Global Mobile Tax Review 2011

Contents

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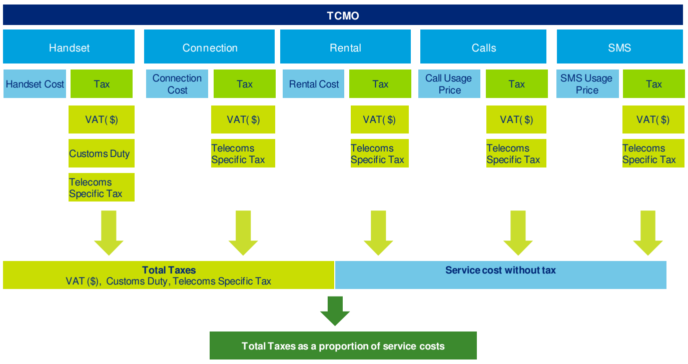
Executive summary

Previous work by Deloitte and the GSMA has highlighted the wide international variation in taxation levied on consumers' usage and access to mobile telephony. This tax base includes differences in taxation regimes across countries and regions of the world and countries which tax mobile telephony over and above other goods and services. Such mobile specific taxation has been linked to the adoption of mobile telephony in developing countries.

In line with the 2007 study carried out by Deloitte and the GSMA, this study calculates how much of a consumer's Total Cost of Mobile Ownership ("TCMO", consisting of handset, connection, rental and usage costs), Total Cost of Mobile Usage ("TCMU", consisting of rental and usage) and of Total Cost of Handsets is made up of taxes.

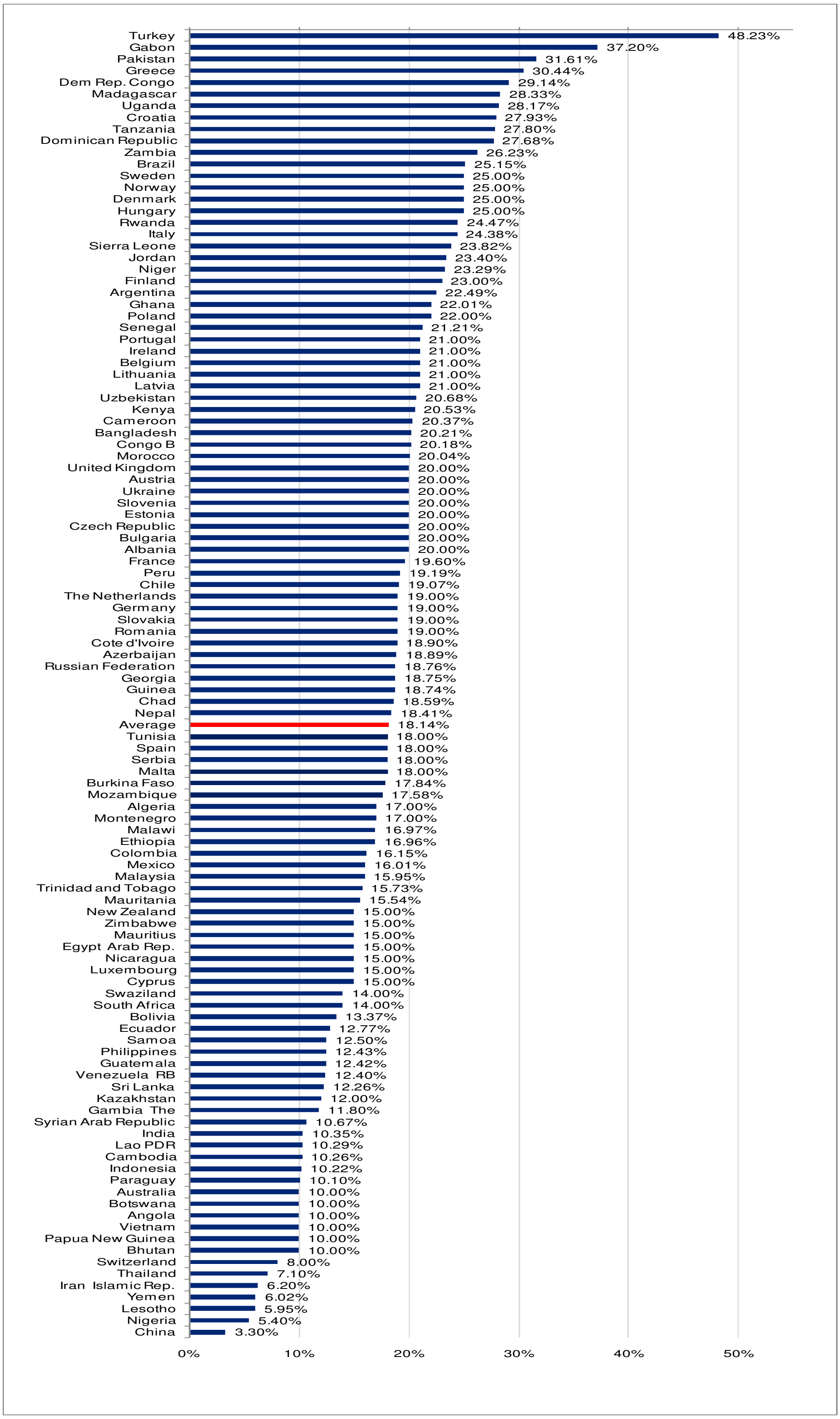


To do so, consumption profiles, prices and taxes were analysed in 111 countries in Europe, Central and Eastern Europe, Africa, Latin America and Asia for pre-pay and post-pay mobile users. Taxes that typically apply to mobile telephony are Values Added Tax / General Sale Taxes on all components, custom excises and luxury taxes on imported handsets, as well as host of mobile-specific taxes ranging from airtime excises applying to usage, to fixed contributions on connection, handsets, and rental. These taxes discriminate mobile telephony against other services, and contribute to reduce access to mobile services as well as service consumption.

"Taxation as a proportion of the total cost of mobile ownership has increased since 2007."

As shown in Figure 1 overleaf, the analysis of taxation as a proportion of TCMO indicates that this has increased since 2007, up to 18.14% from 17.44%.

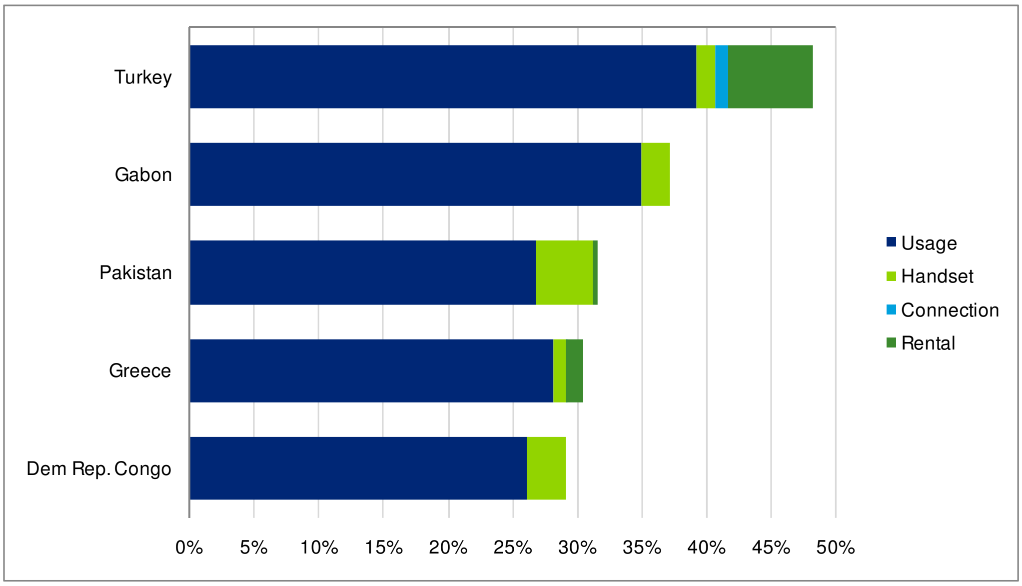
Figure 1 Tax as a proportion of TCMO



Source: Deloitte Analysis

The top five countries that exhibit the highest taxation as a proportion of mobile ownership include Turkey, Gabon, Pakistan, Greece and the Democratic Republic of Congo ("DRC") and in each of these countries mobile specific taxation exists. Figure 2 illustrates how the taxation suffered by consumers is divided between the different components of mobile telephony ownership.

Figure 2 Tax as proportion of TCMO, top five countries in the ranking

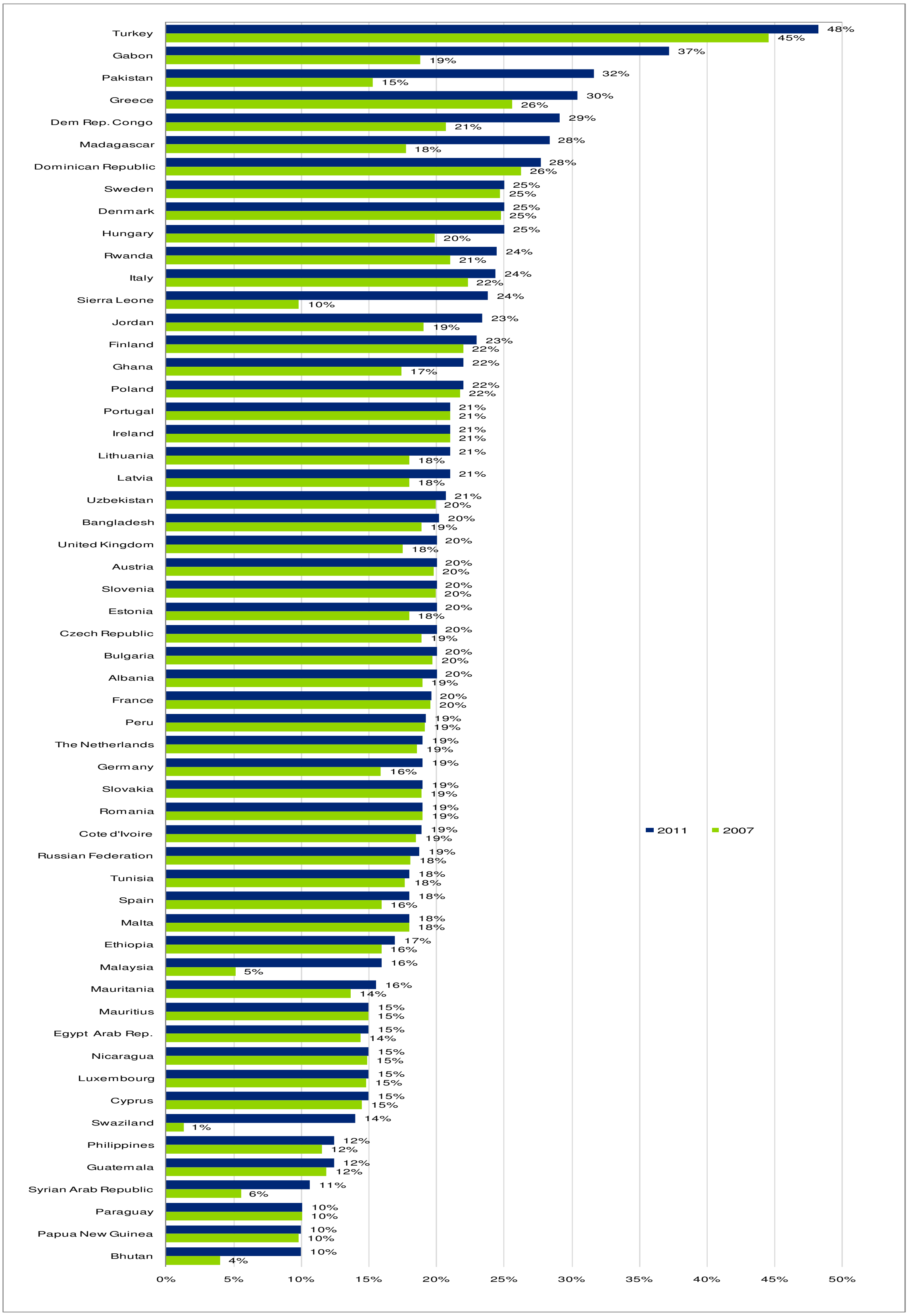


Source: Deloitte analysis

"More countries have increased taxation as a proportion of mobile ownership costs than they have reduced it."

