cote d'Ivoire and Lamont (2013) on the use of the mobile banking facility M-PESA in Kenya to pass bribes to the police, exposes a range of creative strategies whereby mobile phones are harnessed to facilitate illicit entrepreneurial activities, from theft and associated thuggery to phone-based scams, bribery and blackmail. Young people are often implicated in these stories, and our fieldwork provided examples of phone-facilitated illicit acts with direct livelihood implications (in addition to wider issues of harassment, circulation of pornographic material, inducements to gambling, etc.) where young people figured either as victims or (in a few cases) as perpetrators.

We occasionally met stories describing how phones were used to effect house robberies or to perpetrate phone scams, of which the following is a fairly typical example of the latter:

> *I received a message that was saying I have won R2,950 000 … saying it's a Nokia promotion … But the message was saying I must first call the guy … he sent me an account number [as] what I must do was to first pay an amount of R1800*. (man 25 years, shop worker Eastern Cape).

However, phone theft was by far the most widespread crime discussed. In the survey, *personal* experience of phone theft/attack was reported by many young people: 13 per cent in peri-urban and 15 per cent in urban Ghana; 11 per cent in peri-urban and 18

[13]See http://www.ifrtd.org/index.php/component/k2/item/23-rural-transport-news-december-2015.

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per cent in urban Malawi; a massive 48 per cent in peri-urban and 45 per cent in urban South Africa. In South Africa, such theft was particularly likely to be accompanied by violence:

> *Two guys caught me while I was in the public toilets in town, they took out knives and told me to give them my phone, so I had no choice*. (Male student 20 years, Eastern Cape)

Given the perceived importance for many young people of mobile phones in livelihood contexts (whether for job search, work operations or broader efforts to 'get by' described in the next discussion), such theft can have substantial livelihood implications beyond immediate financial loss of the handset and/or trauma associated with physical attack. But inevitably, young people were also sometimes specifically implicated in such attacks: '*So many tourists are attacked by these young boys … and they are mostly targeting the cellphones so … that is denting the image of our area … For us to be able to survive, we depend on the tourists*' (18 years female cook, Eastern Cape). The underlying themes of unemployment and deep poverty, embedded within a history of apartheid-associated racial abuse and violence, that form the backdrop to so much of the foregoing discussion in the South African context, are clearly pertinent here.

8 SAFETY NETS FOR YOUTH—BUILDING NETWORK CAPITAL AND GARNERING RESOURCES

The focus this far has been on the phone as a tool for finding and keeping employment, yet for many of the very poorest young people—from very young pre-teens onwards—the phone may present itself primarily as an instrument for accessing key support networks and a more direct route to material aid. Mobiles phones can clearly act as critical network capital, such that even ostensibly romantic connections often have significant resource implications. Thus, while phone usage was often presented in interviews as essentially a means of keeping in touch with friends, relations and romantic partners, or a wider desire to 'link up' (Horst & Miller, 2006), when youth were questioned directly as to whether they had made any specific phone requests for money and material goods in the survey, the level of positive responses was remarkably high (with funds increasingly organised

Table 7. Requests for financial or material support by phone in previous 12 months, all respondents 9–25 years

	Malawi		Ghana		South Africa	
	Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
	(%)	(%)	(%)	(%)	(%)	(%)
	$N = 289$	$N = 311$	$N = 342$	$N = 345$	$N = 366$	$N = 351$
Request for loan/gift of money	51.6	54.7	42.1	41.7	52.2	57.0
Request for material goods	43.8	40.2	38.4	34.5	62.2	65.8

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Table 8. Requests for support from those 9–25 years no longer enrolled in school

	Malawi		Ghana		South Africa	
	Peri-urban	Urban	Peri-urban	Urban	Peri-urban	Urban
	(%)	(%)	(%)	(%)	(%)	(%)
	$N = 117$	$N = 133$	$N = 139$	$N = 143$	$N = 105$	$N = 61$
Request for loan/gift of money	56.4	66.2	60.4	55.2	71.4	70.5
Request for material goods	35.6	30.8	33.1	25.2	53.8	45.3

through mobile money services[14]). Social relationships are essential to the achievement of these distributive outcomes, as Ferguson (2015, p.104) observes.

