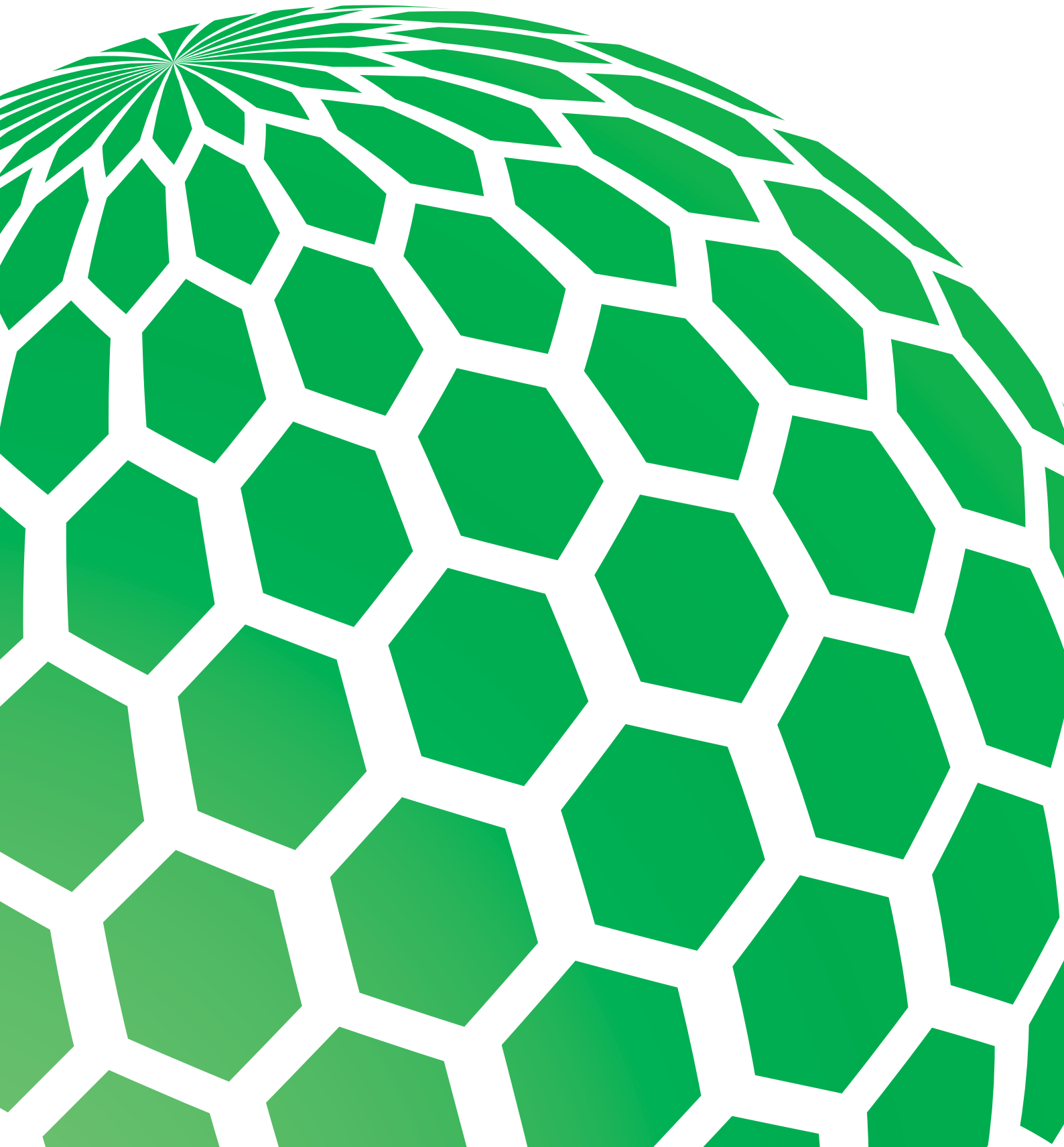




Sub-Saharan Africa Mobile Economy 2013





About the **GSMA**

The **GSMA** represents the interests of mobile operators worldwide. Spanning more than 220 countries, the **GSMA** unites nearly 800 of the world's mobile operators with 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in industry sectors such as financial services, healthcare, media, transport and utilities. The GSMA also produces industry-leading events such as Mobile World Congress and Mobile Asia Expo.

