



CONNECTING SOUTH AFRICA: ICTS, UNEVEN DEVELOPMENT AND POVERTY DEBATES

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Abstract

Much has been written about information and communication technology (ICT) and its development potential in areas such as poverty reduction. Debates are framed around technocentric visions of development. This discourse on ICT-for-development (ICT4D) has opened the way for academic and policy debates surrounding ICT's potential for development in Africa. By critically engaging with these debates, this chapter entangles key issues around ICT4D on the African continent to show how ICT might be implicated in uneven development. It then adopts the lens of South Africa to cover some ICT and poverty debates and shows that ICT is critical for development in South Africa, particularly at the individual level. The development policy prescription of the current South African government is heavily implicated towards this neoliberal line of thinking. Overall, there remains a need for further research to address how ICT can enable a change in the structural dynamics in the country that are key to poverty and inequality reduction.

Keywords

Africa, Development, ICT4D, Neoliberalism, Poverty reduction, South Africa

Introduction

There is a growing body of research on the potential for information and communication technologies (ICTs) to bring about a revolutionary change and development in Africa (Adera et al. 2014; Attwood et al. 2013; Foster and Heeks 2013; Gillwald 2010; Mascarenhas 2010; Obijiofor 2009; Ponelis and Holmner 2015; Ssuuna 2014). ICTs have been linked with development such that a new field of ICT-for-development (ICT4D) has emerged (Heeks 2006), generally built around the idea that ICTs are means to deliver sustainable development. The World Bank (2009, 2016) argues that African countries should improve their connectivity-enhancing infrastructure (including digital technologies) at global, regional and local levels in order to make development more inclusive, efficient, and innovative. As a result, many African countries have adopted national ICT policies and sought to achieve various development objectives (such as employment generation, poverty reduction, education and health care). South Africa is one such example.

The South African case is instructive because the country has a long history of adopting economic policies (both during the apartheid regime and the post-apartheid era) that have produced spatially uneven development (Ashman et al. 2011; Bond 2014; Carmody 2002; Narsiah 2002; Williams and Taylor 2000). Currently, South Africa has one of the highest youth unemployment rates (estimated at 52%) and widening income inequality (World Bank 2015). Suffice to say that the current socioeconomic crisis in South Africa can be best understood as a continuing economic legacy of apartheid, built on the branding of neoliberalism by the policymaking elite and domestic businesses of South Africa, as a driver for economic development (Ashman et al. 2011; Bond 2014).

The South African government has placed great reliability, for future economic development, on ICTs and its related activities. Indeed, the National Development Plan 2030 for South Africa states that "by 2030, ICT will underpin the development of a dynamic and connected information society and a vibrant knowledge economy that is more inclusive and prosperous" (Republic of South Africa 2011, p.170).

It is argued in this chapter that there is considerable controversy about the role of ICTs in development and of its impacts for South Africa. The increasing reliance of the South African government on ICTs and connectivity for development suggests a strategy that is aligned with that of the World Bank. Indeed, the government's approach towards the growth and diffusion of ICTs can be characterised as its search for a technological fix for promoting local economic development, including poverty alleviation (Rogerson and Rogerson 2010). However, the contradiction at the heart of the ICT4D discourse is that while ICTs – if suitably managed – can open the possibility of economic development and poverty impacts, they also pose several risks. It is the contention in this chapter that while ICTs can play an important role in South Africa, the policy prescriptions of the government and development organisations ignore many of the fundamental challenges. These are associated with ICTs inability to change the structural dynamics through which the African region is implicated in the world economy.