Table 7 shows that, across the urban and peri-urban sites in the three study countries, between two-fifths (in Ghana) and a half (in Malawi and South Africa) of all respondents requested money gifts or loans for their personal use in the 12 months prior to the survey (with over four-fifths addressed to family members). Phone requests in this period for material goods (shoes, clothes, books, etc.) were made by well under half Malawians and even fewer Ghanaians but a very substantial two-thirds of South Africans (and in this material goods case with only a tiny proportion of requests—just over 5 per cent at most—made to non-family members).

Many of these requests were linked with schooling needs (fees, books, etc.) and represent longer term strategies with *future* livelihoods in mind, but if we only consider those no longer enrolled in school (Table 8), the proportions who made phone requests for financial support are even higher (though requests for material goods are lower).

The notably high level of requests for money in urban Malawi and peri-urban and urban South Africa (Table 8) probably reflects the cost of living in those locations, especially for those without secure paid work. Many requests seem to be made regularly, almost as a routine part of everyday 'getting by': as Ferguson (2015, p. 97) observes with reference to southern Africa, the livelihoods of today's urban poor depend on such ongoing processes of 'seeking and securing distributive outcomes'. The following reflection from a 23-year-old man in South Africa's Eastern Cape is representative of such situations:

> My mother (in the village is) selling vegetables … and sends me and my younger brother money to buy food and pay rent … I am looking for a job, meanwhile I get temporary jobs – piece jobs … my mother sends us money by depositing it on my bank account which is connected to my cellphone … once she deposits the money in the account my phone will notify me.

While assistance from elders is much valued, the weight of expectations that accompany such transfers can add significantly to young people's stress as they try to make a livelihood.

[14]Availability of formal mobile money transfer services changed rapidly during the research. When the survey was conducted (late 2013, early 2014), reportage of having received money through a formal service over the previous 12 months was under 10 per cent in all countries (9 per cent South Africa, 8 per cent Ghana and 6 per cent Malawi).

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9 CONCLUSION: REVIEW AND PROSPECT

Carmody (2013) wryly observes that Africa may have an information society, but it still lacks a knowledge economy: the mobile phone is an ironic signifier of inclusion and 'development' for populations who are mostly excluded! Evidence for the four livelihood issues we consider in our three study countries supports that view, especially the South African case. In urban Ghana and Malawi, job search is eased by phone use but still focuses on pre-existing personal links across the informal sector. In South Africa, where a phone is now widely deemed essential for job search, particularly in the formal sector (which is more prominent in that country), the vast majority of urban youth still fail to find jobs, often because they lack key skills. As a direct income source, there is quite substantial evidence of individuals benefitting from phone businesses in Ghana and Malawi (though the potential for continued employment growth is questionable), but in South Africa, no evidence of any success could be found, probably because supermarkets here have cornered this business. For would-be entrepreneurs across all three countries, the phone can play a valuable role in both business start-up and its subsequent conduct: again, with strongest evidence of positive impact in Ghana and least in South Africa. Even in Ghana, however, the cost of maintaining a phone may entail sacrifice, while in Malawi, poverty may even force its relinquishment. In South Africa, where successful youth micro-enterprise is particularly rare, the use of phones for illicit entrepreneurship is most prominent; perhaps another of apartheid's legacies. Lastly, but arguably most significantly, phones play a key role as network capital for youth without work: redistribution of resources to the unwaged is organised extensively by phone across all three countries, but especially South Africa, where so many young people have given up any hope of finding the kind of work they desire.