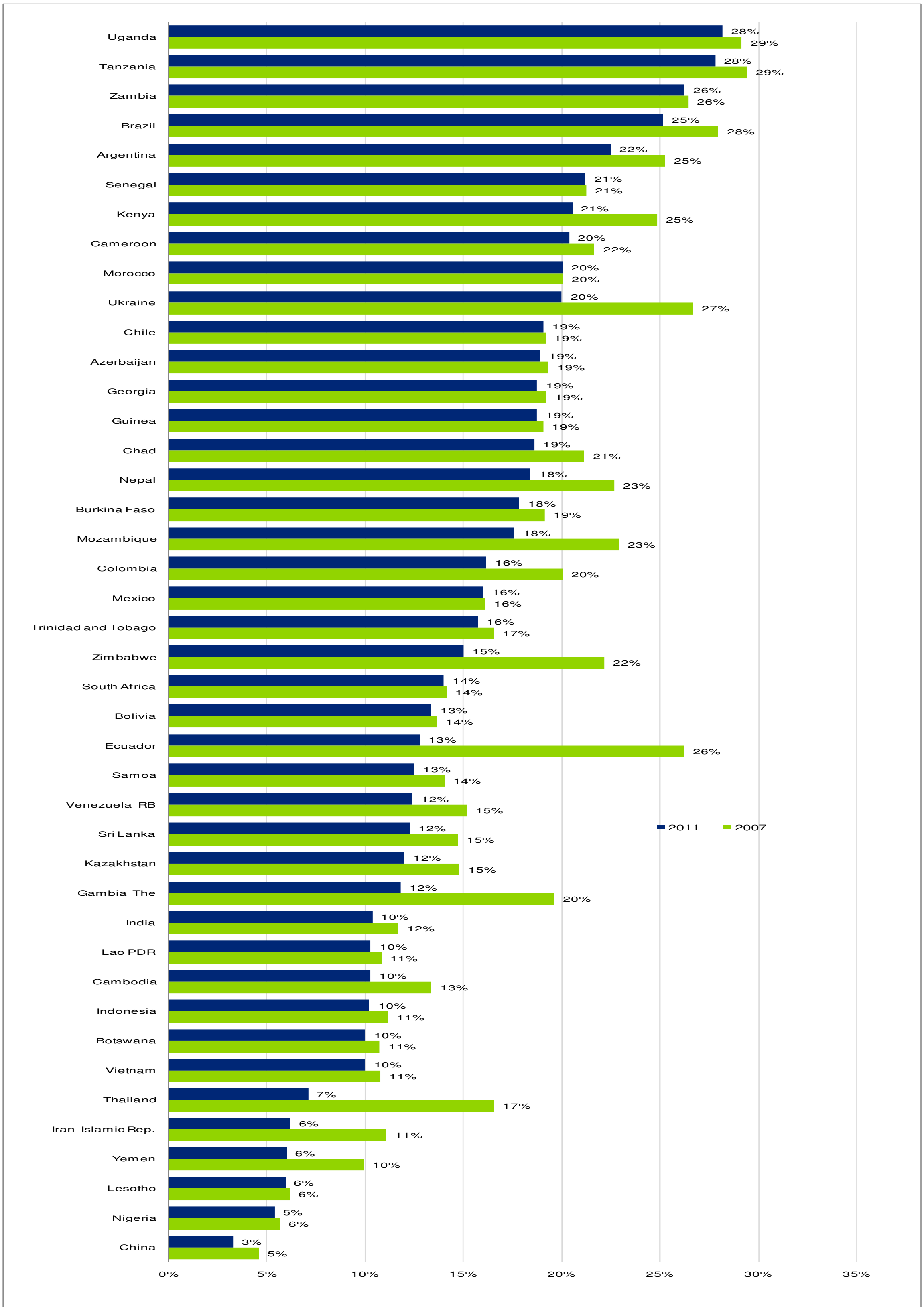
As shown in Figure 3 and Figure 4, 56 countries in the sample have shown an increase in mobile taxation relative to 2007 while only 42 countries have shown reductions in tax as a proportion of TCMO. Countries where taxation has increased include the top five countries showing the highest proportion of tax on TCMO.

Figure 3 Countries where tax as a proportion of TCMO has increased since the 2007 study



Source: Deloitte analysis

Figure 4 Countries where tax as a proportion of TCMO has decreased since the 2007 study



Source: Deloitte analysis

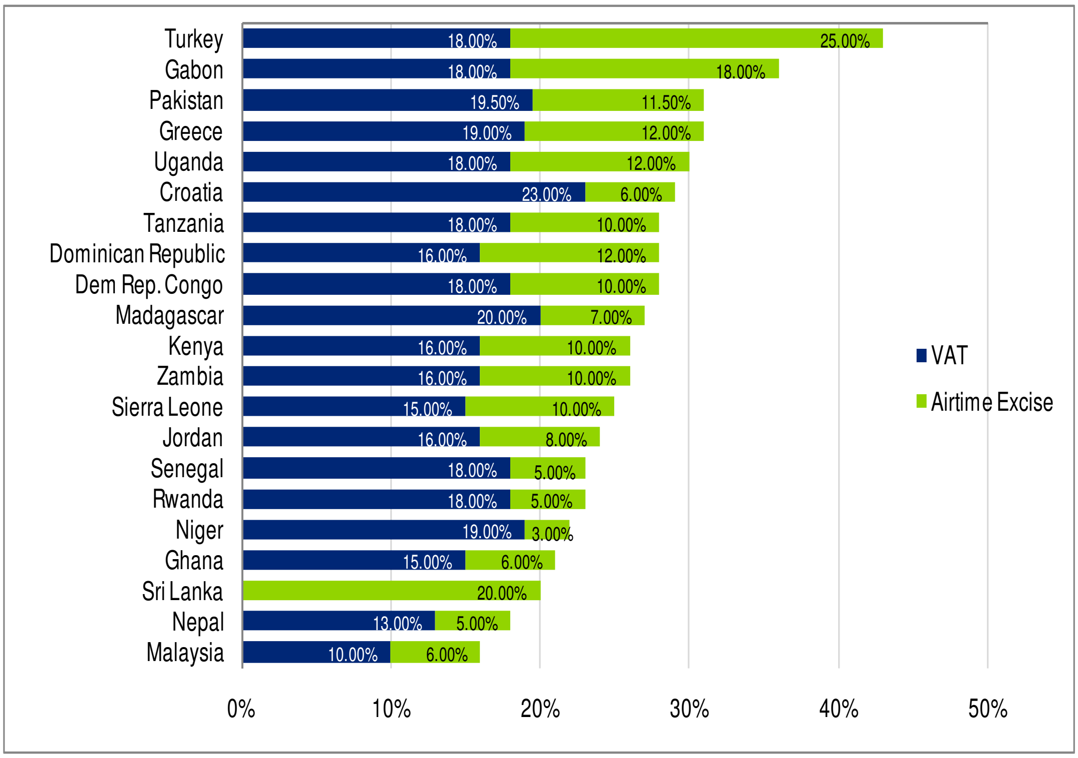
"Countries imposing mobile specific taxes on usage have increased significantly, especially in Africa."

Consumers now pay on average 17.97% of their mobile usage cost as tax, an increase from 16.91% in 2007. A key driver of this result has been that 21 countries out of the 111 in the study now impose a special tax on usage, as shown in Figure 5.

Taxes on the cost of usage can represent a barrier to development of services as they act to reduce usage by consumers. This is particularly the case in developing countries, where lower income levels mean that taxation of usage may impact upon the adoption of mobile by consumers.

12 of the countries imposing special taxes on usage are African, while in 2007 only six African countries levied such tax. Since the 2007 study, DRC, Gabon, Madagascar and Sierra Leone Rwanda and Senegal have introduced airtime excises.

