

WHAT ARE THE ECONOMIC AND SOCIAL IMPACTS OF THE MOBILE PHONE SECTOR IN DEVELOPING COUNTRIES?

AfricaNext Investment Research is an advisory firm focused on the telecommunications, media and technology sectors in Africa. Guy Zibi, as founder and CEO of AfricaNext, has been in the very best position to observe the evolution of these sectors. In this article, he provides a clear overview of the key drivers of the mobile phone sector in the last years, and presents the main challenges faced by the market and mobile phone operators.

# The African Mobile Phone Market: Beyond the Boom Phase, Between the Promise and Uncertainty of Maturity

*The growth of African mobile markets over the past decade has been dramatic and well documented. Its impact has been far-reaching, directly through large capital investments and the emergence of large conglomerates, more widely through a positive influence on business practices, overall perception of African business investments and as a transformative technology platform for other industries. This article provides an overview of the performance of the mobile industry in Africa and outlines the main drivers behind the sector's performance, as well as its overall characteristics and challenges. It also offers some insights into the wider impact of the mobile sector and provides the outlook for the industry in the face of deep economic, regulatory and technological change.*

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By all accounts the growth of the African mobile industry over the past decade has been remarkable. At the end of 2008, the total number of mobile subscriptions in Africa reached about 375 million, up from 280 million in 2007 (AfricaNext, 2009). The overall subscription base is nearly three times larger than it was in 2005 and has grown by a compound annual average rate around 40% over the 2005-2008 period (see Figure 1). Where the pattern of growth was often confined to a small sample of countries, it is now widespread; in 2008, and two thirds of African markets have a mobile penetration higher than 30% (AfricaNext, 2009). A few African markets have broken the once mythical 100% mobile penetration threshold, and projections of similarly high penetration levels across the board are no longer quite outlandish (see Figure 2).

As the subscriber base has expanded, so has the market's revenue performance. Revenues generated from mobile services in Africa reached around USD 45 billion in 2008, up 20% from 2007, and revenue growth is expected to remain at least in the high single to low double digit range over the next five years (AfricaNext, 2009). Even as overall economic growth slowed in 2009, the African mobile market has continued to expand, seemingly impervious to the surrounding global economic downturn and a tightening in consumer spending.

Ten African markets generate more than USD 1 billion in mobile services revenue each year, including such large economies as South Africa and Nigeria, but also markets such as Cote-d'Ivoire and Angola. Six markets fall in the USD 500 million-1 billion revenue range and nine markets generate between USD 200 million and USD 500 million, a substantial opportunity for the private and the public sectors.

## The explanatory factors of the African mobile industry performances

Such solid growth (see Figure 1) has been the result of an effective blend of competition-oriented regulation, technology deployments and sharp marketing acumen. Once dominated by state-owned monopolies, African telecommunications markets have become among the most competitive in the world, as regulators awarded more licenses and widened the service scope of individual licenses. The average number of operators per market has risen to 3.6 in 2009 from around 2.5 in 2005. Tanzania was expected to have around eight operators by the end of 2009; Cote-d'Ivoire and Ghana both have six players and even ostensibly small markets such as Rwanda will have at least three operators. While the increased competition has raised persistent questions about the financial viability of new entrants, it has raised the level of competitive ...

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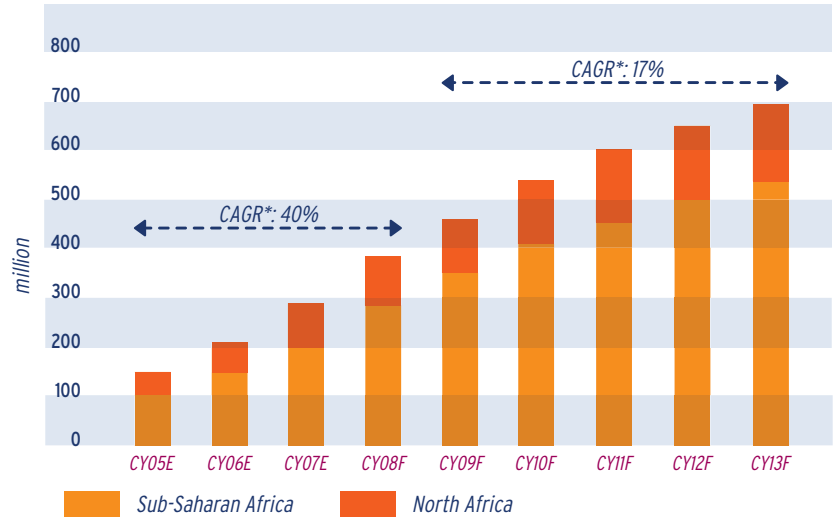
... intensity as operators cut prices, expand networks and develop new offerings to protect or gain market share.