The next section of the chapter outlines some of the major debates on ICTs role in development in general, and in the context of the African continent, particularly focusing on South Africa. The objective is to present this new burgeoning area of research and to identify pitfalls, which could be a useful path to follow for future research. Arguably, there is a need for a clear research agenda that goes beyond stylised debates and clichés about ICTs' transformative roles in African development. 'How can ICTs create new sustainable employment opportunities for the unemployed which will enable income generation and subsequent poverty reduction' should be one of the more pressing questions. In the third section, the focus turns to South Africa and situates the debates around ICTs in the context of neoliberalism as dominant policy initiative that has driven the agenda of ICTs growth and diffusion. This is critical for ICTs contribution towards uneven development in the country and amplifying the already existing socioeconomic inequalities. Unfortunately, the current direction of ICT policy in South Africa is a continuation of neoliberalism. The chapter closes with some policy reflections on avenues on which the government of South Africa could focus in order to make sure that ICTs contribute towards a more prosperous and egalitarian society.

Debates on ICT4D in Africa: Hypes, Hopes and Realities

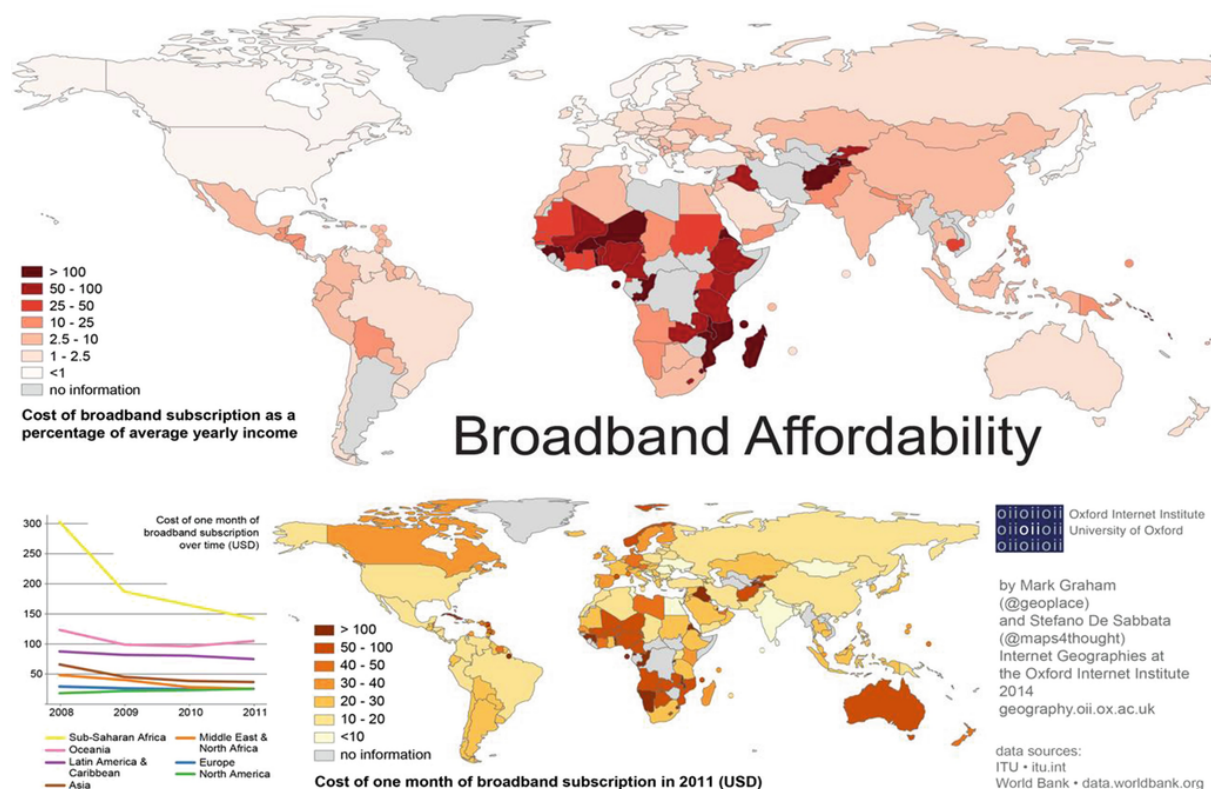
The ICT4D discourse has created powerful imaginaries of ICTs' potential for development in Africa (Murphy and Carmody 2015). Some well-known examples are in *The Economist* and *Time* magazine, both of which published a front-page cover titled 'Africa Rising' (Perry 2012; The Economist 2011). In recent years, major international organisations and other institutions such as the World Bank (2009), African Development Bank (2012), Rockefeller Foundation (2014) and World Economic Forum (2016) have also contributed to this discourse. This is best summarised by this statement of the former Secretary General of International Telecommunications Union (ITU), Dr. Hamadoun Touré (2013):