Figure 5 Countries that impose an airtime excise



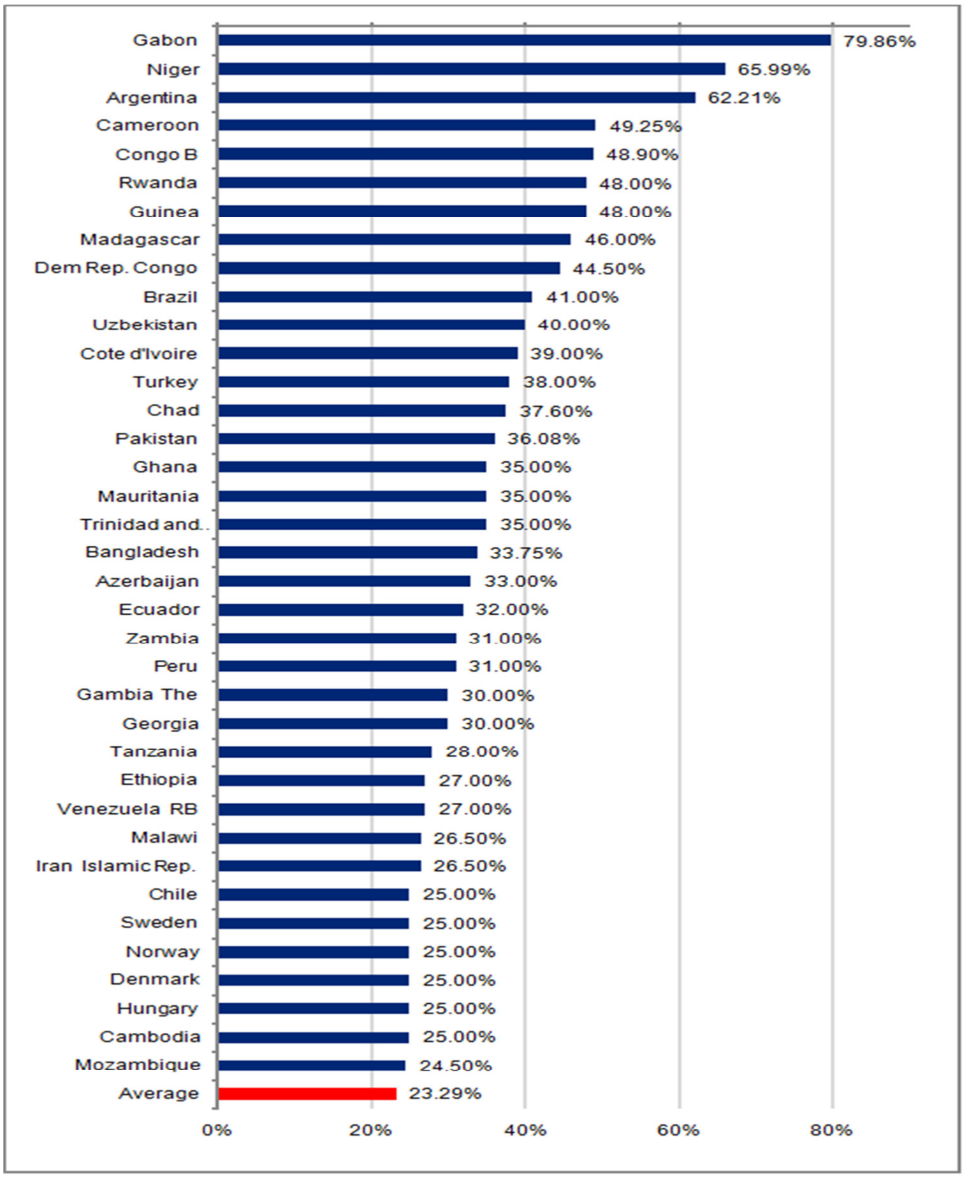
Source: Deloitte analysis

"Tax represents over a third of the cost of a handset in 20 countries."

Tax as a proportion of handset costs is much higher than tax on total mobile ownership or usage costs, standing at an average level of 23.29%, and in 11 countries in the sample tax represents over 40% of handset costs.

This high share of tax on handset costs is due to custom duties on imported handsets, which are imposed 50 countries in the panel, and to a number of other handset specific taxes imposed in 11 countries. These include luxury taxes in countries where handsets are still treated as luxury goods, such as Gabon where mobile handsets incur a special $5 fixed tax. Other countries such as Zambia, Pakistan and Bangladesh apply a special tax on handset acquisition.

Figure 6 Countries where tax as a proportion of handset costs is above global average



Source: Deloitte analysis

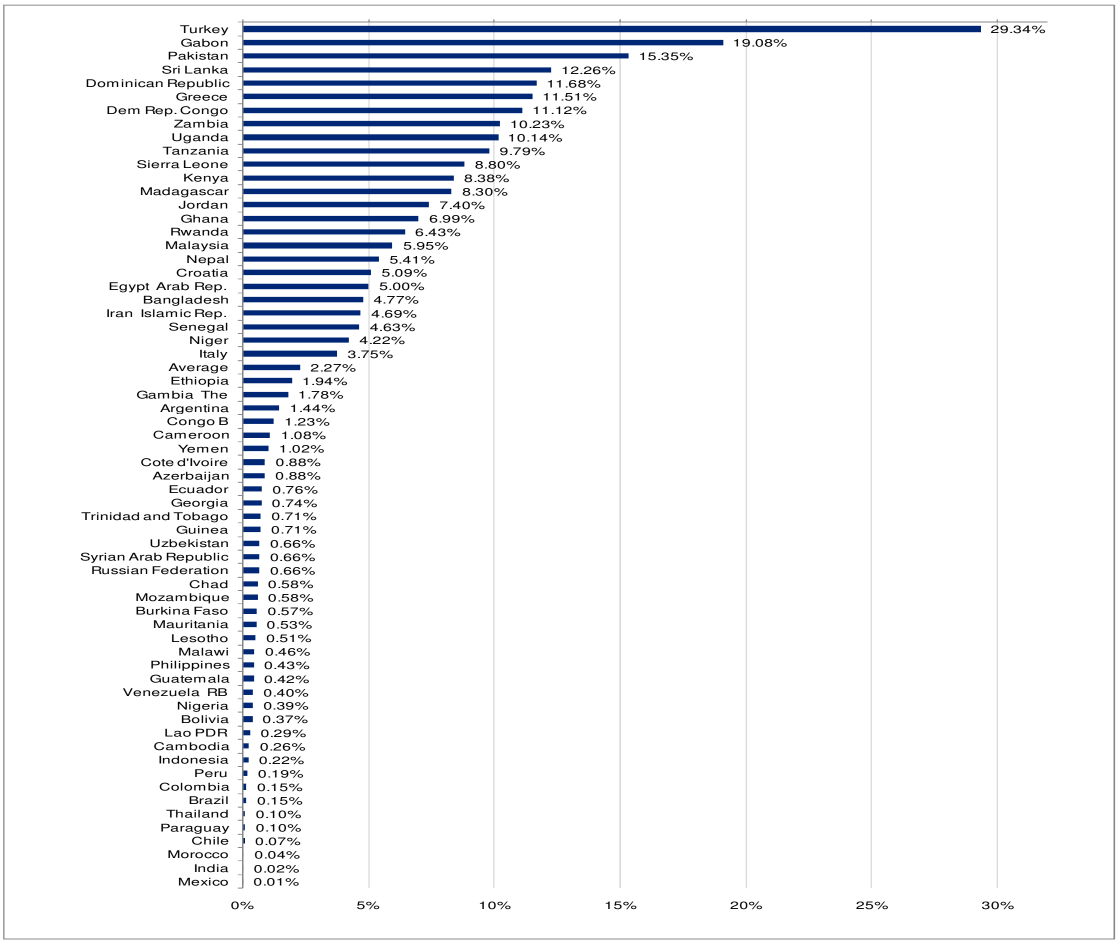
"Mobile specific taxes disproportionately impacting mobile services are now imposed in 28 countries."

Mobile specific taxes discriminate mobile telephony against fixed telephony and other services, are often regressive in nature and may reduce both access to services and usage.

When considering mobile specific taxes as well as customs duties on imported handsets, in total 63 countries charge a form of taxation on mobile handsets above standard taxation and of these, 24 are African.

The level of such mobile specific taxation is illustrated in Figure 7[1]. Turkey, Gabon and Pakistan have the highest proportion of TCMO accounted for by taxation. There are a significant number of African countries that impose such mobile service specific taxation and, of the top 20 countries in which mobile-specific tax as a proportion of TCMO is highest, ten are African.

Figure 7 Mobile specific taxation, excluding VAT



Source: Deloitte analysis

[1] This analysis is obtained by removing VAT and other sales taxes, such that only mobile specific taxation and custom duties on imported handsets are considered.

"Tax as a share of handset costs is much higher than tax as a share of ownership and usage costs in developing markets, leading to unbalanced taxation profiles for mobile related services."

Different geographic regions have different levels of mobile cost, mobile taxation and mobile penetration, and these indicators are greatly influenced by a region's economic conditions. However, a number of clear trends on mobile taxation are apparent.

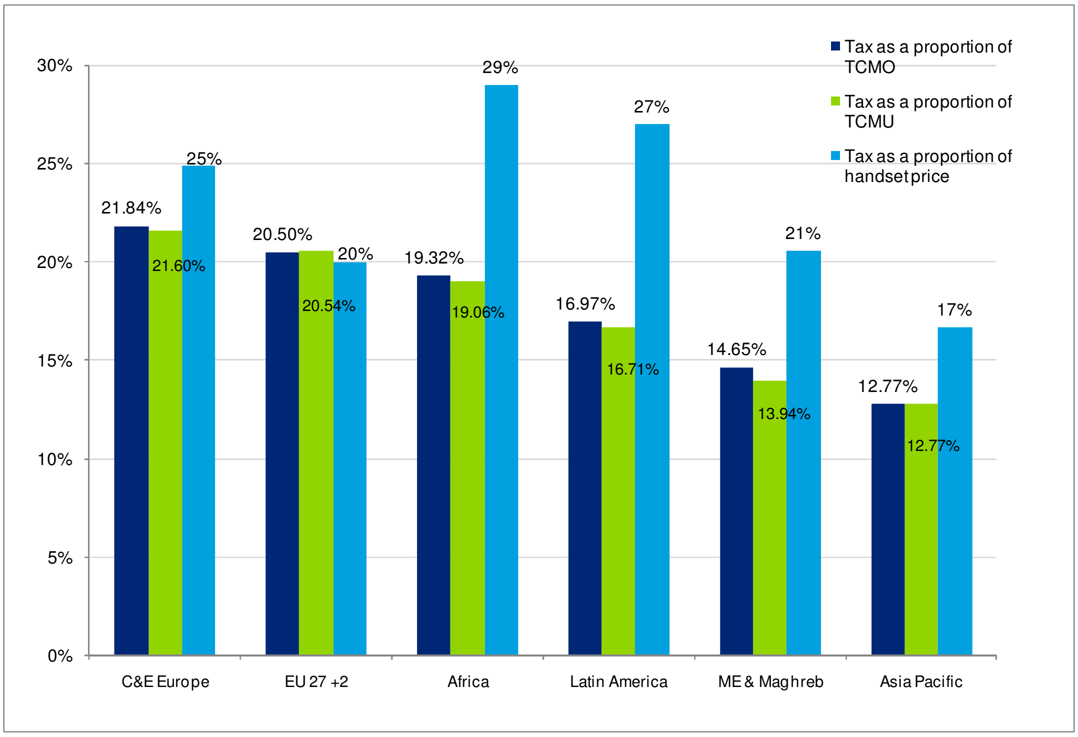
In Europe, tax represents the same proportion of mobile ownership, usage and handset costs. In other countries, taxes as proportion of handset costs are much higher than taxes on usage.

C&E Europe shows the highest average tax as a proportion of TCMO, due to the high mobile specific taxes levied in Turkey, while in the EU higher VAT rates affect the level of tax as a proportion of mobile service costs.

The strongest variation within a region exists in Africa. 17 African nations out of the total 30 African countries in this study have taxation as a proportion of TCMO at above the global average level, largely as a result of the high incidence of airtime taxes. Africa also demonstrates the highest proportion of handset tax globally, representing on average 29% of handset costs.

In Latin America, taxes as a proportion of handset costs are also high, while Asian consumers pay the lowest tax as a proportion of mobile service ownership, due to low VAT rates and limited mobile-specific taxation.