Technology improvements have also been a major driver of growth. Advances in spectral efficiency and network optimization tools, the deployment of IP-based solutions and more cost-efficient network configurations allowed operators to increase network capacity at a relatively marginal cost and lower overall network operating expenses. The sharp decline in the average cost of a mobile base station (BTS) similarly allowed new players to penetrate markets at a faster clip than was previously possible; technology enhancements made services more affordable and accessible. Prepaid platforms were refined, allowing customers to purchase airtime<sup>1</sup> at a price as low as USD 0.25 per minute, share airtime and even buy airtime on credit. Handset prices were slashed, with the introduction of ultra low cost handsets, bringing prices to as low as USD 15 per unit. Another key growth catalyst has been marketing. Borrowing a page from the brewery industry and other consumer goods sectors, mobile operators developed an aggressive, omnipresent brand of marketing. Mobile services are highly visible, and airtime packages are increasingly innovative and targeted towards specific consumer sub-segments.

## Main characteristics of the mobile industry in Africa

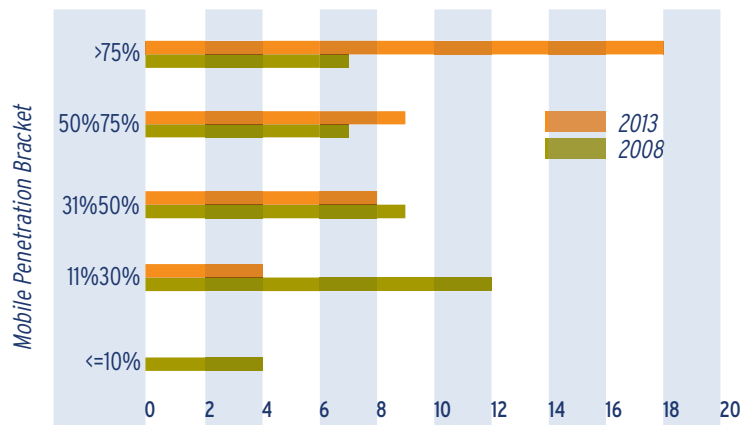
The African mobile subscriber base has a number of distinguishing characteristics. It is predominantly prepaid (99% of the customer base in most markets), with the prepaid platform more of a preferred billing model than it is an indicator income level. Subscriber churn is high; depending on the market, 5% to 10% of all subscriptions are disconnected each month, though this has not represented an insurmountable obstacle to operator ability to generate consistent cash flows. Furthermore, the market is still voice-centric, with voice services accounting for 90% of revenue or more; large-scale data adoption remains limited to SMS. Nonetheless, non-SMS mobile data adoption is picking up. Nearly 4% of mobile users access the Internet through mobile networks ...

Figure 1: Evolution of Africa's mobile subscriber base, 2005-2013



\*CAGR stand for Compound Annual Growth Rate; Source: AfricaNext, 2009

Figure 2: Distribution of mobile penetration of the population in Africa, 2008 and 2013 (forecasts)



How to read the graph: out of the 39 countries in the sample, only 14 (i.e. just over 1/3rd) had a penetration rate above 50% (7 between 50 and 75%, 7 above 75%). This number is expected to increase to 27 (i.e. 70% of the countries) by 2013, with only 10% of the countries having a penetration rate below 30%. Source: AfricaNext, 2009

<sup>1</sup>The airtime represents the amount of time a subscriber spends using his/her mobile phone.

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... (10% in the larger markets), and mobility already accounts for about 35% of an admittedly small broadband subscription base (AfricaNext, 2008).

## Key players: from North-South investments to South-South flows

In a business largely defined by scale, multi-country players dominate the African mobile marketplace. To reach the cost and price sweet spots that make the business attractive and allow to raise service penetration levels, operators need to generate economies of scale; yet, few markets are large enough to provide such scale. In turn, operators look to build it through multi-country presence, a model that has led to the emergence of such African conglomerates as MTN South Africa, the Zain Africa Group or Orange Africa.

