Wholesale Open Access Networks

Introduction

The goals are often ambitious when governments propose establishing a single wholesale network (SWN) or a wholesale open access network (WOAN) instead of relying upon competing mobile networks to deliver mobile broadband services in their country. Citizens are promised better coverage, more competition, and as a result, more affordable prices. However, research shows that of five countries originally considering this option, only one, Rwanda, has rolled out a network. Although it appears the network hasn't delivered on what was promised.

The lessons from these countries should serve as examples to other countries contemplating this route.* They highlight the real challenges of SWNs and WOANs and are a wake-up call to those regulators that look to them as an alternative to tried-and-true approaches to network deployment.

The GSMA's position

Some supporters claim that these networks will deliver greater coverage than market competition can. However, those making this claim often gloss over the fact that in order to be built, the SWN or WOAN require significant public subsidies and other forms of support which are typically not available to competing network operators. The GSMA believes that network competition can and does deliver mobile network coverage. In areas where building networks is uneconomic there are other approaches. They include voluntary network sharing that can facilitate coverage in a particular area.

* See also, Frontier Economics report for the GSMA: Assessing the case for Single Wholesale Network in mobile communications, available at http://www.gsma.com/publicpolicy/assessing-the-case-for-single-wholesale-networks-in-mobile-communications

The benefits of network competition go beyond coverage. Innovation is a key driver of consumer value at the national level, and this occurs in networks as well as services and devices. While mobile technologies are typically developed at the international level, the speed at which they become available to consumers depends on national policies and market structures. In practice, government mandated wholesale networks have been much slower to expand coverage, perform upgrades and to embrace new technologies such as 3G and 4G, and they can be expected to prompt less innovation than network competition.

Recommendation

The GSMA recommends a comprehensive consultation with all stakeholders which includes a review of past attempts and how each key goal might be met using existing market structures before embarking on an alternate strategy.

Country summary

	Kenya	Russia	Rwanda	Mexico	South Africa
SWN Implemented	Not implemented	Quasi-SWN plan initiated and failed	Implemented in 2014	Delayed, but in November 2016 it was announced the Altán consortium will build the network	White paper detailing approach published Oct 2016
Availability	✗	Yota – the wholesale operator remained in urban areas only	4G coverage objectives not yet met, although progress has been made	Significant delays to roll out, which should have begun in 2014	?
Affordability	✗	No visibility on pricing	Low take up potentially due to high pricing suggests affordability objectives yet to be met	?	?
Retail competition	✗	Retail competition never materialised as carriers were unable to reach an agreement	No new MNVOs - competition in mobile remains unchanged at present	?	?
Efficiency	✗	Failure of initiative meant operators rolled out their own overlapping 4G networks	At this time there is little evidence to suggest that SWNs have had an impact on efficiency	?	?

Kenya

The push seems to have been abandoned

The SWN push in Kenya has stalled due to a complicated negotiation process with a number of stakeholders. These struggles highlight how complicated the SWN model is.

Originally, a network was proposed through a public-private partnership in Kenya in order to 'fast track' roll out of LTE services. Under this framework the government would provide spectrum and private companies would roll out and operate the wholesale network. The initial plans suggested that an LTE consortium should cover 98 percent of the population.

That never happened. Although no official announcement has been made, the plan seems to have since been abandoned. This is evidenced both by the lack of mention of the network in recently published draft ICT policy and framework documents, and by the recent recent assignment of 800MHz spectrum to existing mobile operators who have since commenced the deployment of broadband services using the spectrum.

Mexico

The roll-out has been delayed several times

Mexico's inability to get its project off the ground also highlight some of the issues. Out of the original 21 qualified bidders, most struggled with the business case. Also, multiple delays have forced the country's regulator to lower its ambitions on funding and more importantly coverage.

Mexico first made constitutional changes to try to foster competition in the telecommunications and broadcasting markets. As part of this, it proposed the deployment of a shared public network for broadband access and mobile telecommunication services.

The roll-out was intended to begin in 2014 and be operational by 2018. In May 2015, the government announced the investment target had been reduced from $10 billion to $7 billion and the estimated number of cell towers will be closer to 12,000 instead of 20,000.