Figure 8 Taxes as a proportion of TCMO, TCMU and handset costs by region



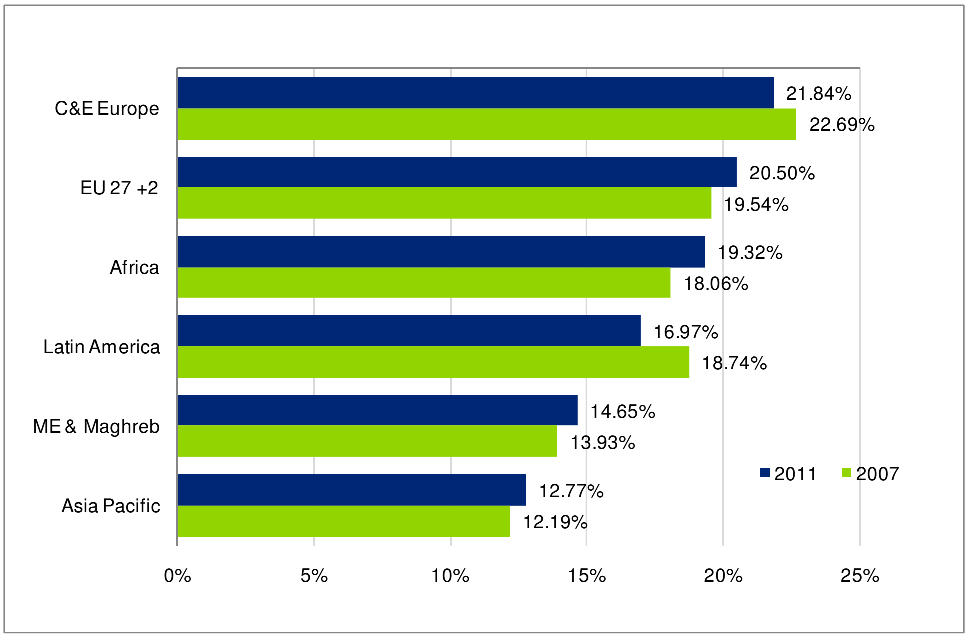
Source: Deloitte analysis

"Taxes as a proportion of mobile ownership costs have increased in most regions of the world but have decreased in Latin America and Central and Eastern Europe."

The Middle East/Maghreb and Africa are the regions where the two biggest increases have been experienced, and these were driven by usage taxes. In the Middle East and Maghreb, countries where mobile usage is subject to a mobile specific tax include Jordan and Egypt.

In Africa, the increase was driven by the proliferation of airtime excises, such that taxes as a proportion of usage costs have increased by a notable 13%. While tax as a proportion of handset costs has slightly decreased due to the reduction of handset-related taxes in Kenya, Senegal and in Burkina Faso, it remains the highest worldwide.

Figure 9 Tax as a proportion of TCMO across regions, comparison with 2007 survey



Source: Deloitte Analysis

"Taxation discriminating mobile telephony and unbalanced taxation profiles for related mobile services prevent the realisation of the full benefits of the mobile technology."

This study has found that mobile taxation as a proportion of mobile ownership costs has increased globally, and has highlighted certain mobile-specific taxation trends in developing regions. It has also highlighted the unbalanced taxation profile of related mobile services, as taxation represents a much higher proportion of handset costs than of other mobile costs in developing markets.

Increasing mobile specific taxation may contribute to reducing the economic and social benefits generated by mobile communications and risks endangering the development and uptake of wireless data services. Taxation on usage, such as airtime taxes, can represent a significant obstacle to consumption of mobile services by the poorer sectors of the population while taxes on handsets increase the access barriers to mobile services, and may lead to underconsumption of wireless data. Unbalanced taxation profiles for related services may also give inefficient buying incentives to consumers, and further limit access to mobile services.

Conversely, removing mobile-specific taxation and imposing a balanced taxation profile for mobile related services provides more efficient incentives to consumers for their consumption choices, and can enhance the evolution from basic mobile consumption, such as access and usage, to more advanced services driven by the potential of wireless data and internet through mobile devices.

Governments, particularly in developing countries, could consider focussing their taxation strategies to increase economic development rather than adopt policies that may create barriers to more people owning and using a mobile phone.

1 Introduction

This paper was commissioned by the GSM Association ("the GSMA") and follows two previous studies on taxation on mobile services undertaken by the GSMA.

In 2005, the GSMA developed its first study on tax and the Digital Divide[2], seeking to understand more fully the tax rates affecting telecommunications in developing countries and the impact that cutting taxes may have on mobile handsets and new services. The study's key findings showed that telecommunication taxes were disproportionately high in many developing countries and that even small cuts in taxes many attract significantly more mobile users.

In 2007, the analysis was extended to include a larger set of countries – in particular adding the transitional Eastern European countries[3]. The link between lower taxes and revenue opportunities for governments in the long term was also investigated, showing that cutting taxes may lead to increased economic growth in the least developed countries.

This third report reviews mobile telecommunication taxes paid by consumers in 2010/11 in an increased number of jurisdictions in Europe, Africa, Asia, Middle East, Latin America and in the Pacific region.

This report is part of a wider Deloitte/GSMA study on global mobile taxation trends[4].

1.1 Background

Mobile telecommunications have become paramount to a country's economic and social development, and have had a profound effect on people's lives and on the global economies. The scale of technology and of the industry has made mobile phones affordable worldwide, and currently mobile connections stand at over 5.5 billion.

A significant wave of investment is now under way from MNOs worldwide to bring affordable mobile data services and internet connectivity to consumers. Wireless broadband is seen a key factor to bridge the Digital Dividend. In developed markets, governments are looking at mobile broadband networks to increase fast internet penetration, especially in rural areas. In developing markets, widespread internet access has been identified as a key issue for growth in education and businesses and the reduced presence of fixed networks makes wireless broadband a crucial component of internet penetration and development.

In developing countries, wireless broadband will be crucial for economic development. Based on an analysis of 120 countries, the World Bank has indicated that for every 10% increase in the penetration of broadband services, there is an increase in economic growth of 1.3%[5]. Additional research indicated countries with 80%

[2] GSMA, "Tax and the Digital Divide - How new approaches to mobile taxation can connect the unconnected", 2005.

[3] GSMA/Deloitte, "Global Mobile Tax Review 2006/7", 2007.

[4] Separate Deloitte/GSMA reports on the Surcharge on International Inbound Termination in Africa and on mobile telephony and taxation in Kenya, Croatia and Bangladesh will be published in parallel to this report.

[5] World Bank, Qiang, 2009.

broadband penetration are more than twice as innovative as countries with 40% penetration, and that increasing broadband penetration by 10% translates into a 1.5% increase in a country's labour productivity[6].

However, a number of high barriers still act to constrain penetration, which in numerous African and Asian countries remains low, generating concerns for the uptake of wireless broadband. Low penetration and low usage prevent the realisation of the full benefits of mobile telephony. Low wireless broadband uptake may act as a barrier to economic development and foreign direct investment, especially in countries with low internet penetration.

1.2 Methodology and scope of the study

This study describes consumer taxation globally, and focuses on special mobile-specific taxes on access, e.g. handset, and usage, e.g. airtime, that contribute to reduce penetration and consumption of mobile services. As such, the objective of this study is to measure the taxes paid by consumers as a proportion of ownership and usage costs of mobile services.

In line with the methodology developed for the 2007 study[7], consumer taxes on mobile services have been measured as a proportion of the Total Cost of Mobile Ownership ("TCMO") and the Total Cost of Mobile Usage ("TCMU") in a panel of 111 countries worldwide, identified in Table 1.

Table 1 Countries included in the study

Sub Saharan Africa		Maghreb and Middle East	Latin America	Asia Pacific	Central Eastern Europe	EU27 (+2)	
Angola	Niger	Algeria	Argentina	Australia	Albania	Austria	Portugal
Botswana	Nigeria	Egypt	Bolivia	Bangladesh	Azerbaijan	Belgium	Romania
Burkina Faso	Rwanda	Iran	Brazil	Bhutan	Croatia	Bulgaria	Slovakia
Cameroon	Senegal	Jordan	Chile	Cambodia	Georgia	Cyprus	Slovenia
Chad	Sierra Leone	Mauritania	Colombia	China	Kazakhstan	Czech Republic	Spain
Congo B.	South Africa	Morocco	Dominican Republic	India	Montenegro	Denmark	Sweden
Cote d'Ivoire	Swaziland	Syria	Ecuador	Indonesia	Russian Federation	Estonia	Netherlands
Dem. Rep. Of Congo	Tanzania	Tunisia	Guatemala	Lao PDR	Serbia	Finland	United Kingdom
Ethiopia	Uganda	Yemen	Mexico	Malaysia	Turkey	France	*Norway**
Gabon	Zambia		Nicaragua	Nepal	Ukraine	Germany	*Switzerland**
Gambia	Zimbabwe		Paraguay	New Zealand	Uzbekistan	Greece	
Ghana			Peru	Pakistan		Hungary	
Guinea			Trinidad and Tobago	Papua New Guinea		Ireland	
Kenya			Venezuela	Philippines		Italy	
Lesotho				Samoa		Latvia	
Madagascar				Sri Lanka		Lithuania	
Malawi				Thailand		Luxembourg	
Mauritius				Vietnam		Malta	

6 Booz & Company, Enabling Sustainable Digital Highways; Strategies for Next-Generation Broadband.

7 GSMA/Deloitte, "Global Mobile Tax Review 2006/7", 2007.

Sub Saharan Africa	Maghreb and Middle East	Latin America	Asia Pacific	Central Eastern Europe	EU27 (+2)
Mozambique					Poland

** Norway and Switzerland are included in the same group as the other EU27 countries due to market and geographic similarities*

Source: Deloitte analysis

The TCMO is a useful concept to measure the total cost to an average consumer of owning and using a mobile phone as it considers all the typical components that mobile consumers require. These components include handset costs, connection costs[8], rental costs (typically for post-pay services) and call and SMS usage costs[9]. The TCMU focuses on service usage and does not include handset and connection costs.

Each of the cost components identified above includes the actual component price as well taxes paid by consumers. Typical consumer taxes that apply to mobile services include:

- Value Added Tax ("VAT") or General Sales Tax ("GST"): these are consumer taxes incurred when purchasing every component of owning and using a mobile phone. These taxes are 'ad valorem' and are often expressed as a proportion of the value of the good or service. Mobile services sometimes attract higher VAT, e.g. in Pakistan the VAT rate for telecoms is 3.5% higher than VAT on other goods.

- Custom duty and excise taxes on imported goods. In mobile telephony, users in developing countries typically pay import taxes on handsets and other mobile devices. These can either be expressed as a proportion of the handset value or as a fixed sum or both. These also typically apply to imports of SIM cards, which are paid for by MNOs and sold as part of the initial connection service.

- Special taxes on handsets, which in certain countries are still treated as luxury items and often attract high custom duty rates and other special contributions, e.g. in Gabon mobile handsets are subject to a 30% custom duty and a $5 fixed fee.

- Special communication taxes on mobile usage: a number of countries still impose specific taxes on consumers for using mobile services. For example, airtime excise apply in a number of African countries, impacting calls and SMS usage in addition to VAT.

- Other telecoms specific taxes, such as SIM activation taxes or other taxes on connection, e.g. in Bangladesh and Turkey, and monthly contributions for post-pay customers.