Today, these pan-African operations account for around 72% of the African subscriber base, nearly 80% of generated revenue and almost USD 0.75 of each dollar invested in African mobile markets (AfricaNext, 2009). Their share of operating profit is more difficult to estimate, but is higher than their share of revenue.

Besides the core group of pan-African operators described above, a new breed of cross-country players has emerged over the past three years, a wave of South-South investment flows that complemented (and in some cases replaced) traditional North-South foreign investment. The latest wave of pan-African investment has been Middle Eastern (Zain, Etisalat, Warid), North African (Maroc Telecom, Lap Green Libya) and more recently, Indian (Tata, Essar, Reliance). It has been driven by a mix of high oil prices, the increased attraction of the African telecoms space for foreign investors, and closer relationships between African governments and those in other emerging markets, in furtherance of "South-South Cooperation".

## Overall market impact

The impact of the African mobile boom on the larger economy has been far-reaching. In many markets, the telecoms sector has become one of the main sources of foreign direct investment, often only supplanted by the oil and gas sector.

Telecoms revenue and expenditures now contribute a combined 5% to as much as 10% of GDP in many countries. African mobile network capital expenditure reached around USD 12.5 billion in 2008, and investment in communications has reached around 5-6% of total investment spending on the continent. In addition, the mobile sector has had a notable contribution to employment, directly, and indirectly through the establishment of extensive networks of dealers, sub-dealers and sub-contractors. In Nigeria for example, MTN's distribution network includes more than 10,000 sub-dealers, 30,000 sub-sub-dealers and more than 50,000 retail points and street hawkers (Farroukh, 2006).

Just as significant has been the impact of mobile networks on other economic sectors. Financial institutions, for example, are increasingly using mobile banking to expand the reach of their offering. Mobile operators themselves have expanded the financial services field with new applications such as M-PESA, Safaricom Kenya's popular money transfer service. The mobile platform is similarly becoming a favorite tool to optimize the economic potential of urban and rural areas. In Uganda for example, MTN Uganda launched a service combining its mobile network with the Google platform allowing end-users to have access to basic, localized, and actionable information through short message services (SMS).

## Challenges and outlook

For all the achievements of the African mobile industry, the outlook is as uncertain as it is promising. While the number of subscribers continues to grow, marginal revenue per subscriber has declined precipitously, reaching less than USD 5 per month in many markets. This has redefined the traditional parameters of telecoms profitability (for example reducing the reliance on average revenue per user) and compelled operators to optimize their models to remain viable. Profitability levels remain low outside of the top tier operator group, as the business undergoes a dramatic transformation from premium, value-based models to the scale-focused approaches more typical of commodity businesses. ...

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... African markets are also challenging traditional paradigms of mobile profitability analysis; for example, average revenue per user (ARPU) has long been one of the most popular indicators of operator performance. This is largely the outcome of convenience; it is a relatively easy concept to grasp and does have some value as an indicator of revenue generation. In African markets however, ARPU has emerged as a poor indicator of operator performance— that is once it falls below USD 10. As illustrated below (Figure 3), many African operators are generating high margins despite ARPU levels that are considered low; to date, market share and capital expenditure levels have emerged as the best indicators of profitability.

The African mobile model, long built on the spending power of high end consumer segments and urban areas, is now about building volumes and driving profits through scale efficiencies and the sheer power of massive numbers. Research conducted in a sample of 35 African markets indicates that operating expenses are growing faster than revenues, and that at least a third of all African mobile operators are not profitable on a net income basis. Capital requirements are higher, with the cost of mobile licenses on the rise and the need to build scale necessitating increased investments. Intense competition has raised concerns of increased negative returns and long term consolidation.

With these challenges have come a new set of opportunities, for the mobile industry is now seeking to achieve for the Internet market what it did for voice telephony. The obstacles are numerous; limited infrastructure in key portions of the Internet network value chain; high cost of bandwidth and customer equipment, low literacy levels and small addressable markets. And yet the opportunity carries this perennially unique African blend of highly promising potential and often uncertain returns, setting the stage for the next phase of mobile market expansion on the continent. ●

Figure 3: African mobile ERPU vs Ebitda margin\*



\*Based on data for FY2008 or FY2008/09; Source: AfricaNext, 2009

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