Thus, evidence in this paper suggests that while the mobile phone may offer young people in poor urban neighbourhoods tantalising glimpses of other worlds and other lives seemingly glowing with opportunity (particularly for those able to access global social networks), it rarely presents a magic bullet. Rather, its main contribution to youth livelihoods is as an aid in their efforts to 'get by', in the face of constrained resources and opportunities, whether by finding (mostly low paid) work through—or living off resources from—their extant local social contacts. Comparative work across our three countries has drawn out an important point: while the mobile phone is currently facilitating some job search and some livelihood opportunities, the interactions through which this is occurring are strongly embedded in local contexts. In urban Ghana and Malawi, we identify fairly similar outcomes of phone access: youth are able to enhance connections across their social networks through mobile phone usage, drawing on a complex mix of social and economic strands. This enables many, particularly in the more buoyant Ghanaian economy, to modestly progress their working lives. In urban South Africa, work opportunities for the majority of low-skilled young people are much sparser, especially in the absence of a vibrant informal sector. Consequently, while the phone is instrumental in linking young South Africans to potential (low skill) openings, the intense competition for those few opportunities available ultimately overwhelms the majority, many of whom retreat into despondency and apathy. For some disadvantaged and despairing young men, illicit activities may become the only perceived route to a better life.

A review of current employment issues in South Africa, where the youth employment situation is most acute, suggests that there are a number of interventions

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that would be worth careful consideration in that specific context (Graham & Mlatsheni, 2015). One suggestion is that youth lack sufficient financial resources to enable mobility from deprived areas (such as the ones where our study was conducted) to areas with labour demand: here, travel vouchers could help. At the same time, given the stronger demand for skilled (over unskilled) labour, there is an evident need for skills development/training, including better secondary, post-secondary and workplace education/training. In Ghana and Malawi, young people typically learn basic skills within family enterprises and elsewhere in the informal sector before they leave school, but in South Africa, such experience is often lacking: while there are some opportunities in South Africa to build experience through public works, National Youth Service and NGO volunteering, all of these would need to incorporate stronger skills training for young people from poor communities. Another suggestion, which sits particularly well in the current era of social protection, cash transfers and campaigns for the basic income grant, is that social assistance might be extended and also provided for the chronically unemployed as a basic income grant, among other things, to reduce the burden on urban-based migrant youth (Hall, Ebrahim, De Lannoy, & Makiwane, 2015, p. 81). This makes sense, given that many urban young people are currently trapped in poverty, often exacerbated by the need to send money back to rural homes (which arguably prevents them from investing in training or business expansion) (Porter *et al*., 2018). However, this is a complex issue, as Ferguson (2015, p. 160) recognises. While elders' and child support grants on the one hand, and bonding capital on the other, have helped cushion youth against extreme poverty and hunger, conversations in our South African research sites show that young people would greatly prefer work to dependence on grants—they hanker after the social personhood and membership that is perceived to belong with a job. Unfortunately, most of our young respondents lack strong employability attributes: they have low levels of education and no work experience. This is why volunteering in third sector organisations is so common yet still does not bring permanent jobs to the majority. The harsh reality is that there is unlikely to be full-time quality employment available for all in the foreseeable future.

Returning to the wider continental scene, our findings suggest that the extent to which the mobile phone can support and sustain real improvement in young lives is depressingly finite, unless significant interventions occur, particularly in the education and technology sectors. While youth are advantaged because they are at the vanguard of phone uptake and use, adapting more easily than their elders to new technology, unless the overall basket and scope of livelihood opportunities that are open to them grows substantially, the question arises as to whether mobile phones will simply bring ever more competition to play in a jobs market, which lacks sufficient elasticity to support the entry of those waiting on the sidelines. Stronger participation from Africa in wider global opportunities could offer one route out of this quagmire but, as Donner (2015) argues, the mobile phone *per se*—even when Internet-enabled—is unlikely to provide adequate facility for this. Mobile data are expensive, and the Internet is far more effectively, efficiently and safely utilised from a PC (especially one with unmetered data connections). Public access to shared computing resources in poor neighbourhoods, coupled with intensive on-site training, might help move this forward. However, this would entail a much more joined-up approach to building youth livelihoods in Africa than has occurred hitherto, with significant commitment from governments and the development sector.

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