- Other special taxes, for example a tax on mobile operators' gross revenues in Croatia, introduced in response to the financial crisis, and a health insurance tax levied on mobile services in Ghana.

Data on average retail handset, connection, rental, call and SMS costs for both pre-pay and post-pay customers was collected to calculate TCMO and TCMU in each of the countries in the panel. Data on the

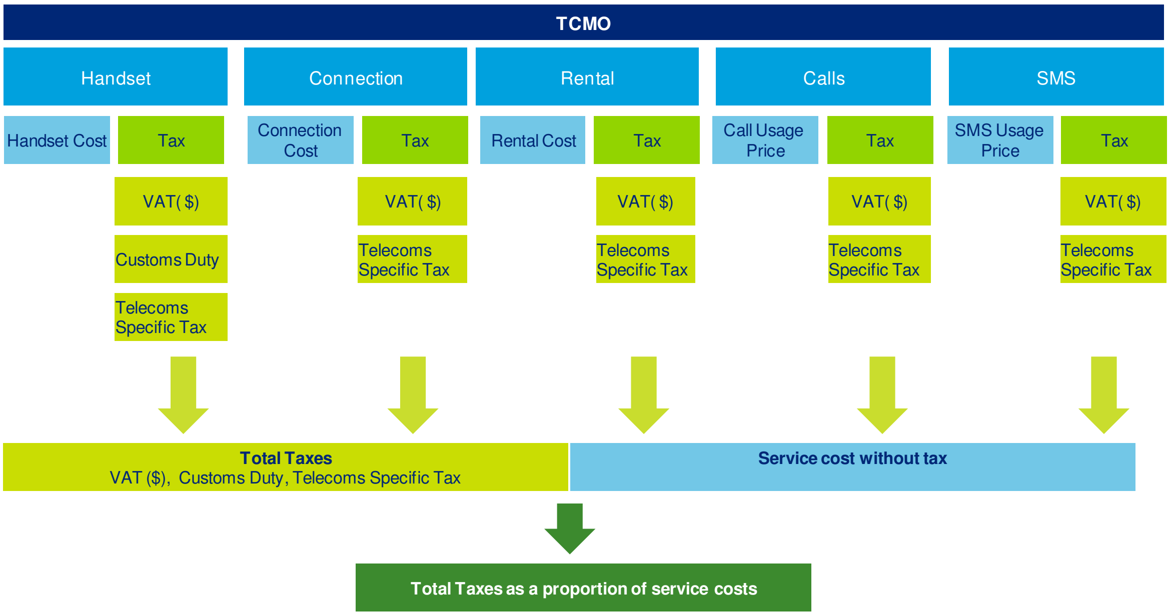
[8] Handset and connection costs are amortised over an appropriate period of time.

[9] TCMO should also include internet data usage, in particular in developed markets. However we were not able to obtain sufficient data on internet usage and prices.

level of taxes that apply to each of the consumer's mobile consumption bundle was also collected with the help of the MNOs and of the Deloitte Global Network

The tax incurred on each mobile component was then calculated by extrapolating the tax value based on a research on tax rates. TCMO, TCMU and taxes as a proportion of service costs were calculated. Figure 10 illustrates the approach to calculate total taxes incurred by consumers as a proportion of TCMO and TCMU. The methodology is described in greater detail in Appendix A to this paper.

Figure 10 Methodology applied



Source: Deloitte analysis

1.3 This report

This report presents the results of the updated analysis on global mobile-specific taxation, by calculating the proportion of taxes paid by consumers when acquiring mobile services in a panel of 111 countries worldwide and is structured as follows:

- Section 2 to 4 present the global results on taxation and TCMO, TCMU and handset costs respectively.
- Section 5 discusses mobile specific-taxation.
- Section 6 discusses taxation issues affecting MNOs worldwide.
- Section 7 describes in more detail how mobile taxes vary globally by geographic region.
- Section 8 presents the conclusions and implications of this work.

The appendices at the end of this report provide:

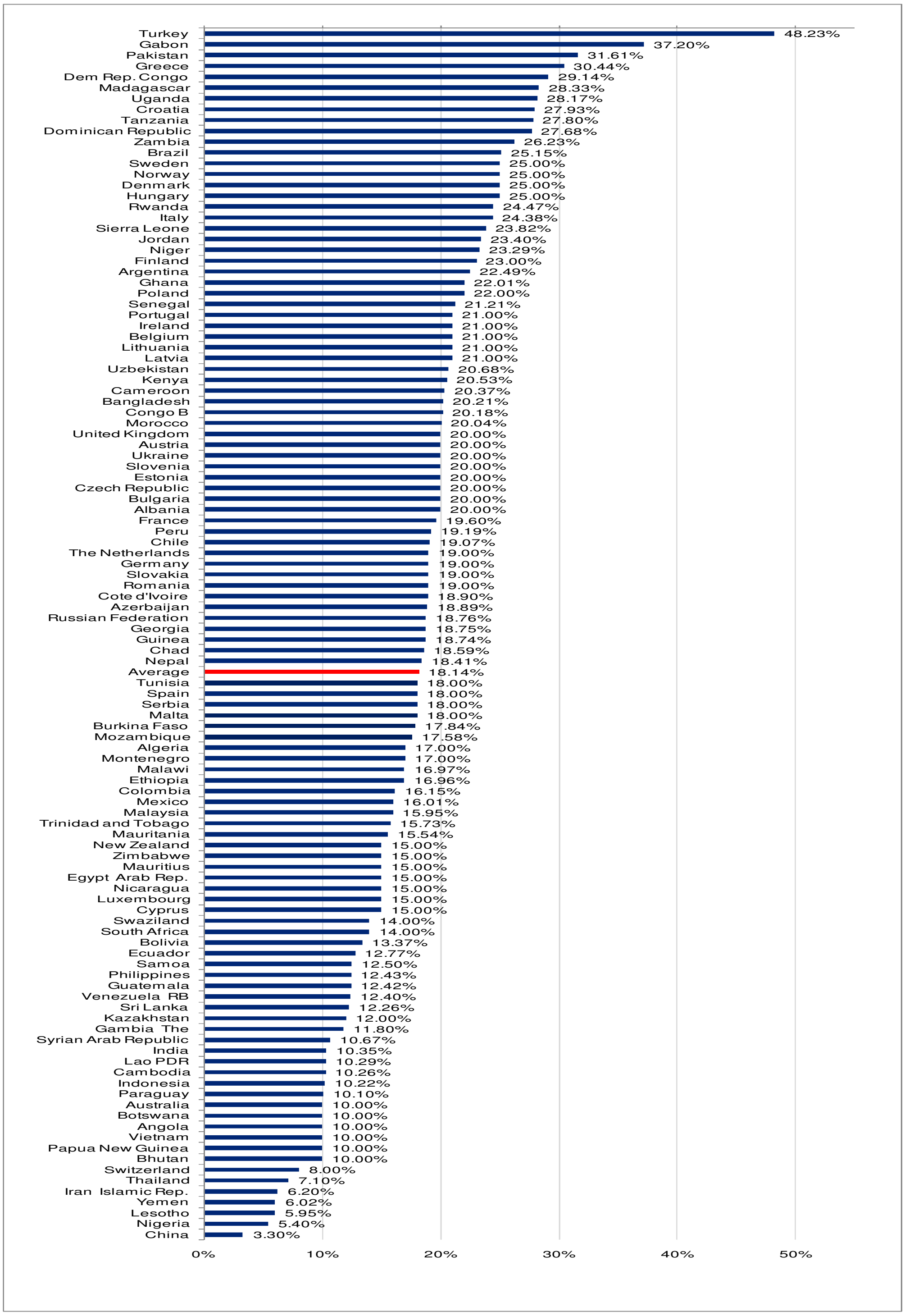
- More detail on the methodology and assumptions employed in this study and on the data sources used.

- Country rankings for tax as a proportion of proportion of TCMO.
- Examples of regulatory charges and other accounting practices applying to MNOs in a selected number of countries.

2 Tax and the cost of mobile ownership

Figure 11 illustrates taxes as a proportion of TCMO, ranking the 111 jurisdictions in the sample by the proportion of TCMO that is accounted for by tax.

Figure 11 Tax as a share of TCMO



Source: Deloitte analysis

Mobile taxation profiles remain very different across the countries in the panel and the average tax as a proportion of TCMO is 18.14%, compared to a 2007 level of 17.44%. Even when considering the same sample of countries included in 2007, tax today stands at 18.05%.

Turkey remains the highest ranking country with tax as a proportion of TCMO of over 48%, compared to a 44% value in 2007, while Gabon ranks second with tax as a proportion of TCMO of 37%. This is a significant increase from a value of 19% in 2007. Pakistan ranks third with a tax as a proportion of TCMO of 32%, due to high fixed and variable taxes on mobile ownership and usage. Of the ten countries with the highest tax as a proportion of TCMO, five are African nations.

Countries with the lowest taxation as a share of mobile costs are those with low VAT levels and no other tax such as China, Nigeria and Lesotho. In Lesotho, mobile services attract a lower VAT as the government here has recognised the social importance of mobile communications.

Telecom specific and special taxes such as airtime excises and special handset taxes remain the main tax elements in the most heavily taxed countries. Figure 12 below identifies the top five countries that exhibit the highest taxation on mobile ownership:

- Consumers in Turkey suffer a 20% special consumption tax on handsets in addition to VAT of 18%. A special communications tax of 25% applies to usage. A fixed communication tax of 34TL applies to connection in addition to a wireless charge of 13.2TL.

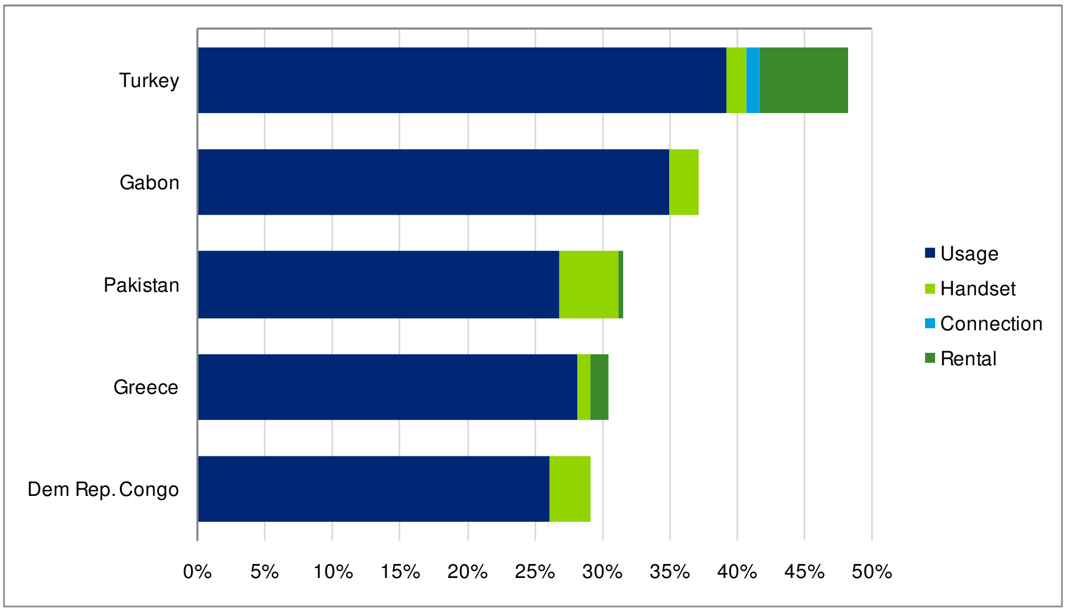
- Gabon imposes an 18% VAT on mobile handsets in addition to a special telecoms tax of $5 per handset, and a custom duty of 30% on each handset imported into the country. An airtime excise on usage also applies at a rate of 18%, leading to total taxes of 37%.

