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Executive Summary

Over the last five years, 15 African countries have imposed a new additional telecommunication specific tax, in the form of a Surtax on International Inbound Call Termination ("SIIT").

Based on the data received from mobile operators, this paper studies the effects of the SIIT in six of these countries and on regional integration. Data was not available for Central African Republic ("CAR"), Republic of Congo, Gambia, Chad, Niger, Malawi and Rwanda. Therefore aggregated figures in this report refer to Benin, Democratic Republic of Congo ("DRC"), Gabon, Ghana, Tanzania, and Uganda (referred to as the ‘SIIT countries’).

The SIIT takes the form of an imposed fixed price that operators must charge for international inbound termination, of which the government takes a set amount. SIIT prices are different from the competitive market prices for termination which applied before the tax was introduced. In the countries where it is imposed, the SIIT has caused the price of terminating International Incoming Calls ("IICs") to increase by an average 97%, with an increase of up to 247% in Burundi.

![Figure 1](impact_of_siiit_on_iic_termination_prices.png)

**IMPACT OF SIIT ON IIC TERMINATION PRICES**

(Source: Deloitte analysis based on data provided by local mobile operators)

Figure 1
This price increase is being reflected in retail prices for consumers. Evidence from retail international tariffs suggests that the average price per minute to African countries that have implemented a SIIT is 28% higher than those countries that have not introduced one. For example, the cost of calling Ghana from the UK is now 200% higher than the cost of calling Nigeria. The difference in average price per minute between those that have implemented a SIIT and countries at a similar level of economic development is similar to the average price increase due to the SIIT.

Operators are concerned that governments have not considered fully the negative direct and indirect costs that the SIIT generates which could lead to losses for governments, local businesses and consumers, and negatively impact regional integration.

Additionally, governments often use a private party to measure the number of international inbound minutes terminated by each operator and bill the operators accordingly. The tax charges collected in this way are then shared with the private party that carries out the measuring function. The amount shared with the private party constitutes a significant proportion of the tax revenue, which can be as high as 50% and this should be considered against a background where such information could be collected from the operators directly using their own traffic recording systems.

This study analyses a range of negative effects of the SIIT that affect operators, businesses and consumers. Firstly, it estimates what would have happened to volumes of IICs in the absence of the SIIT by considering the relationship between IICs before and after the introduction of the SIIT with a number of macroeconomic and industry variables. In addition, after analysing what might have happened to the volumes of IICs if the SIIT had not been introduced, the costs of the SIIT in terms of lost corporate tax revenue for governments and lost remittances are estimated.

The SIIT also creates significant extra costs to African businesses that trade with (and hence call) businesses in countries in the region where the SIIT has been imposed, negatively affecting regional integration. Evidence from mobile operators indicates that nearly 40% of all international incoming traffic is from countries in the region. In some countries such as Tanzania this is over 50% and for the DRC and Uganda, 48% of calls originate within Africa. Negative regional impacts have also been estimated.

A summary of these potential effects is presented in Table 1. The analysis indicates that 1.2 billion minutes may have been lost and the direct costs to the economies and across the region from these taxes may amount to US$78 million. These costs are discussed in more detail below.

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1. The analysis is based on operators’ data and scaled to each market employing market shares. The approach is described in the main report.
### Summary of the Impacts of the SIIT by Country, US$M unless otherwise stated