With just one bidder left, the winner was announced in November 2016. The Altán consortium will get access to 90 MHz of contiguous spectrum in the 700 MHz band to build the wholesale LTE network.

Rwanda

The network is live, but can't live up to expectations

The country's LTE-based network was launched as planned in late 2014 in the capital Kigali. The project is a public-private partnership between the government and Korean operator KT. However, launching a network is just the first step. The government is still unlikely to achieve coverage, price and competition goals.

As of July 2016, the network was available in 25 (out of 30) districts with population coverage estimated at around 30 percent. The current progress in terms of coverage suggests it is unlikely the original coverage target of 95 percent will be achieved by the end of 2017.

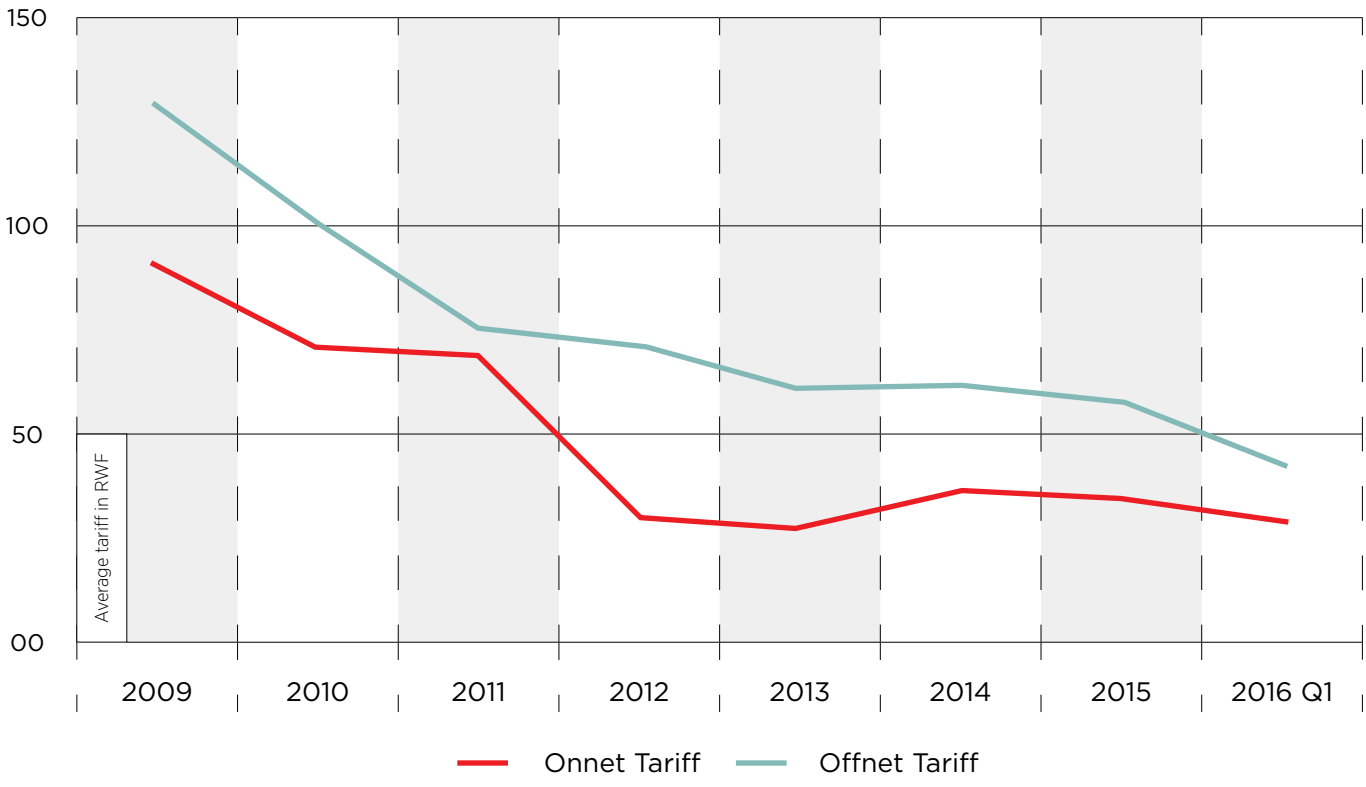
The take up appears to be limited so far. A failure attributed to the cost of the services.