- In Pakistan, both handsets and connection suffer a fixed Rs 250 tax. An 11.5% withholding tax (equivalent to an airtime excise) applies to prepaid calling cards. This has recently increased from 10%. The telecoms sector also suffers a 19.5% VAT rate, which is 3.5% higher than other sectors of the economy.

- In Greece, a 12% airtime excise applies on usage of calls and SMS in addition to VAT.

- In the DRC, an airtime excise of 10% applies in addition to a custom duty rate on handsets of 26.5%.

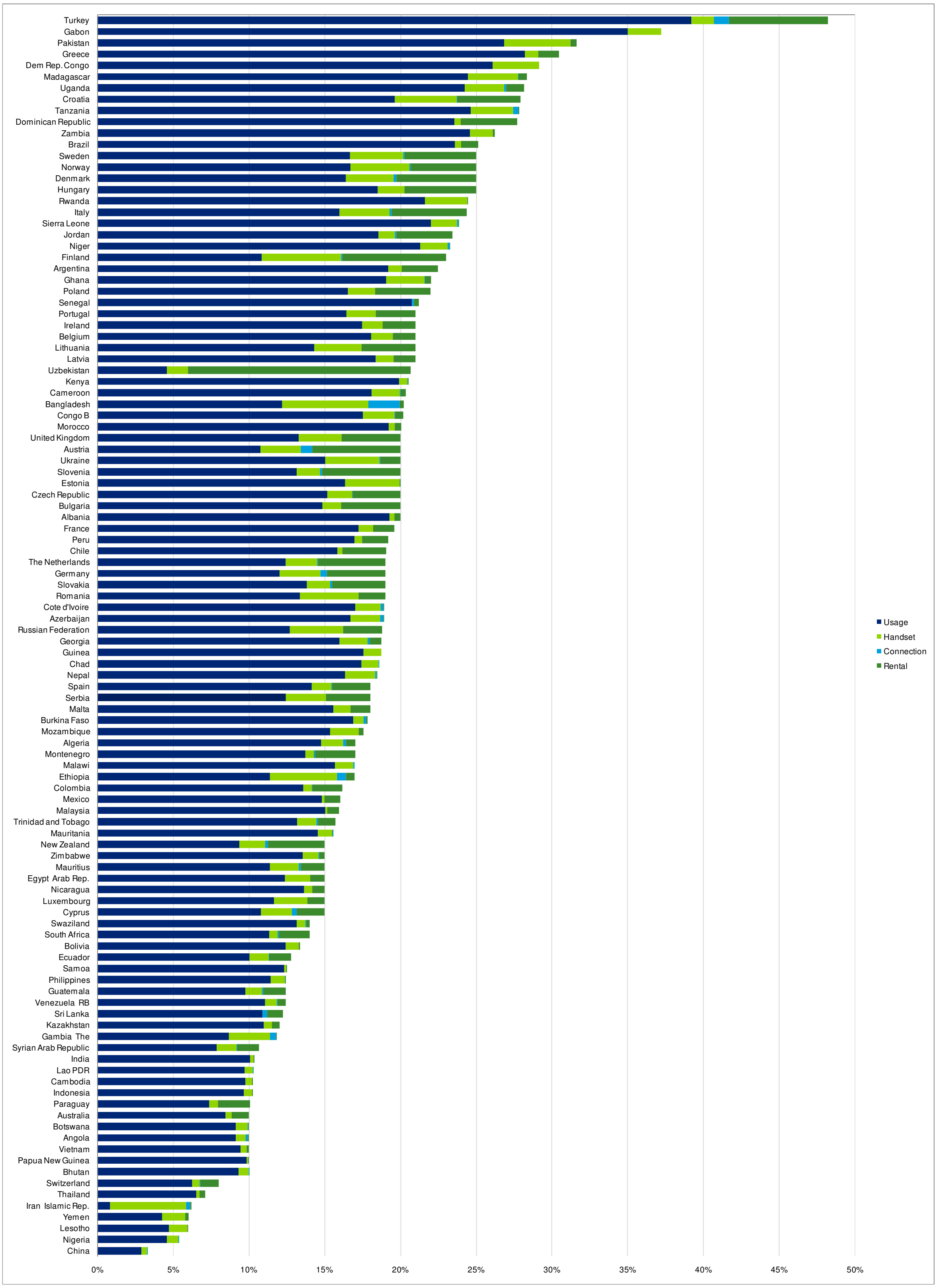
Figure 12 Tax as proportion of TCMO with breakdown of service components, top five countries in the ranking



Source: Deloitte analysis

Further disaggregation showing taxes as a proportion of usage, handset connection and rental costs is provided by Figure 13, which shows for each country in the study how taxes are divided between service components. This shows, on average, that taxes on usage make up the largest component of total taxes, followed by handset taxes, taxes on connection and taxes on rental. Taxes on usage and handsets are discussed in further detail later in the report.

Figure 13 Tax as proportion of the TCMO by service components



Source: Deloitte analysis

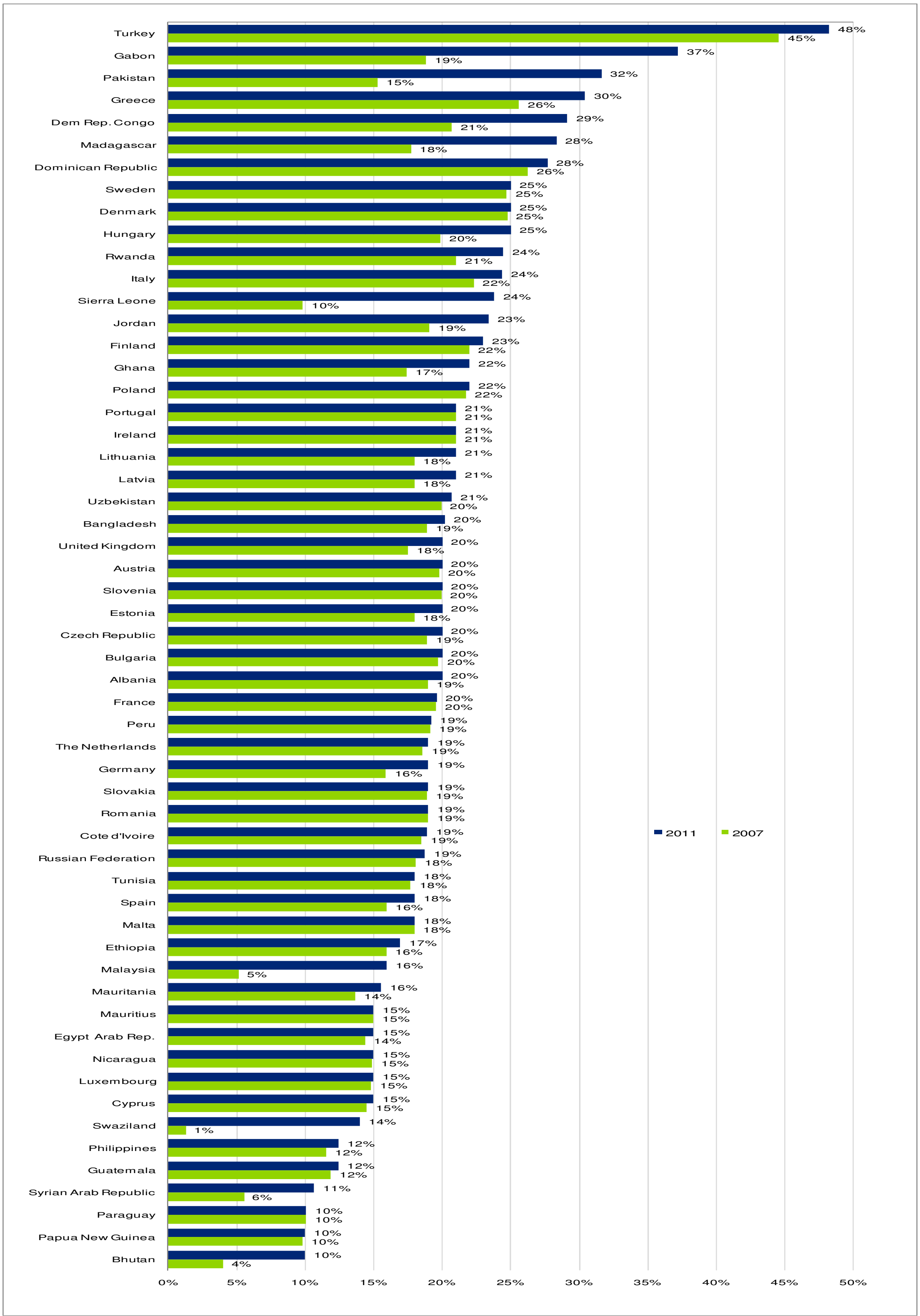
Pre-pay services are taxed slightly less than post pay. On average, tax as a proportion of TCMO for pre pay services is 18.08% compared to the 18.44% for post pay services. In addition to the same taxes that apply to pre-pay services, post-pay services are still in some countries subject to further specific taxation. For example, in Italy a special tax of €5.16 to €12.91 is applied to monthly rental, while in Argentina a special tax of 12.9% applies.

Figure 14 and Figure 15 show the movement in tax as a proportion of TCMO in all countries captured in the survey in 2007 and in 2011, which is also summarised in Appendix B to this paper.

56 countries in the sample have shown an increase in mobile taxation relative to 2007: these include the top 5 countries with the highest tax as a proportion of TCMO in 2011, i.e. Turkey, Gabon, Pakistan, Greece and DRC.