For more information, please visit the **GSMA** corporate website at www.gsma.com
Follow the GSMA on Twitter: [@GSMA](https://twitter.com/GSMA)

or **MOBILE WORLD LIVE**, the online portal for the mobile communications industry, at www.mobileworldlive.com



GSMA Intelligence

This report is authored by **GSMA** Intelligence.

GSMA Intelligence is the definitive source of global mobile operator data, analysis and forecasts; and a publisher of authoritative industry reports and research. Our data covers every operator group, network and MVNO in every country worldwide – from Afghanistan to Zimbabwe. It is the most accurate and complete set of industry metrics available, comprising tens of millions of individual data points, updated daily. **GSMA** Intelligence is relied on by leading operators, vendors, regulators, financial institutions and third-party industry players, to support strategic decision-making and long-term investment planning. The data is used as an industry reference point and is frequently cited by the media and by the industry itself. Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

For more information, www.gsmaintelligence.com

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Mobile for Development

GSMA Mobile for Development brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets. We identify opportunities for social, economic and environmental impact and stimulate the development of scalable, life-enhancing mobile services.



THE BOSTON CONSULTING GROUP

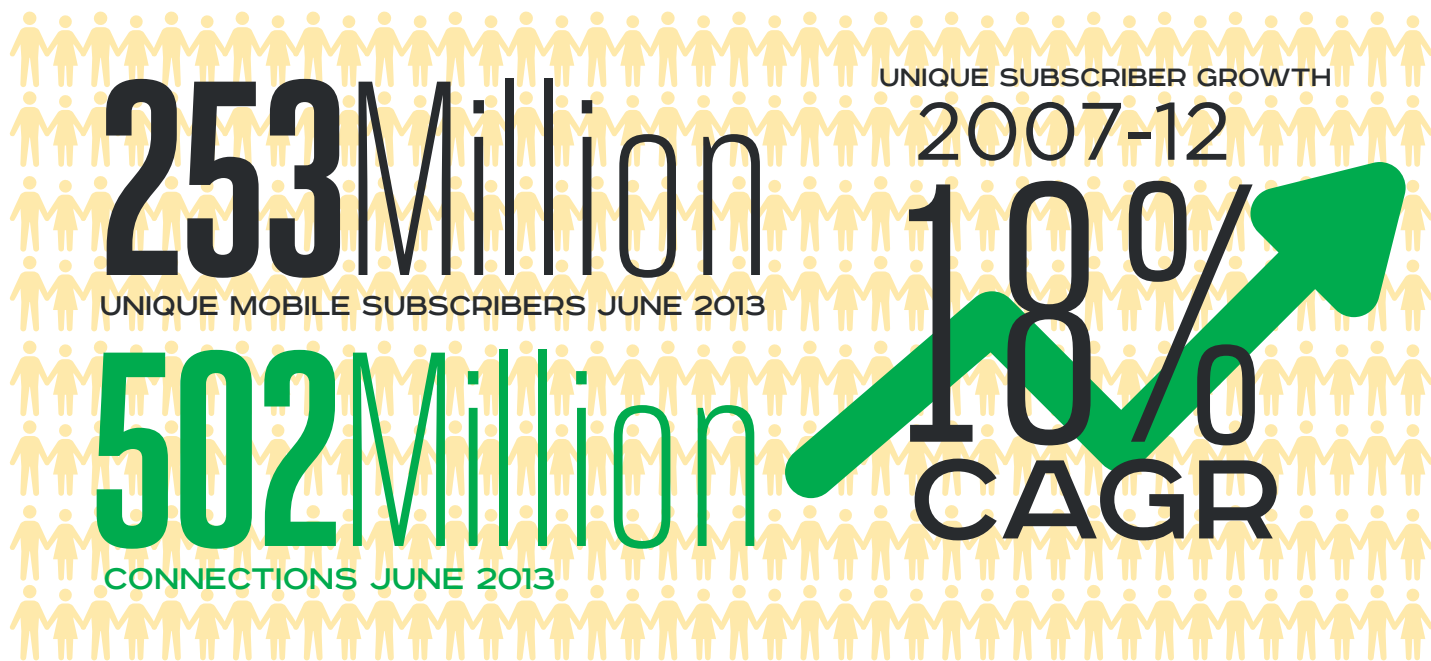
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MOBILE ECONOMY SUB-SAHARAN AFRICA