'ICTs are truly transformational. With the power of technology, we can educate every African citizen, right across the continent. With the power of technology, we can open new opportunities and create new well-paid jobs for our people. With the power of technology, we can deliver healthcare services to every African citizen, even in the remotest villages. And with the power of technology we can empower African women and leverage the fantastic energy and passion of young Africans. This is not just a pipe-dream: this is real'.

The arrival of the fibre-optic undersea cable in 2009 to the eastern coast of Africa was hailed by SeaCom, the company backing these cables, as a “revolution” (George Kahama, the Chairman of Seacom Tanzania, quoted in SEACOM live 2009) now that “Africa is connected to the world” (quoted from Graham and Mann 2013, p.2). That said, Africa was already connected to the world capitalist economy, albeit on structural terms which favoured rich countries. The old forms of connectivity of the African continent with the rest of the world produced various forms of historical exploitation and underdevelopment (Carmody 2010). For many observers, the danger is that the new ICT-driven connectivities can amplify those existing economic, political and social inequalities (Fuchs and Horak 2008) rather than create a level playing field, as argued by Friedman (2006). In other words, changing connectivities can reinforce the production of spatially uneven development, the very process that the World Bank (2016) thinks is inevitable but key for the future economic development of the African continent.

Despite this hype surrounding ICTs and their role in Africa, the evidence of ICTs’ transformative potential for African development is inconclusive at best (Friederici et al. 2017). Murphy and Carmody (2015, p.xv) maintain that the ICT4D literature in relation to Africa often lacks “geographic contextualization, theoretical grounding, and/or inter-study comparability or transferability”. Arguably, ICTs and connectivity are found to have variegated effects on development, with more evidence available from high-income countries than middle- and low-income countries (Friederici et al. 2017). Nevertheless, grand visions of the power of ICTs and resultant connectivities on economic development are recreated, encouraging African economies to integrate into the global production networks (Coe and Yeung 2015) often to their detriment (Murphy and Carmody 2015). Despite modern communication networks, the cost of broadband across Africa still remains very high (see Fig. 1).

Fig. 1 Broadband affordability (Source: Graham and De Sabbata 2014, licensed under Creative Commons, CC BY 3.0)



Notwithstanding these comments, the rhetoric of ICT4D has been adopted by national economies on the African continent without much critical appraisal and is present in a wide range of national policy documents, including in South Africa. Here it is argued that the South African government has tried to rebrand neoliberalism into its new development policies particularly in the ICTs sector, largely driven by recent (under)development debates. This is discussed in the next two sections.

ICTs and Development Debate from South Africa

For many years the ICTs and affiliated sectors remained under the radar while the 'mineral-energy complex' (Ashman et al. 2011) dominated policymaking circles in South Africa. This has now shifted as the information economy sectors have been granted higher priority in the South African government's current and future economic policies (Republic of South Africa 2014). This change in the policy discourse has been supported by a wealth of theoretical and empirical advances in ICT4D research which tackles the issue of development from a variety of geographical, socio-political and economic contexts (e.g. Adera and May 2011; Avgerou 1998; Chacko 2005; Chib et al. 2015; Donner 2006, 2008; Duncombe and Heeks 2002; Elder et al. 2013; Foster and Heeks 2013; Gillwald 2010; Heeks 2002, 2006; Oshikoya and Hussain 1998; Ponelis and Holmner 2015). These studies adopt different conceptual and methodological approaches to understand links between ICTs and poverty in different geographical contexts (May and Diga 2015; Murphy and Carmody 2015). More importantly, there is a burgeoning research base highlighting relationship between ICTs and development in the South African context (Adera et al. 2014; Anwar et al. 2014; Attwood et al. 2013; Blankley and Booyens 2010; Bornman 2016; Cross and Adam 2007; Rey-Moreno et al. 2016).