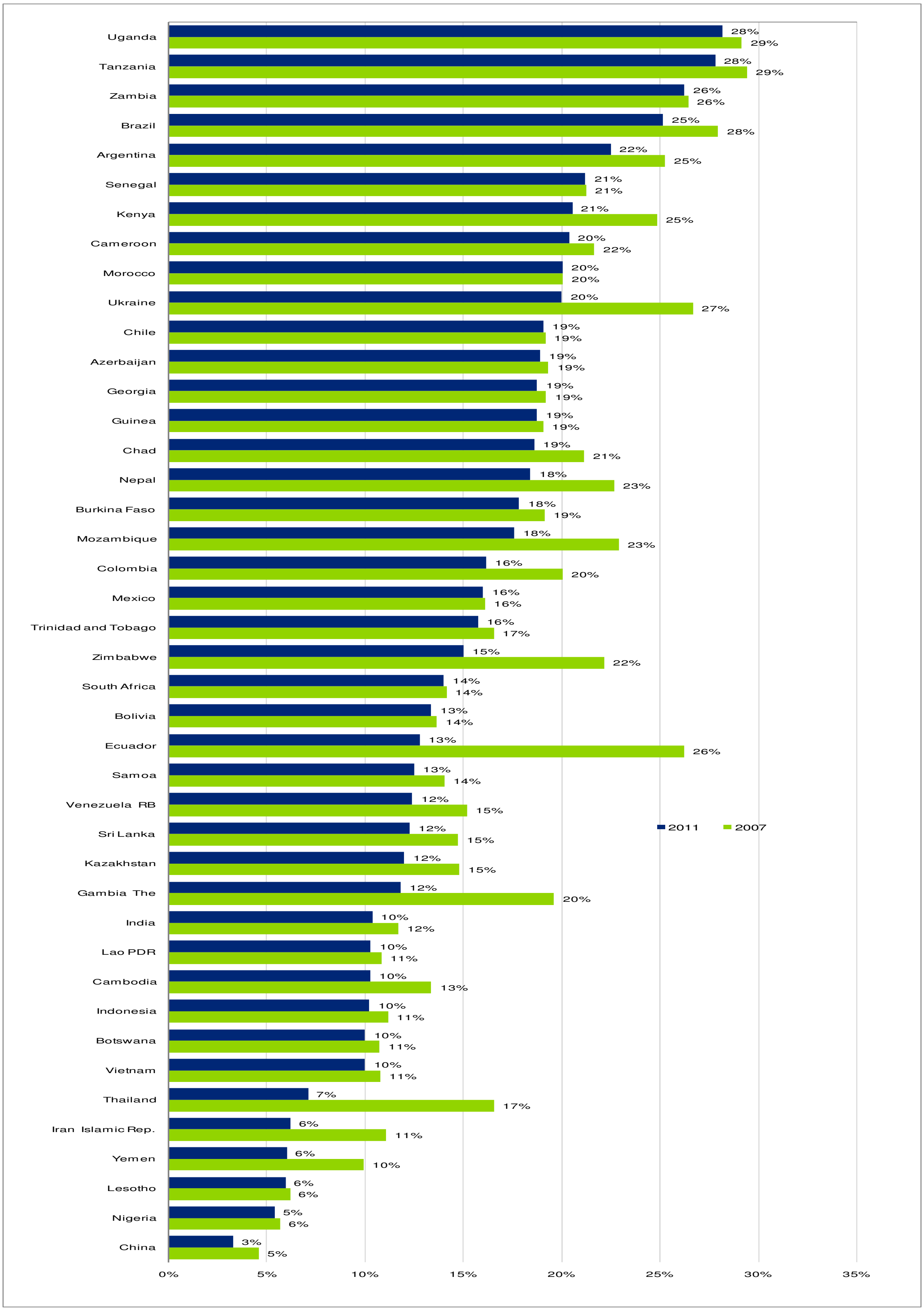
At the other end of the spectrum, 42 countries have shown reductions in tax as a proportion of TCMO. In Latin America, Ecuador shows the biggest reduction: the government has removed a general excise duty of 20% on all service components, such that a 12% custom duty and a 20% VAT apply today. This policy has reduced the tax as a proportion of TCMO in Ecuador from 26% to 13% from 2007 to 2011.

Figure 14 Countries where tax as a proportion of TCMO has increased since the 2007 study



Source: Deloitte analysis

Figure 15 Countries where tax as a proportion of TCMO has decreased since the 2007 study



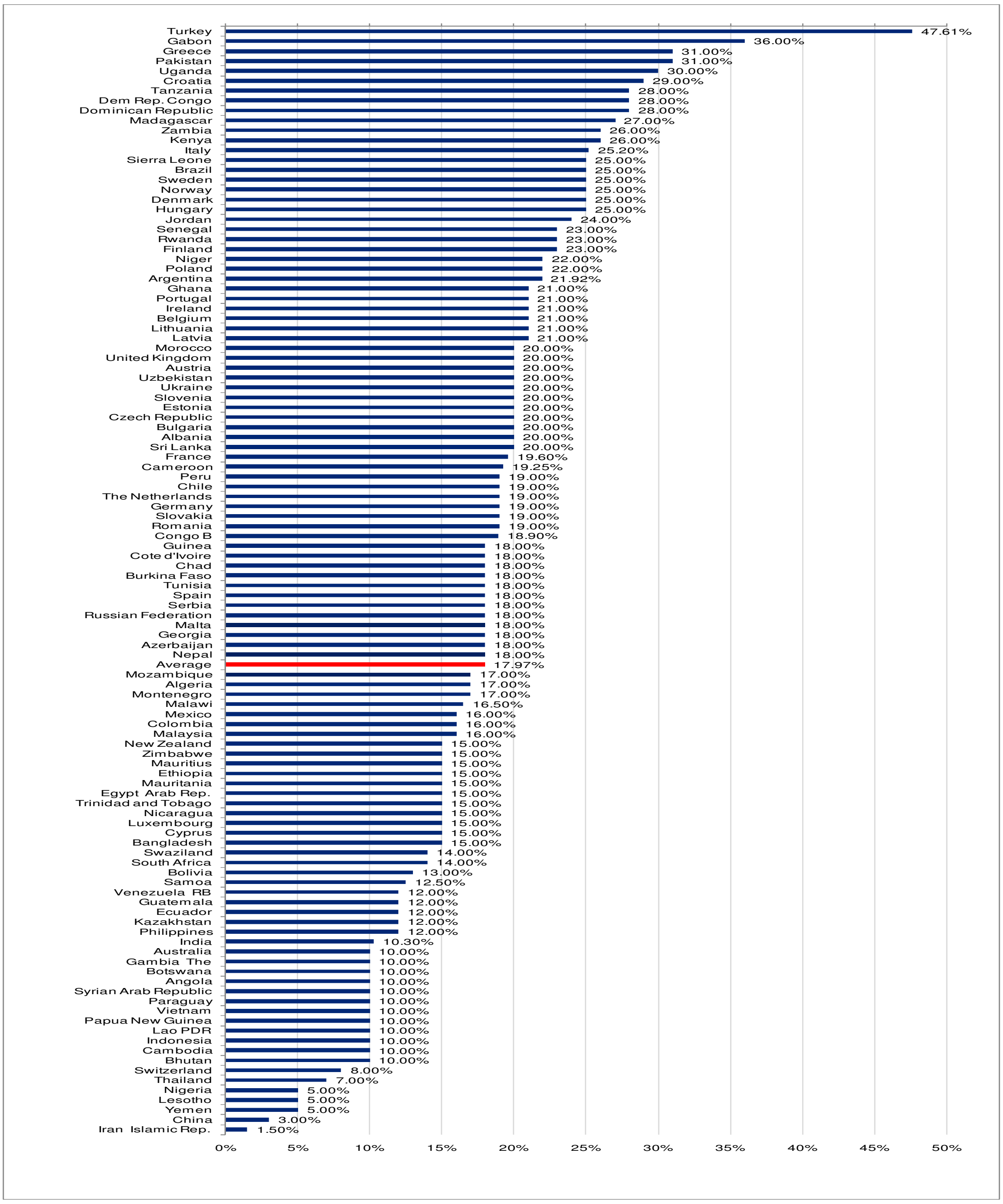
Source: Deloitte analysis

3 Tax and the cost of mobile usage

The TCMU reflects the cost of using a mobile phone once the "access" investment of purchasing a handset and a connection have been made, and therefore indicate spend on calls and SMS.

The results of the country-by-country analysis on taxes as a proportion of mobile usage costs are shown in Figure 16. Consumers now pay on average 17.97% of their mobile usage cost as tax, an increase from 16.91% in 2007.

Figure 16 Tax as a proportion of TCMU



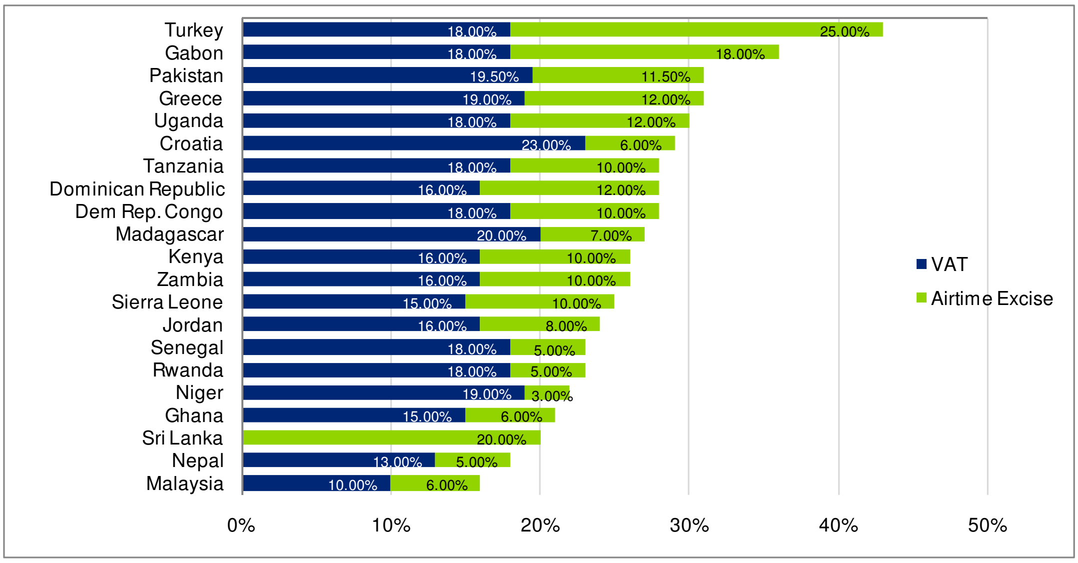
Source: Deloitte analysis

Taxes on usage typically include VAT and other general sales taxes. However, a number of countries, especially in Africa, continue to charge an airtime excise that is imposed in addition to VAT. Some governments, e.g. in Croatia[10] and Serbia[11], have resorted to this additional taxation on usage as a direct response to the 2008 financial crisis, leading to further margin erosion for MNOs.

In the 12 countries where tax as a share of usage costs is the highest, an airtime excise applies. This stands at 25% in Turkey, at 18% in Gabon, at 12% in Greece, at 11.5% in Pakistan and at 12% in Uganda, the top five countries in the panel for taxes as a proportion of TCMU.

21 countries out of the 111 in the study impose a special tax on usage, as shown in Figure 17. Such taxes can represent a barrier to development of services as they act to reduce usage by consumers, especially in developing countries where consumers have lower income levels. In addition, the majority of consumers of mobile services in developing countries are pre pay service users. As such, taxes on usage in these countries represent a key barrier to usage as they act directly on retail prices, raising the cost of these services and contributing to reduce their consumption.