Unique Subscribers and SIM Connections



Growth

Huge growth potential remains as average subscriber mobile penetration is 31% across 40 countries in Sub-Saharan Africa (SSA)

UNIQUE SUBSCRIBERS TO GROW
43% BY 2017*
REACHING 346M

SSA TO REMAIN FASTEST GROWING REGION

*Unique subscriber growth from 2012 to 2017

Socio-economic impact



High levels of mobile access compared to other basic services



Mobile already bringing enormous social and economic benefits to region



Potential in future to achieve much more with a supportive regulatory and policy environment

Mobile ecosystem contribution to GDP in SSA

2012
US\$60B

2020
US\$119B

8%
GDP
BY 2020



GDP US\$60B in 2012 growing to a forecast of US\$119B - 8% of GDP by 2020

Public Funding



2012

US\$21B public funding contribution from MNOs including licence fees in 2012 growing to US\$42B by 2020



2020

Employment

3.3M

Direct employment by the mobile ecosystem to grow to 6.6M by 2020

6.6M

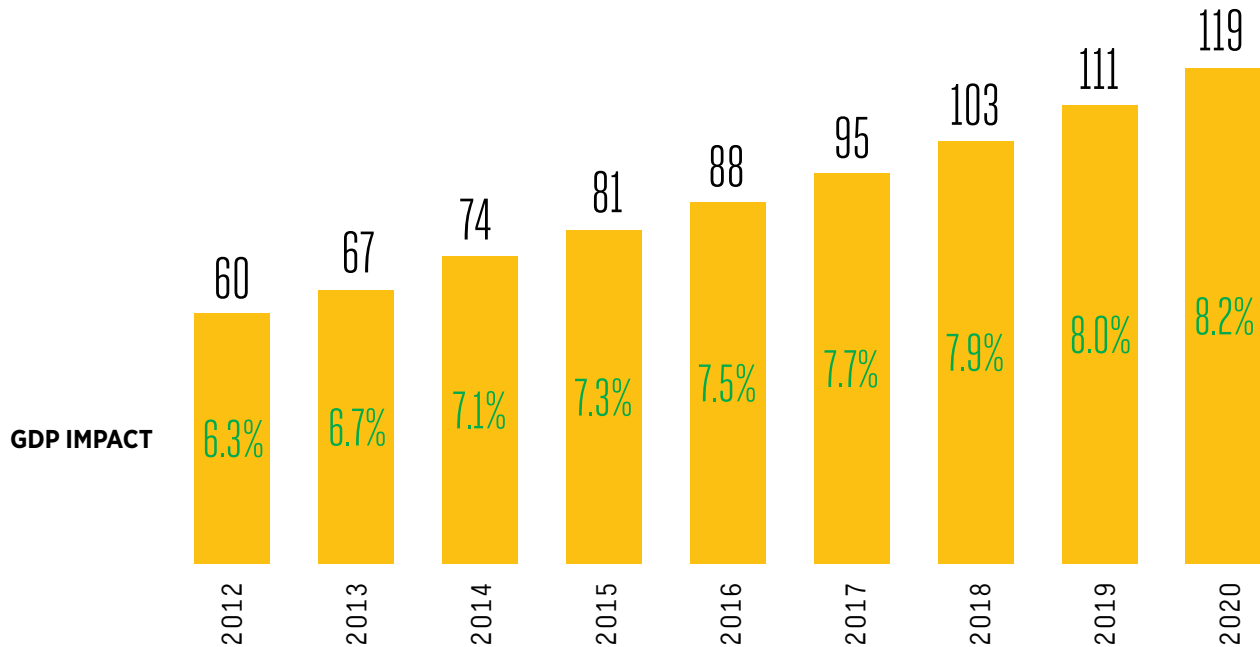
Executive Summary

Despite the astonishing progress of the mobile industry in Sub-Saharan Africa (SSA) in recent years, the biggest impact of mobile in Africa is yet to come. Roughly two thirds of the population are still without a mobile subscription, leaving much room for growth; while the region is on the cusp of an explosion of mobile data as 3G and 4G deployments gain scale and advanced capabilities appear on increasingly affordable handsets. Mobile already contributes over 6% of Sub-Saharan Africa's GDP, higher than any other comparable region globally, and this is forecast to rise to over 8% of regional GDP by 2020. However, a short term focus by some governments on maximising tax revenues risks stifling the potential of the industry to drive both economic and social development across the region.