Attwood et al. (2013, 2014) conducted grounded research under the participatory action project *Community-based Learning, ICTs and Quality-of-life (CLIQ)* to study the impacts of computer training programmes and telecentre usage among rural communities in

KwaZulu-Natal. Results show that the majority of participants, who acquired new computer skills, noted positive improvements in their quality of life. This was higher for individuals with improved participation rates and who experienced better implemented training programmes. The research also highlighted other major benefits mentioned by participants, including increased self-empowerment, self-esteem, happiness, confidence, widening of social circles and interaction, attainment of computer skills, free use of computers, greater knowledge of the world or increased access to information. However, these telecentres have internal political contexts, and differences can exist across these centres in terms of empowerment (Braathen et al. 2012). Nonetheless, research is beginning to show that ICTs have become important development tools both in the African and South African contexts with respect to people's various goals and aspirations, and that the Government of South Africa needs to incorporate ICTs in their development policies, particularly from a poverty and

inequality reduction perspective (Adera et al. 2014; Chib et al. 2015). Having said that, the positive relationship between ICTs and poverty reduction in South Africa (and in other African countries) is more complex. Digital communication tools and services still remain unaffordable to the majority of the poor especially in rural areas (Gillwald 2012; Rey-Moreno et al. 2016). This fact denies them the equal opportunity to participate meaningfully in the information economy, as compared to richer urban socioeconomic groups (mainly white people but also some affluent black people). While the penetration of ICTs has increased in rural areas of South Africa, this has also resulted in rural communities spending a high proportion of disposable income on airtime (Rey-Moreno et al. 2016). For example, Duncan (2013) found, in their sample of rural households in South Africa with earnings between R300 and R5000/month, respondents were spending roughly 26% of their income on buying cell phones and airtime, largely due to highly expensive telecommunication services. It is here that public telecentres in South Africa are of great utility, albeit with limited roles in improving livelihood chances, income generation and poverty reduction. Attwood et al. (2013) discuss telecentres' role in provision and access of ICTs in rural areas of South Africa, but do not fully show that telecentres improve participants' quality of life. This is because their research was based on subjective evaluations of wellbeing measured in terms of expansion of respondents' personal choices and freedoms, as argued by Sen's (2001) 'capabilities approach'. This is bound to generate varied responses with no sense of causality between usage and access to ICTs and participant wellbeing. For example, one of their participants expressed that her quality of life declined despite getting a job, because her father died. In addition, their research overlooked the structures of class power and how ICTs might be able to alter current socio-political and economic structures. Nonetheless, their study acknowledges that there are limitations to ICTs' impacts on poverty reduction and economic development in the South African context.

Overall, there is a lack of systematic studies that connect ICTs to poverty reduction in the South African context, particularly those that address the structural problems of how the domestic political economy continues to produce both poverty and inequality. In other geographical contexts, many studies that attempt to put a positive spin on the links between ICTs and poverty reduction are more descriptive than analytical (e.g. Adeya 2002; Morales-Gómez and Melesse 1998), with literature reviews confirming the continued reproduction of the discourse (Friederici et al. 2017; Moodley 2005). Other researchers have highlighted that ICTs in many African countries, especially mobile phones, merely maintain social interactions or networks rather than effect wider

economic changes at micro or macro levels (Murphy and Carmody 2015). In light of this evidence, where do South Africa's policies to incorporate ICTs into its development plan fit in?

ICTs and Rebranding of Neoliberal Discourse in South Africa

During the early 2000s, a number of reports and working papers were commissioned by the South African government to identify the role of ICTs in the country's development. The National Development Plan 2011 expanded on ICTs' role in development interventions in several key areas: employment creation, education, infrastructure, spatial divide, public services, corruption, and social integration (Republic of South Africa 2011). The National ICT Policy White Paper 2016 later became the South African government's formal document for policy position on these issues (Republic of South Africa 2016). Although these policies are ambitious in scope, they are rooted in the neoliberal economic framework that has characterised policy development and implementation since the fall of apartheid.