Also, there is no sign mobile broadband services have become more affordable because of the government intervention, according to data from the regulators website. This contrasts with the cost of voice services, which has fallen over the same period.

Commercial negotiations set the wholesale prices They are reviewed twice a year. Over the lifetime of the network there have been several significant reductions in wholesale prices. But they have not translated into lower retail prices on a consistent basis.

Exhibit 1.

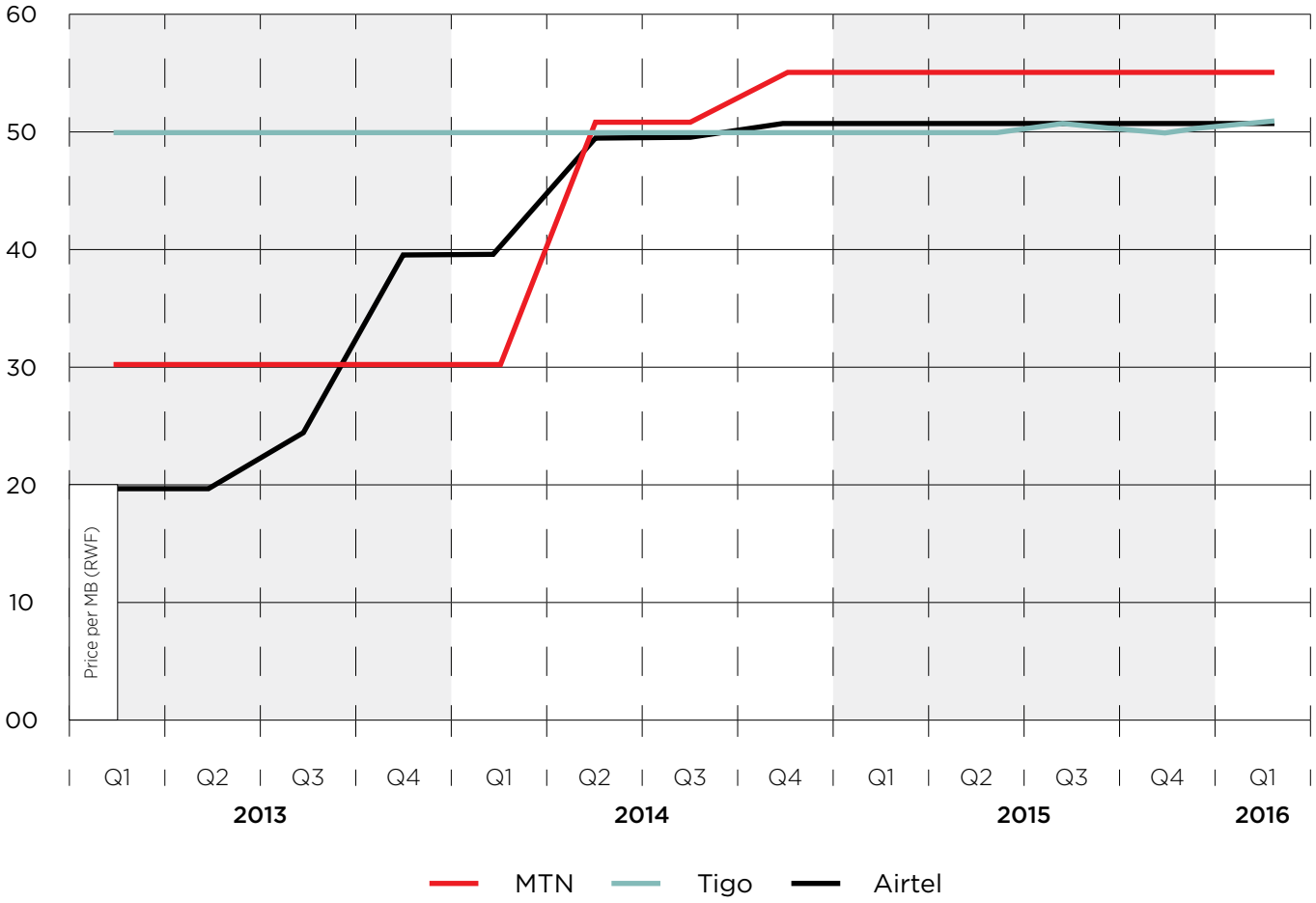
Voice trend in Rwanda



Source: RURA Statistics and Tariff information in Telecom Sector as of March 2016
http://www.rura.rw/index.php?id=83

Exhibit 2.