The mobile industry has already had a transformative effect on the social and economic development of Sub-Saharan Africa, on the back of a sustained period of strong growth. By the middle of 2013, there were 253 million unique mobile subscribers (and 502 million active SIM connections) in the region, 95% of whom were on prepaid tariffs. The unique mobile subscriber base has grown by 18% per annum over the last five years, making SSA by some distance the fastest growing region globally.

MOBILE ECOSYSTEM CONTRIBUTION TO GDP TO 2020

(US\$ B)



Source: GSMA Intelligence; Ovum; EIU; BCG analysis

Despite the strong growth, GSMA Intelligence research reveals that unique subscriber penetration rates in SSA remain lower than any other region globally (unique subscriber penetration rates are lower than SIM based rates, as most phone users have multiple SIMs). Less than one in three people in SSA have subscribed to mobile services, compared to the global average of close to one in two, while in more developed regions such as the European Union, the figure is now four out of five. This shows that significant growth potential still remains, with the challenge for both the industry and policy makers to help realise this potential.

The industry faces a number of challenges to lift penetration rates further, and close the gap with other mobile markets. Incremental subscriber growth will come almost entirely from rural and lower income populations, reinforcing the need to further improve the affordability of mobile services and to extend network coverage. Mobile users in

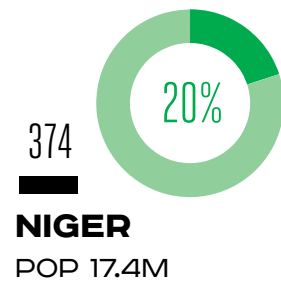
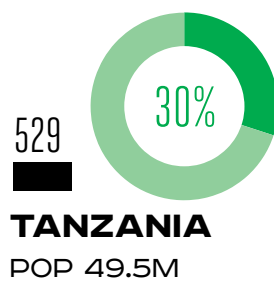
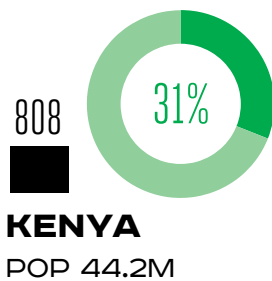
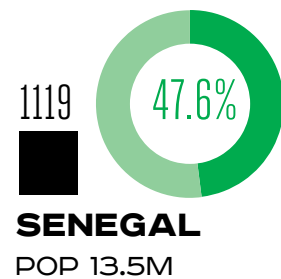
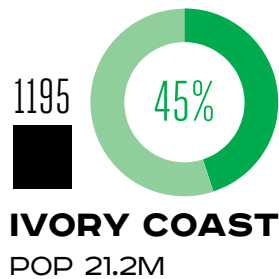
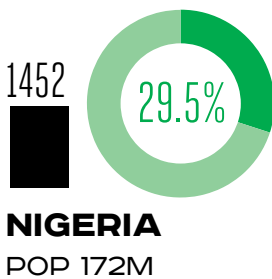
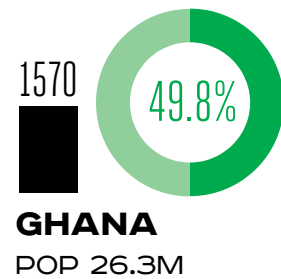
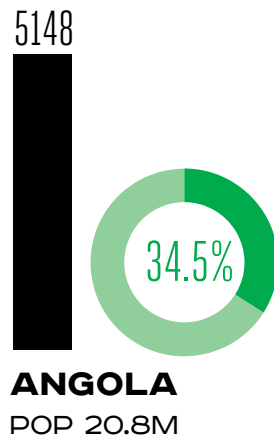
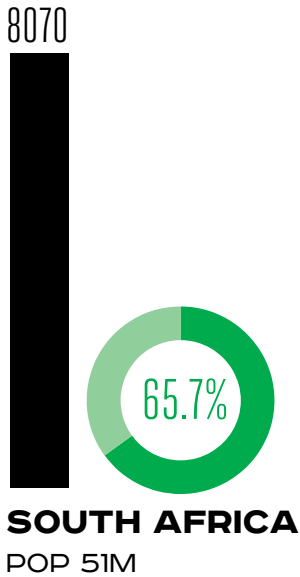
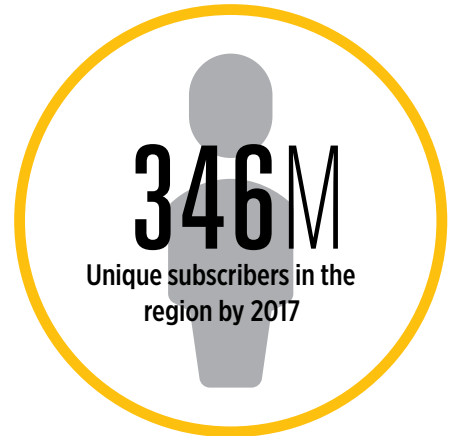
SSA spend on average a larger proportion of their income on mobile services than in other regions: an average of 15% of their income compared to the 3-5% observed in other developing markets and the less than 1% that is the average in the US and Europe.