The South African government's position on ICTs and their role in economic development is consistent with that of the World Bank and the ICT4D discourse. The World Bank, in its report on *ICTs for Greater Development Impact*, argued that "ICTs have great promise to reduce poverty, increase productivity, boost economic growth, and improve accountability and governance" (World Bank 2012, p.v). The South African government took a similar stance in one of its preparatory documents on the ICT policy:

'Over the past three decades the world has accepted the transformative power of ICTs... The International Telecommunication Union (ITU) estimates that a 10% increase in broadband penetration will result in an increase of up to 1.38% in the Gross Domestic Product (GDP). This will create jobs. The implementation of e-government, e-commerce and online transactions will improve service delivery and open new avenues for the end-user equipment manufacturing sector. Therefore, a coordinated roll-out of ICTs promises a realistic opportunity to bridge the digital divide and help deal with the inequalities and unequal access to services in the country'. (Republic of South Africa 2014, p.2)

There are several elements of South Africa's current ICT policy that are positive developments but overall it remains highly contentious and contradictory. For example, the White Paper states that "increased access to communications technologies, in particular, broadband, and the services and content carried on ICT networks, is acknowledged as an important means of promoting growth" (Republic of South Africa 2016, p.10). A report by Statistics South Africa estimated that ICTs sectors contributed roughly 3% to GDP in South Africa in 2014 (StatsSA 2017). While there is some evidence of a correlation between ICT penetration and economic growth (Röller and Waverman 2001), the issue of causality is not clear (Gillwald 2010). The problem is further complicated by the fact that economic growth alone does not lead to poverty alleviation. South African policymakers need to ensure that economic growth is multidimensional and inclusive, so that benefits reach the poor and marginalised. South Africa imported roughly US\$9.6 billion-worth of ICT products (both goods and services) but exported only US\$2.3 billion in 2014 (StatsSA 2017). Future policy interventions must address the country's dependence on ICTs related imports. While most of the mobile

phone market in Africa is dominated by foreign products, a local South African company (Onyx) is hoping to launch locally-assembled smart phones within the country (its component parts will still be imported) (CNN 2017). Such initiatives may help generate jobs in the country. However, the question of job creation is one of the most problematic aspects of the South African political economy, and the expectation that the ICT sector is able to generate jobs on a scale that will alter the income distribution structure of the country is farfetched.

The World Bank (2015) confirmed that while job creation in South Africa is slowing since 2000, total employment in the country is becoming more skills-intensive. Since the 2000s, there has been growth in capital-intensive segments of the economy (finance and information technology), while labour-absorptive sectors such as industrial manufacturing have declined. This means that much of the jobs generated in South Africa cater to the high-skilled workforce, who mainly reside in urban areas. As such, in post-apartheid South Africa, the majority of the poor have experienced job losses while the growth of the information economy mainly benefits elites (Bond 2014; Carmody 2002). This results in limited opportunities for the unskilled and semi-skilled workforce in both the formal and informal sectors. Thus, instead of altering the power structure in the country, ICTs may be amplifying already existing socioeconomic inequalities, as most beneficiaries (affluent white people or the emerging black elite) enjoy better access to education and have skills that can be absorbed into new sectors of the economy. This is not to say that no benefits are derived from the changing economic structure of the national economy for the unemployed poor. Harambee, a youth employment accelerator programme, which connects job seekers to employers, is helping unemployed youth (mainly black people) to find entry-level jobs in retail, hospitality, financial services, and business process outsourcing.