<table>
<thead>
<tr>
<th>Country</th>
<th>Time Period</th>
<th>Estimated Lost ICS (Minutes)</th>
<th>Lost Corporate Tax from Reduced Mobile Operator Revenue</th>
<th>Lost Corporate Tax from Businesses Trading with Other SIIT Countries</th>
<th>Cost for African Businesses Trading with the Country</th>
<th>Economic Losses due to Reduced Remittances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>Feb 2011 to Sept 2013</td>
<td>147m</td>
<td>-0.8</td>
<td>1.8</td>
<td>10.0</td>
<td>3.7</td>
</tr>
<tr>
<td>DRC</td>
<td>June 2013 to March 2014</td>
<td>90m</td>
<td>0.9</td>
<td>1.7</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Gabon</td>
<td>Aug 2011 to March 2014</td>
<td>161m</td>
<td>3.0</td>
<td>1.2</td>
<td>4.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Ghana</td>
<td>June 2010 to Sept 2013</td>
<td>679m</td>
<td>2.9</td>
<td>0.3</td>
<td>21.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Jan 2013 to March 2014</td>
<td>110m</td>
<td>1.3</td>
<td>1.4</td>
<td>5.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Uganda</td>
<td>June 2013 to Sept 2013</td>
<td>9m</td>
<td>0.1</td>
<td>0.8</td>
<td>4.2</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>June 2010 to March 2014</strong></td>
<td><strong>1,195m</strong></td>
<td><strong>7.5</strong></td>
<td><strong>7.1</strong></td>
<td><strong>48.1</strong></td>
<td><strong>15.2</strong></td>
</tr>
<tr>
<td><strong>Aggregate total</strong></td>
<td><strong>June 2010 to March 2014</strong></td>
<td><strong>1,195m</strong></td>
<td></td>
<td></td>
<td><strong>78m</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Deloitte analysis based on data provided by local mobile operators recognising that the timeline in which these effects have occurred is different for each country.

Table 1
Negative impacts on call volumes and corporate tax revenue

The SIIT raises the price of international call termination to a level that is not based on the cost of terminating international calls and on market conditions. These large increases in price have a direct effect on the volumes of IICs by reducing the amount of calls that would have otherwise been made to the country using mobile networks. The price increases will also have an indirect effect by inducing the substitution of standard calls with VoIP calls; and by encouraging the development of illegal SIM boxes used to terminate international and also domestic calls. Although call substitution may mitigate some of the wider economic impacts, the SIIT results in significant losses for mobile operators and governments through reduced revenues and corporate tax receipts respectively.

Mobile operators have provided data on how volumes of calls on their networks have varied before and after the introduction of SIIT. This data suggests that:

- In Benin, call volumes fell by 1.6% during the year following the introduction of the SIIT, whereas they grew by 38% in the year before it was introduced.
- Call volumes in Ghana fell by 27% in the five months after the SIIT was introduced.
- In Gabon, call volumes fell by 57% in the month the SIIT was introduced.
- The volume of calls in Uganda began falling after being stable for the previous four years.
- Call volumes in Tanzania fell by 16% in the month the tax was introduced and 12% in the following month.

These trends are consistent with analysis recently undertaken by the Organisation for Economic Co-operation and Development (OECD), which found that call volumes have “dramatically decreased” in countries where the SIIT has been introduced. For example, it was found that IICs in El Salvador dropped by 53% and by 30% in Rwanda.

IICs volumes before and after the introduction of the SIIT were compared with macroeconomic variables such as GDP and exports, and industry variables such as mobile penetration, incoming domestic calls and international outgoing calls. Against a background of economic growth and of significant growth in the volumes of mobile calls in nearly all SIIT countries, the volumes of IICs have grown at lower levels than before the introduction of the SIIT. Based on these trends, it is estimated that in the absence of the SIIT, mobile operators could have terminated an extra 1.2 billion international minutes and could have generated US$86 million in revenues from 2010 to March 2014.

Considering average profitability of mobile operators in Africa, and the corporate tax levels charged by governments in these countries, this suggests that governments could have gained an extra US$27.5 million in corporate taxes across the period had the SIIT not been introduced. It is likely that the reduced growth in IICs may have been substituted partly by VoIP calls and by illegal
Negative impacts on African businesses

The introduction of the SIIT has the potential to generate at least two significant types of economic losses to local economies: to regional businesses and to local consumers.

International benchmarks suggest that 40% of international traffic is generated by businesses. As such, on the basis of the data on the country of origin of international calls from operators in SIIT countries, it is estimated that African businesses incurred a direct economic loss of US$48 million for the period 2010 to March 2014. In addition, they would have also incurred indirect losses as a result of any missed calls that were not undertaken due to price increases.