The mobile industry has already made great progress in improving the affordability of mobile services in SSA,

connecting the previously unconnected and transforming the way people across the region live their lives. However, more remains to be done to address issues around social inequality and to bring mobile services to lower income and often more marginalised sections of society. Policy makers need to be aware of the negative impacts of taxes that target mobile usage and handsets, in a region where tax as a proportion of the cost of ownership is already above the global average.

PENETRATION, GDP AND POPULATION

Selected countries, 2012



■ GDP per capita (US\$) ■ Sub Penetration

Improving coverage is a further challenge for the industry; given the region's vast rural expanse and the limited reach of grid-based electricity and supporting infrastructure. Operators are already employing a wide range of innovative solutions to tackle these challenges. These include the growing use of "green" solutions including solar, wind, water, biomass and fuel cells. There is also an increasing trend towards network sharing, with mobile operators hiring sites from third party tower companies, which can also reduce network deployment costs and bring down barriers to rural coverage rollout.

Not only is there still growth to come for basic voice services, but SSA is on the cusp of an explosion in the uptake of mobile broadband and mobile data growth. Increasingly affordable, internet enabled mobile devices are enabling people to access the internet for the first time. Mobile devices, using either 3G or even 2.5G EDGE networks, are already the main platform for internet access in SSA, allowing people to bypass the limited reach of the fixed broadband network.

Realising the growth potential of the mobile industry, both in terms of connecting new subscribers and enabling widespread mobile broadband access, will depend on substantial ongoing investments by the network operators. Based on the available data, it is estimated that mobile operators across the region have invested over US\$ 44 billion over the last six years (excluding fibre and international cables). Going forward, investment levels are likely to be even higher given the costs of extending coverage to lower density geographic areas and deploying increased 3G coverage as well as higher speed 4G networks.

Long-term investment also depends upon sustainable market structures at the country level. A number of markets have five or more operators, well above global average levels. Operators need to be confident of generating sustainable long-term cash flows if current investment levels are to be sustained. Regulators and competition authorities should take a pragmatic and flexible approach to consolidation, and look to balance short term pricing trends against ensuring adequate investment levels in the longer term.

The mobile industry already makes a significant contribution to economic growth and job creation across SSA, accounting for a greater proportion of GDP than in any other region across the globe. In 2012 the broader mobile ecosystem contributed over 6% to GDP in SSA, a figure that is forecast to rise to over 8% by 2020. This is well ahead of comparable figures in other parts of the world, for example of 1.4% in Asia-Pacific and 4% in Latin America. In addition, the industry already supports over 3.3 million jobs across SSA, while contributing US\$ 21 billion to public funding through taxation in 2012.

Mobile services are already available to a larger portion of the population than many other basic services, including electricity, sanitation and financial services. Access rates to mobile services are even higher if one considers the household effect where a single phone may act as a shared device. As a result, mobile services can play a unique role in addressing social, economic and environmental issues, particularly for populations at the base of the economic pyramid (BoP). For example, in Nigeria 56 million people lack access to electricity, and 38 million lack access to clean water, but nearly all could potentially access mobile services.

SSA faces some unique social challenges, with a relatively rural population living in often remote and difficult-to-reach areas. Urbanisation rates are relatively low, though urban growth has translated into a rapid rise of populations living in informal settlements, and increasing poverty and inequality. Many SSA cities are characterized by limited infrastructure, particularly in low-income areas. The GSMA Mobile Enabled Community Services (MECS) programme leverages mobile technology and infrastructure to improve access to basic energy and water services.

