

## Cross-border penetration of mobile networks: economic and financial aspects

### Background

Togo is a country in West Africa, with Benin immediately to its east, Ghana immediately to its west, and Burkina Faso immediately to its north. At its borders, as is often the case in any country, it faces the problem with its neighbours of the cross-border penetration of the radio coverage of mobile networks. Nevertheless, one particular characteristic of Togo is that its capital Lomé, where much of the country's business is conducted, is located on the border with Ghana.

The *Autorité de Réglementation des secteurs de Postes et Télécommunications* (ART&P) of Togo has undertaken coordination several times with its counterparts in the neighbouring countries.

On 10 September 2004, an agreement was signed between the National Communication Authority (NCA) of Ghana and ART&P, limiting the penetration distance of mobile network radio signals in either direction across the border at Aflao to **500 metres**.

Nevertheless, this has not prevented a Ghanaian operator from having its signal penetrate over **10 km, from the border to the autonomous port of Lomé**. And one important detail should not be overlooked: **the country is 45 km wide, from the border with Ghana to the border with Benin**.

This problem was raised during a coordination meeting, held in Lomé, from 18-20 December 2006, between Burkina Faso, Benin, Côte d'Ivoire, Ghana, Guinea-Conakry, Mali, Niger and Togo. Ghana's NCA promised ART&P to oblige its operators to comply with the regulated penetration distance.

A further meeting between ART&P and NCA was held in Lomé on 14 February 2007 to review the situation. It was noted that the penetration distance of the Ghanaian mobile network radio coverage across the Aflao border is progressively shortening.

### The issue

The location of the capital Lomé in relation to the border with Ghana is a critical factor. **In general, major commercial activities develop at the various borders of countries in Africa. Consequently, the areas along the border generally constitute a real market for mobile network operators.** In most cases, in any given country, each operator can seize the market opportunity at the limit of the regulated distance beyond the border. Under these conditions, protection of the revenues of authorized national operators is less of a problem.

In Togo, the area between the frontier with Ghana and the port of Lomé, which is a distance of 10-20 km, encompasses all the administrative centres, the biggest market and the largest business area in the country, whereas on the other side of the border, in Ghana, Aflao is a small town. During working hours (from 0700 to 1800 hours), this area represents at least 60% of the traffic in Lomé, the capital, and Lomé represents 80% of the operators' market.

To allow Ghanaian networks to penetrate into this area makes them operators on a major market on a par with the authorized operators. The fundamental question is whether the cross-border coordination can provide an effective and lasting solution to this problem. What are NCA's real powers to ensure that these operators comply with the regulatory distance negotiated with ART&P?

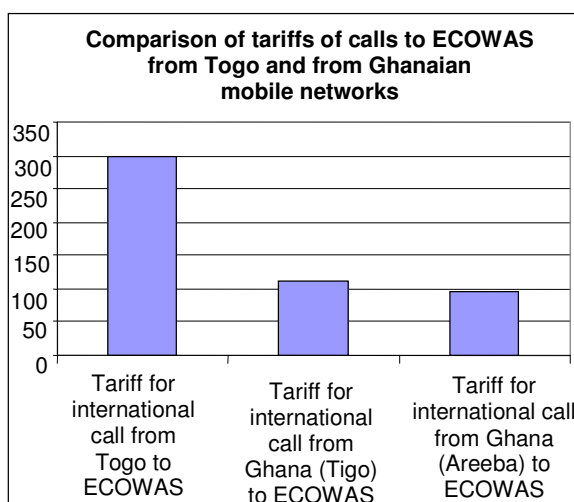
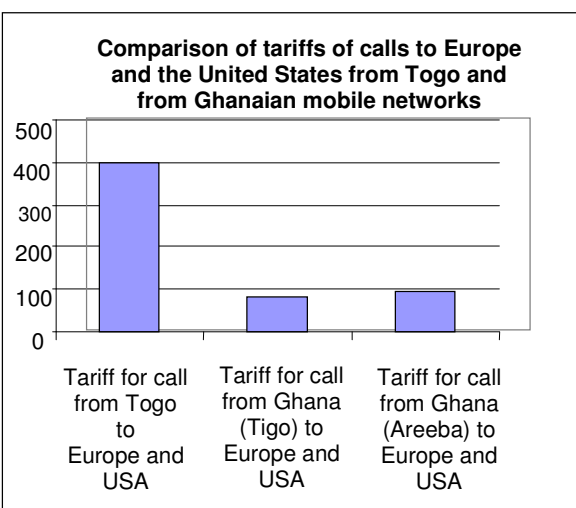
## Economic aspects

In reality, the penetration of Ghanaian mobile networks into Togo poses the problem of protecting the revenues of authorized Togolese operators. On the market, it is to be noted that Togolese consumers subscribe to a Ghanaian mobile network by buying the corresponding chip, or use the services of a Ghanaian mobile network in the public booths set up in Lomé.