Price per MB – mobile broadband



Source: RURA quarterly publications – statistics and tariff information in Telecom sector
Note: The regulator's website does not seem to provide information on how this price measure was

In order to retail the wholesale services they buy from KT, the MNOs are commercially inclined, but not obligated, to promote 4G services, although since no 4G spectrum will be allocated to the MNOs if they wish to provide 4G it must be provided through KT's network. Although KT's 4G services are promoted via MNO's retail activities, the perception in the market is that MNOs themselves will be responsible in the eyes of consumers for any issues with coverage and quality of 4G services.

Russia

The initiative failed as carriers couldn't reach an agreement

In Russia, Scartel (brand Yota) was allocated 40 MHz of spectrum in the 2.6 GHz band and given the first licence to offer LTE services with conditions that wholesale access must be provided to other mobile operators.

However, this initiative failed as carriers were not able to reach an agreement and went their own way on LTE, after reportedly insisting on choosing their own vendors. The main issue was that the government allowed Yota to act as both a wholesaler and retailer limiting Yota's incentives to offer wholesale terms attractive to other operators with which it would compete at the retail level.

It looks like a revived plan for a full-blown SWN (similar to Rwanda or Mexico) also has been rejected following the roll out of LTE services by the Russian mobile operators.

South Africa

The latest project's larger scale comes with larger risks

The South African government's recently renewed efforts go further than other countries have dared by using all spectrum bands.

A white paper published in October proposes the creation of a WOAN in South Africa and as part of this presents significant changes to access policies and spectrum licensing.

It proposes a public-private consortium to develop an open access wireless network. The consortium is proposed to include a wide range of private participants on a voluntary basis, including existing mobile operators (MNOs and MVNOs), infrastructure companies, private equity investors, ISPs, and OTT players. The consortium approach is not dissimilar to what has been proposed or implemented in other countries, but suggests a much larger scale.

Irrespective of its motives, the government is putting a lot of faith in an unproven model. The repercussions, if the project goes ahead, could be irreversible and result in a negative impact to the country's economy.

If the project goes ahead as proposed in the White Paper, it will have repercussions on the structure of the industry and the country's economy. The critical role mobile broadband plays in the global economy and, especially, in the economies of developmentally advanced markets like South Africa should be carefully considered.

Alternative ways to meet objectives

Bridging the connectivity gap will be a huge challenge. At the end of the day, it can only be overcome through close collaboration. Both the private sector and public sector have important roles to play in improving the business case for mobile network coverage expansion to the unserved and underserved.

Two of the main concerns intended to be addressed by wholesale networks are the apparent cost of network duplication and lack of rural coverage.

However, mobile operators are already demonstrating a willingness to balance competition with co-operation in infrastructure investment by entering into infrastructure sharing agreements on a voluntary basis. They are also exploring new business models with third parties to share the cost and risk of investment in rural and remote locations.

The goals are indeed ambitious when governments propose the roll-out of a wholesale network to improve coverage. But, as this report highlights, taking this route gambles with the ability to connect the unconnected.

A better way forward is for governments, regulators and mobile operators to collaborate on long-term solutions. The basic building blocks which can help make this happen are:

- Cost effective access to low frequency spectrum
- Support for spectrum re-farming
- Support for all forms of voluntary infrastructure sharing
- Elimination of sector specific taxation on operators, vendors and consumers
- Non-discriminatory access to public infrastructure
- Support for streamlined planning and administrative processes
- Relaxation of Quality of Service requirements
- Context appropriate competition policy, especially concerning market structure
- Support for multi-sided business models such as zero rating and sponsored data

Read more at:
www.gsma.com/mobilefordevelopment/programme/connected-society/unlocking-rural-coverage-enablers-commercially-sustainable-mobile-network-expansion

GSMA HEAD OFFICE
Floor 2
The Walbrook Building
25 Walbrook
London EC4N 8AF
United Kingdom
Tel: +44 (0)20 7356 0600
Fax: +44 (0)20 7356 0601