Mobile operators, entrepreneurs, corporates, governments, investors and non-profit organisations have together driven an explosion in mobile-enabled products and services across SSA that can help address these issues. The number of new service launches has increased consistently over recent years, with a particular focus on mHealth and mobile money.

Mobile money services are a clear success story, with SSA leading other regions in the number of mobile money deployments. This brings financial services within the reach of previously unbanked populations, driving economic growth and promoting financial inclusion. At the time of writing, the region had over 110 active initiatives in 2013¹, with a number of countries having more than one provider. There are 56.9 million registered mobile money users in SSA and in June 2012, there were twice as many mobile money users as Facebook users in the region².

Similarly, mobile solutions are beginning to address a range of social and economic challenges in the region, particularly in areas such as healthcare, education and agriculture. mHealth solutions can be a powerful assisting tool for countries

to improve health conditions for their populations, and there are almost 250 mHealth services in operation across SSA today. By end of 2016, the GSMA Pan-African mHealth Initiative aims to have catalysed nationally-scaled, commercially sustainable mHealth services which contribute meaningfully to national health objectives in nutrition as well as maternal and child health in ten African countries. Mobile solutions can play an important role in improving productivity in agriculture across SSA, a sector that generates around a third of the GDP in SSA and employs almost two thirds of the labour force.

Closing the mobile gender gap, especially amongst low-income populations, should be a key consideration for operators and policy makers aiming to realise the potential contribution of mobile services. The most recent data on the gender gap for mobile phone ownership suggests women are 23% less likely than men to own a mobile phone in Africa³. Women are critical to realising the potential socio-economic benefits in the areas of health, education and agriculture, and have the most to gain in terms of financial inclusion via mobile financial services.

However, the potential of the mobile industry to deliver these socio-economic benefits depends on a supportive regulatory environment. Key regulatory issues in the region surround spectrum management and taxation. Operators and investors need stability and clarity in order to fund the huge investment needed over the coming years both to extend coverage to more remote areas and to meet the growing demand for higher speed connectivity. Excessive regulation can stifle innovation, raise operating costs, limit competition and, ultimately, harm consumer welfare.

1. MMU Mobile Money Deployment Tracker available at <http://www.gsma.com/mobilefordevelopment/programmes/mobile-money-for-the-unbanked/tracker>

2. "State of the Industry: Results from the 2012 Global Mobile Money Adoption Survey", GSMA Mobile Money for the Unbanked http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/02/MMU_State_of_industry.pdf

3. GSMA and The Cherie Blair Foundation for Women. Women and Mobile: A Global Opportunity

Efficient spectrum management is paramount to promoting investment and connectivity. Spectrum should be allocated to those with the ability to deploy and invest in infrastructure. The licensing process should not discriminate among operators, or in favour of new entrants, but instead should provide a level playing field and regulatory certainty.

With a number of licences due to come up for renewal across SSA, establishing a transparent, consultative and predictable process for granting spectrum licences and renewing spectrum usage rights will allow operators to plan their investments. The cost of renewing spectrum usage rights should be based on recovering administrative costs, rather than maximising short-term revenues for government.

While some governments and regulators have recognised the importance of harmonising spectrum across the region, much work remains in this regard. In many SSA countries, concrete commitments to the harmonised allocation of sub-1 GHz spectrum, in particular the 700 MHz and 800 MHz (Digital Dividend) bands are yet to be fulfilled. Coordinating and accelerating the analogue to digital television switchover and freeing the Digital Dividend spectrum bands for mobile broadband should provide a massive boost to economic growth in the region. The analysis in section 2.2.1 of this report suggests that allocating this Digital Dividend spectrum band to mobile broadband in SSA would generate a GDP increase for the region of US\$ 49 billion from 2015 to 2020 (5.9% of 2012 GDP), while contributing a further US\$ 15 billion of tax revenues over the period.

Taxation as a proportion of the total cost of mobile ownership is higher than the global average in many SSA countries, reducing the affordability of mobile services. Twenty countries also have customs duties on mobile handset imports, while the operators themselves face a number of sector-specific taxes. Lowering taxation levels on the mobile sector could benefit consumers, businesses and government alike by encouraging the take-up and use of new mobile services, improving productivity and boosting GDP and tax revenues in the longer term.



For the full report on Mobile Economy: Sub-Saharan Africa 2013
please visit the GSMA website at www.gsma.com/mobileeconomyssa