There is evidence that operators in African countries where the SIIT has not been introduced have reciprocated the tariff increases introduced by SIIT countries. As such, economic losses may underestimate the extent to which the introduction of SIIT in certain countries has inflated international termination prices across the region.

SIM boxes. VoIP substitution carries a risk of being permanent and therefore foregoing a lifetime’s revenues from these customers. Substitution may have occurred also for those using calling cards as they will use up the allowance faster.

One of the most concerning effects of the SIIT is that it encourages the development of illegal SIM boxes by increasing the difference between domestic and international termination prices. An operator in Ghana reported that calls being terminated by illegal SIM boxes had risen over 279% between 2010 and 2013, which can result in large losses for operators and corporate tax revenue. In 2011 the Ghanaian government reported that they had lost US$5.8 million due to SIM box fraud.

The SIIT also generates potential negative impacts on international roaming within the region and reduces the incentives for operators to extend good value on-network roaming across the region.

Taxation imposed on mobile telecommunications in African countries, of which the SIIT is just one example, contributes to increased telecommunications costs for local businesses. The resulting higher cost of doing business also carries a risk of decreasing the international competitiveness of the region and reducing regional integration. This could lead to a worsening of the terms of trade for local exporters and reduce local and Foreign Direct Investment (“FDI”), particularly in telecommunications related business.
Negative impacts on consumers and remittances across the region

The SIIT also has the potential to create negative impacts for African consumers that have emigrated from their origin countries and frequently call friends and family back in the home country. As a result, they can respond by either cutting the amount of calls to their home country, reducing connections that result in negative social impacts, or absorb the price increase, which reduces their disposable income. On the basis of IICs data provided by mobile operators, these extra costs are estimated at US$191 million from 2010 to March 2014.

In addition to these impacts, the SIIT has significant effects on remittances. Increased costs of calling home reduce the income of emigrants. Employing evidence from studies on the sensitivity of remittances to income decreases, it is estimated that increases in the SIIT may have reduced remittances back to SIIT countries of up to US$9 million from 2010 to March 2014. As remittances contribute to economic development in the country where these are received, governments in SIIT countries may have lost this amount of economic activity as a result of these missed remittances. Including the multiplying effect that these extra resources could have generated in a local economy, the wider losses to local economies due to reduced remittances are estimated to be US$15.2 million from 2010 to March 2014.
Concerns over the use of third party traffic monitoring companies

The operational implementation of the SIIT policy is also a source of concern for operators, as the third party intermediaries used to measure call volumes add an unnecessary layer of monitoring. Operators are concerned that some of the systems employed can violate privacy as the third party can access private information, some of which is unrelated to the monitoring of international calls. As a result, operators emphasised that the requirements of these systems be clear, transparent, and consistent with the laws and regulations, including privacy requirements.

In relation to the operator’s own monitoring of call volumes, operators reported that adequate assurance and audit measures for international traffic accounts exist within national regulation or law and are upheld by operators using their own traffic recording systems. Operators are therefore concerned that it is an inefficient and unnecessary use of resources to divert tax revenue to pay a third party to calculate call volumes.

Operators are concerned that some of the systems employed can violate privacy as the third party can access private information, some of which is unrelated to the monitoring of international calls.
Conclusions

The introduction of the SIIT can create economic losses to governments that impose it, in the form of losses from tax revenues from mobile operators and consumers and through the incentivisation of illegal SIM boxes, as well as causing a significant leakage from their local Sub-Saharan Africa region. African businesses will experience economic losses in addition to consumers from reduced remittances. Overall, these costs are material at approximately US$78 million for the six countries from 2010 to March 2014.

Recognising the negative impacts of the SIIT on trade and regional integration, Kenya, Rwanda, Burundi, Uganda and South Sudan agreed in May 2014 to waive the SIIT for calls originating in these countries. In light of these negative consequences, other governments should reconsider the impact of the SIIT on the regional economic development in Africa and on their economies.