

Taxing mobile phone more than gold mining in Africa

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The tax on internet voice calls such as WhatsApp, Skype and Viber triggered massive protests in Lebanon, which bring down the government a few months later. Several other countries especially in Sub Saharan Africa (Uganda, Zambia, Kenya) raised or tried to raise (Benin¹) similar taxes. These experiments illustrate not only governments' efforts to tax new bases, but also the politically sensitivity of some bases and the poor design of these taxes, which often take the form of a specific excise². Such taxes add up to a lot of others, which are particular to the telecommunication sector.

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1. The Decree 218-34 of July 25, 2018 raised a tax on the use of social media at a rate of 5 FCFA or equivalently USD 0.009 per megabyte. Online and street protests push the government to cancel this tax a few month later.
 2. The tax is specific when its base is a quantity (e.g. minutes, megabyte...).

.../... This sector is yet one of the most dynamic economic sectors in Africa and still displays some significant growth potential. Unique subscriber penetration remains low, at around 45 percent on average in Africa compared to more than 60 percent in other developing countries in 2017 (GSMA intelligence, 2018). Telecommunication participates to the economic development of countries by reducing transaction costs and improving market efficiency.

What should be the adequate level of taxation on the mobile phone operators? On one hand, mobile phone companies would extract a kind of rent from operating their exclusive licenses. The tax regime applied to telecommunication should therefore follow the same logic than the one applied to the extractive industries. On the other hand, telecommunication firms participate to bridge the digital divide, justifying potential tax incentives. This debate is not particular to the telecommunication sector and reflects a well-known trade-off, prominent in developing countries, between fostering an economic activity through tax incentives and collecting tax revenues for public funding purposes.

We estimate the tax burden on the mobile telecommunication sector in twenty-five African countries.³ This tax burden encompasses not only standard and particular taxes under the control of the Ministry of Finance (MoF), but also fees raised by national telecommunication Regulatory Agency (RA). We compute the Average Effective Tax Rate (AETR) for a representative mobile network operator, named TELCO, using the GSMA Intelligence database.⁴

3. We study 25 African countries: Algeria, Angola, Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, DRC, Egypt, Ethiopia, Kenya, Gabon, Ghana, Guinea, Madagascar, Mali, Morocco, Niger, Nigeria, Senegal, Sierra Leone, South Africa, Tanzania, Tunisia, and Zambia.

4. Our approach is close to Djankov et al. (2010) and the Doing Business Report of the World Bank for standard economic activity and the Fiscal Analysis of Resource Industries of the International Monetary Fund for mining and petroleum project.

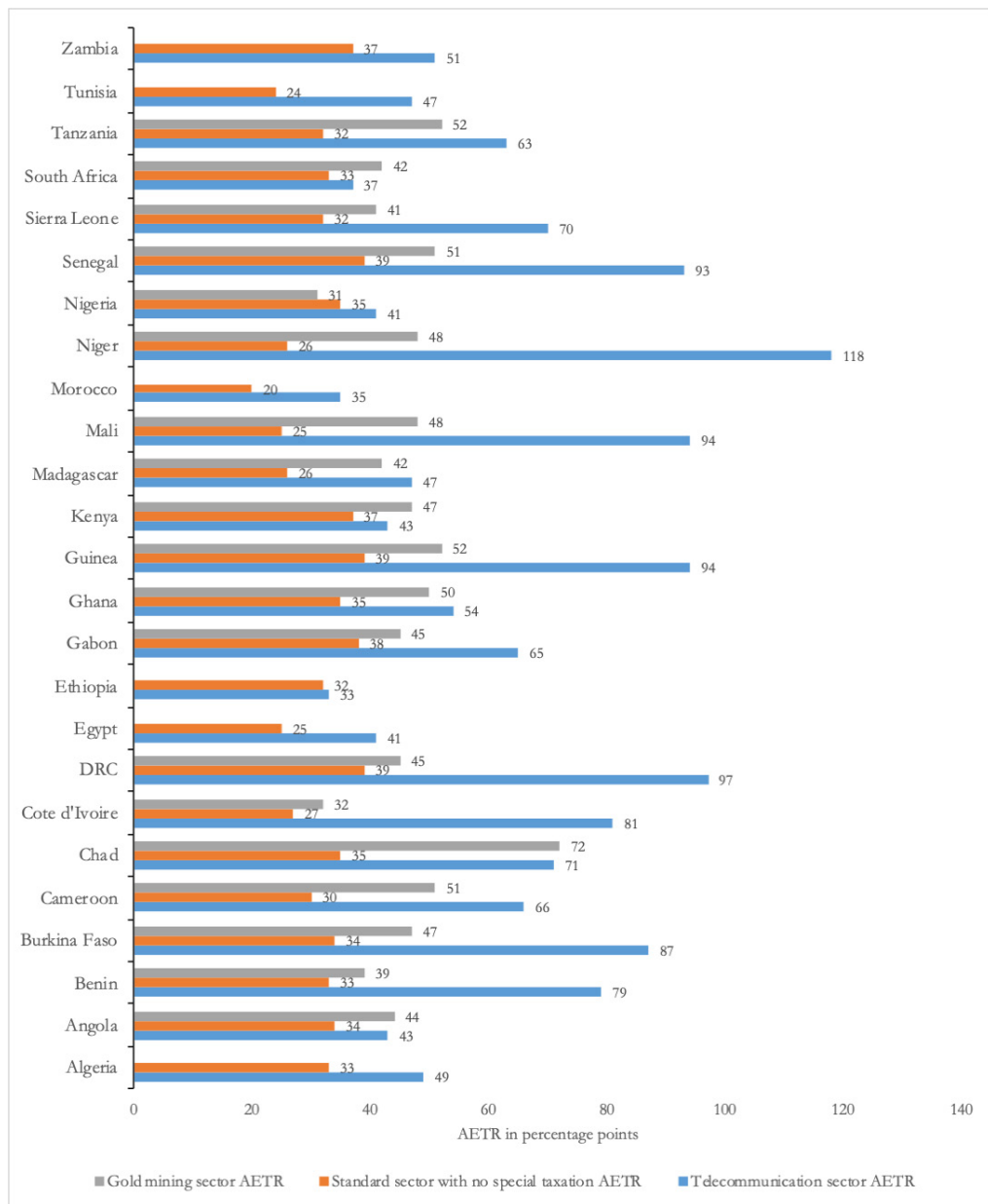
The AETR varies significantly across these countries from 33 percent in Ethiopia or 35 percent in Morocco to 97 percent in DRC and even 118 percent in Niger with an average at 64 percent. Ethiopia is an outlier of our sample since the liberalization of its telecommunication sector remains to be done. Special taxes and fees represent a large share of the AETR illustrating some taxation by regulation and a potential tax competition (a race to the top) between the MoF and the RA.