Furthermore, the government of South Africa aims to make ICT tools and services (such as computers, laptops, mobile phones, e-government, e-commerce, e-post, e-finance) accessible to all its population by, for example, leveraging ICTs into its postal services. This entails maximising the benefits and impact of the current infrastructure through the introduction of new ICT services and products (Republic of South Africa 2016). This is a welcome addition to expand the reach of digital technologies and services, enabling a greater degree of local participation in democracy and enhancing the rural population's ability to make significant changes to their life circumstances. However, it is critical for the state to ensure that ICT services are made affordable and easily accessible to the poor and in remote areas. South Africa has seen a marked increase in mobile phone service access among its population, but these services are unevenly distributed and expensive, a result of the duopoly market (Gillwald 2012). In a free market scenario, the dangers of consolidation and dominance of few big players (monopolies, duopolies and cartels), particularly in the ICTs sector, can result in poor quality services and extractive rents (Gillwald 2012). Here, the South African state should ensure that public-private partnership is encouraged for the provision of services and to encourage healthy competition that ensures better services at affordable prices.

One of the main criticisms of the National Development Plan 2030 was that it did not go far enough to make ICTs a priority in broader economic development planning (Gillwald 2012). One of the most problematic aspects of the new direction taken by policymakers is the continued dependency on neoliberal policy approaches by the political elite. Some industry experts and commentators have even hailed the National Development Plan 2030 for its 'free market' position (cf. Gillwald 2012). The South

African government maintains that markets and the private sector are key to the successful growth of ICT sectors in order for them to impact on the delivery of infrastructure and services. This debate should focus on the role of state *and* the market, rather than state vs the market. To reverse the adverse policy outcomes of the post-apartheid era, the idea of free markets and direct state ownership of services must be reworked to adopt a more evidence-based approach for the ICT sector (Gillwald 2012).

There is also a need for new research that deals with both macro- and micro-levels of analysis, focusing on how ICT tools and service provision among poor and marginalised societies can generate wider benefits. Unfortunately, there is little data on this issue and it is premature to conclude that “the quality of life of the poor people has improved” based on their access to and usage of ICTs (Gillwald 2010, p.81). The danger of South African society slipping into further socioeconomic gaps is quite real, if the proliferation and diffusion of ICTs are not managed effectively. The current planning position of the South African government with regards to ICTs is to improve domestic connectivity and infrastructure provision for the flows of information and services. This has various consequences whereby flows of economic values will increase, but not necessarily the creation of new values that benefit its citizens.

Summary

South Africa has been going through one of its worst political-economic crises since the end of apartheid. As a result, the South African policy makers have embarked on a bold vision of development with a renewed focus on ICTs. The South African government's ideological underpinning on ICT is that it would ‘level the playing field’ (Friedman 2006) where the country can compete and reap the benefits of new forms of globalisation enabled by changing connectivities. This current planning discourse fits with the emerging discourse on positive links between ICTs and development. Mainstream literature suggests greater adoption of ICTs can enable the population to participate in the information economy, thus affording them potential improvements in their quality of life. There are also arguments that improving digital connectivity across the country and in various business sectors can also contribute towards economic growth. Yet, the transformative potential of ICTs for the poor and marginalised through employment and poverty reduction is less clear.

The availability of paid employment opportunities represents one of the most significant development interventions, but development is itself a broad term with multiple meanings and conceptualisations (Peet and Hartwick 2009). Seers (1963) argues that when unemployment, poverty and inequality decrease, then development takes place. Paid jobs enable individuals and social groups to support their families, access education and health care, and improve their societal position and general wellbeing (Erez and Earley 1993; Gallie 2009; Green 2006; Hanson and Pratt 1995). There is limited evidence to suggest that ICTs are going to generate good quality jobs for low-skilled workers. Instead, ICTs have integrated South Africa into existing circuits of the world capitalist economy which has significant implications for job creation and economic diversification. While the emergence of the information economy offers potential for some forms of development, it also reinforces the dynamics of capital accumulation and hence the process of uneven economic development in the country. The South African government's National Development Plan 2030, despite being touted as reformed and new, is rooted in the

neoliberal framework advocated by the World Bank and ignores socioeconomic and political realities of the country.

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