As an intermediary solution, and in addition to the cross-border coordination, ART&P has undertaken police action against the sale of Ghanaian operators' recharge cards and against public booths offering Ghanaian mobile network services. Nevertheless, it is doubtful whether this action has any real effect, since the border is just a few kilometres away and it is difficult, if not impossible, to prevent the Togolese from going to Aflao to buy the cards.

An in-depth study of the matter points to the fact that Togolese consumers do not use the Ghanaian network signal simply because the signal is available. There are surely other motivations, in particular the tariffs applied.

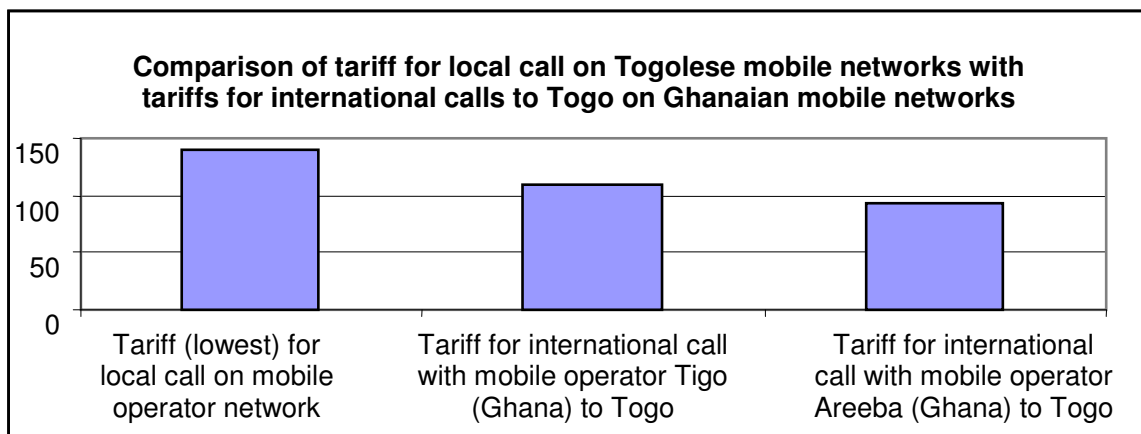
**Indeed, the international communication tariffs in Togo are higher than those offered by the Ghanaian operators**, and this initially was the Togolese consumer's main motivation. This situation is illustrated below by the offers of two Ghanaian mobile network operators (Tigo and Areeba).



For years now, Togolese operators have been under the misconception that Togolese consumers are drawn to the Ghanaian networks because the Togolese operators' international tariffs are not competitive.

Today, however, the true gravity of the problem has come to light: **the tariffs applied by Ghanaian mobile operators for communications from Ghana to Togo are lower than the tariffs for local mobile calls (on net) in Togo. As a consequence, the Togolese consumer makes a “local call” by dialling international on the Ghanaian network.**

The following figure illustrates the situation:



This type of competition will always be possible so long as the Ghanaian operators' signal is available for use by Togolese consumers. National telecommunication markets are nevertheless defined by national borders and entry into the telephone segment is subject to the payment of taxes and fees, with authorized operators benefiting in return from market protection.

The prices currently practised by Togolese operators are not competitive compared with their Ghanaian counterparts. But since they are not supposed to be operating on the same market, the problem of competition should not arise. Such competition does unfortunately exist, and not just any market, but in the city centre of the capital of Togo. If cross-border coordination and prohibiting the sale of Ghanaian operators' cards produce no real results, what other alternatives can be resorted to?

ART&P considers that a lasting solution to this problem must be tariff-related. It therefore proposes:

- 1) to promote a reduction in national mobile communication tariffs if the results of the cost audit allow it;
- 2) failing that, to intervene in setting the accounting rate in the direction of Ghana, so as to press Ghanaian operators into increasing their communication tariffs in the direction of Togo.