Telecommunication is generally more taxed than the mining sector. We compare the AETR of TELCO to this of a representative gold mining plant and a standard firm with similar gross return over the period. The tax burden of the telecommunication sector is higher than this of the mining sector in 15 countries out of the 19 countries for which we have data on the gold mining sector (see Figure 1). The AETR in the gold mining sector varies from 31 percent in Nigeria to 72 percent in Chad. Its average value is around 46 percent against 68 percent for the mobile sector. In several countries, the special taxation on telecommunications alone is higher than the total tax burden applied to the mining sector. The mining sector remains however more taxed than the standard economic one except in Nigeria.

Higher AETR is associated with lower market penetration and lower Gross National Income (GNI) per capita (see Figure 2). These results are mainly driven by special taxes and fees. The correlation is negative between special taxation and the two variables while it is positive with general taxes. Beyond the level of taxation measured through AETR the form of taxation matters in terms of revenue and telecommunication development. Telecommunication RAs can raise very distortionary taxes or fees as Hausman (1998) emphasized it in the case of the US Telecommunication Act of 1996. Alternatively, these correlations may also illus-

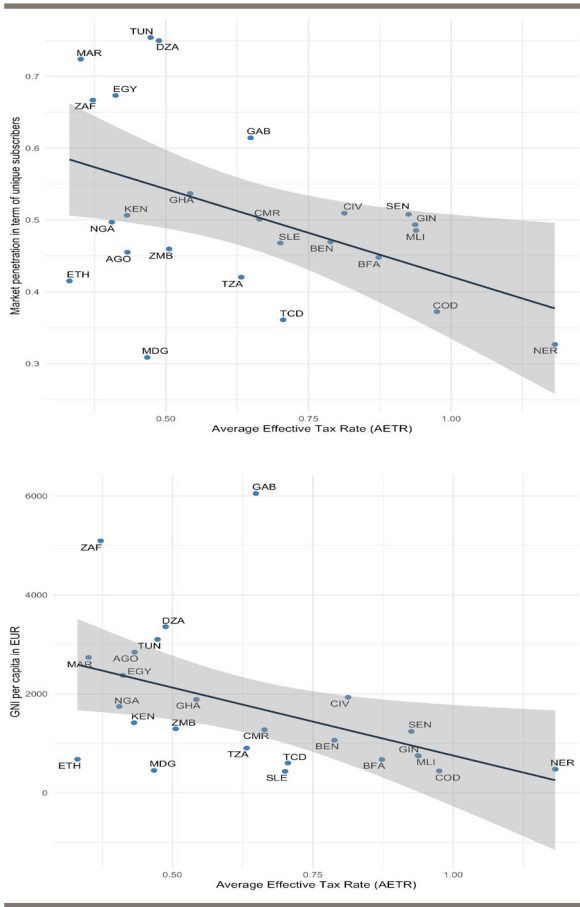
trate that more advanced countries in terms of mobile phone market penetration rely less on special taxation. This relationship could result from a more powerful lobbying of MNOs in these countries.

Figure 1: The Average Effective Tax Rates of a mobile phone operator, a gold mining project and a standard firm.



Source: authors.

Figure 2 : AETR, market penetration, and GNI per capita



Source: authors.

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