Figure 17 Countries imposing an airtime excise



Source: Deloitte analysis

Taking into consideration countries that were part of the 2007 study, 12 African countries impose airtime excises on consumers in 2011, while in 2007 only six African countries levied such tax. Since the 2007 study, DRC, Gabon, Madagascar and Sierra Leone, Rwanda and Senegal have introduced airtime excises. In Rwanda, the government expects to raise airtime usage to 8% from the current level of 5% in the next budget round[12].

VAT is a key component of tax as a proportion of TCMU. Figure 18 below shows VAT rates for all countries in the study. It indicates that higher VAT rates apply in Europe and C&E Europe compared to many Asian countries which have lower VAT rates. Countries with lower tax as a proportion of usage costs are typically those with low VAT levels and no other usage tax is levied.

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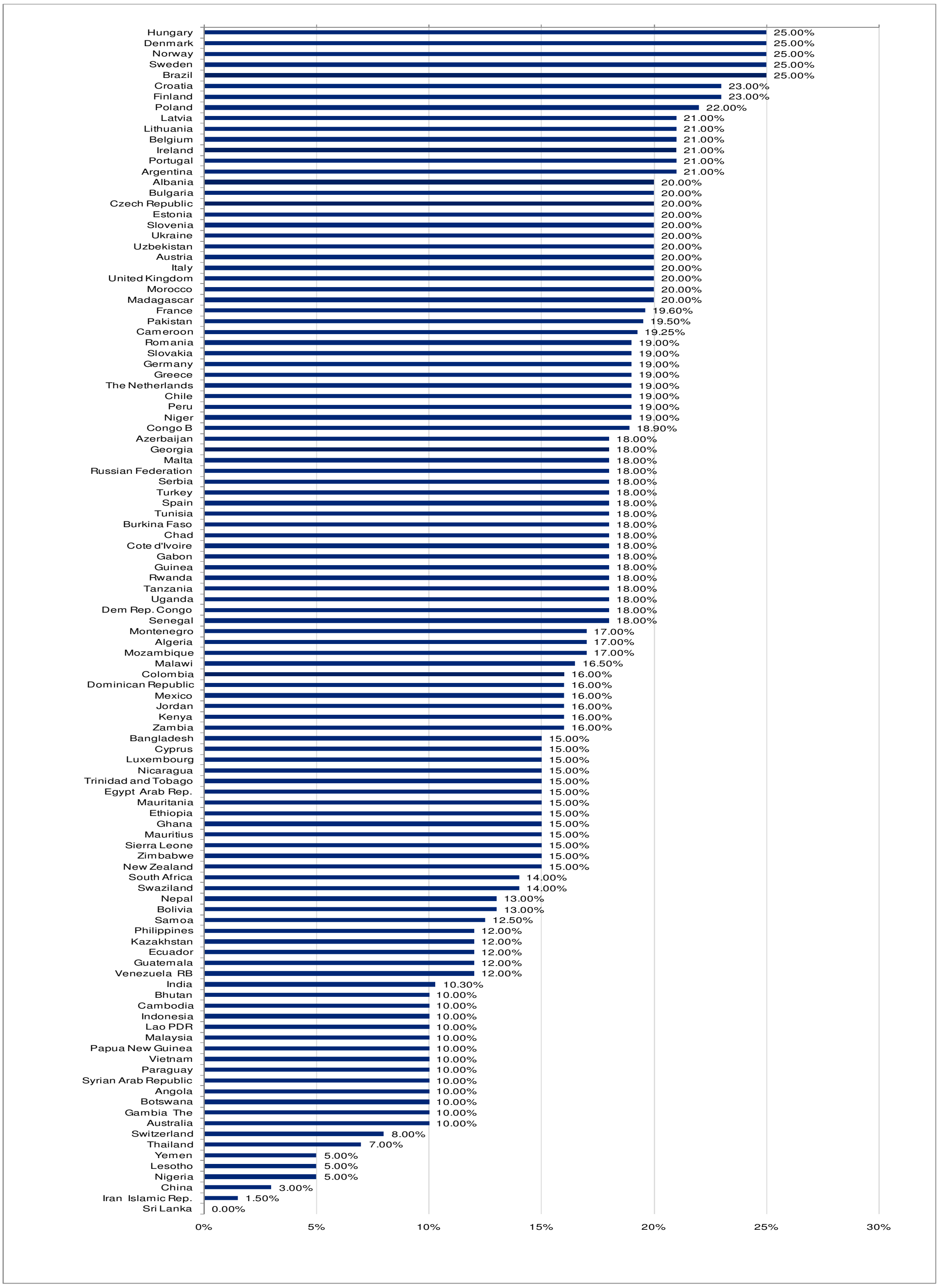
10 While not defined by the Croatian government as an airtime excise tax like in Africa, this charge generates a similar impact on consumers and has therefore been included in this category.

11 In Serbia, this tax was removed in 2010.

12 http://www.busiweek.com/10/page.php?aid=841

Figure 18 VAT or GST levels



Source: Deloitte analysis

4 Taxes on handsets

Taxes on mobile handsets are another significant component of the TCMO and include:

- Import duties, in particular applying in developing countries, affecting the retail price of a handset.
- Special custom duties: on some occasions, handsets are treated as luxury goods and a special custom duty is applied, for example in Gabon mobile handsets incur a special $5 tax.
- Other special taxes: a number of countries, for example Gabon, Zambia, Pakistan and Bangladesh apply a special tax on handset acquisition.
- Copyright fees: certain governments in developed markets, e.g. Italy, have imposed a fixed fee on smartphones, arguing that consumption of media content should be taxed. The proceeds from this tax are used to subsidise the national Copyright Protection Agency.

Handset costs represent the most significant barrier to the consumption of mobile services, particularly in developing markets. Taxes on handsets therefore contribute to increase the cost barrier to first-time handset users, thus negatively impacting penetration, in particular on low-income users.

Today, tax as a proportion of handset costs stands at 23.29%. While this is a slight reduction on the 2007 level of 24.24%, tax as a proportion of handset cost is much higher than on total ownership or usage costs. Tax represents over a third of the cost of a handset in 20 countries, while in 11 countries worldwide, of which seven are in Africa, 40% of handset costs is now spent on tax, as shown in Figure 19.

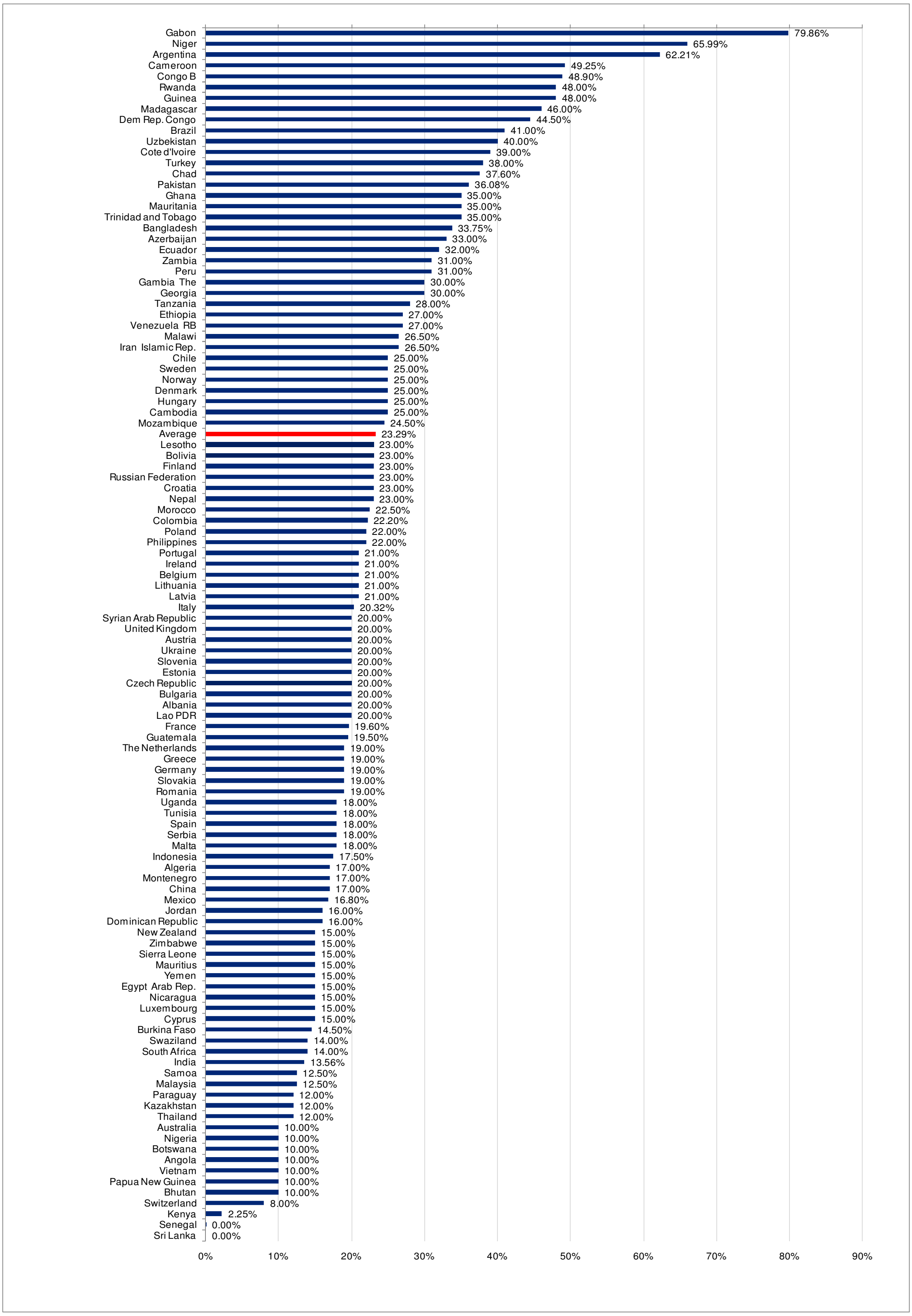
The three countries showing the highest tax as a proportion of total handset cost are Gabon, Niger and Argentina:

- In Gabon, tax as a proportion of handset cost stands at 80%. This is due to a $5 special tax imposed on each handset purchased. Consumers also pay a high custom duty tax on imported handsets at 30%, in addition to a VAT of 18%.
- In Niger, a 46.99% custom duty applies on all handsets imported into the country.
- In Argentina, a special handset tax of 25.2% of the handset value applies.

At the low end of the taxation spectrum are Sri Lanka and Switzerland, whose governments do not impose any taxes (such as custom duties) on the import of mobile handsets, and have low VAT rates. Kenya and Senegal also rank amongst the lowest countries in the study, as a result of a government's decision to abolish VAT on handsets in 2009.

The majority of European jurisdictions have no custom duty for imported handsets, and neither do countries such as Vietnam, Australia and New Zealand.

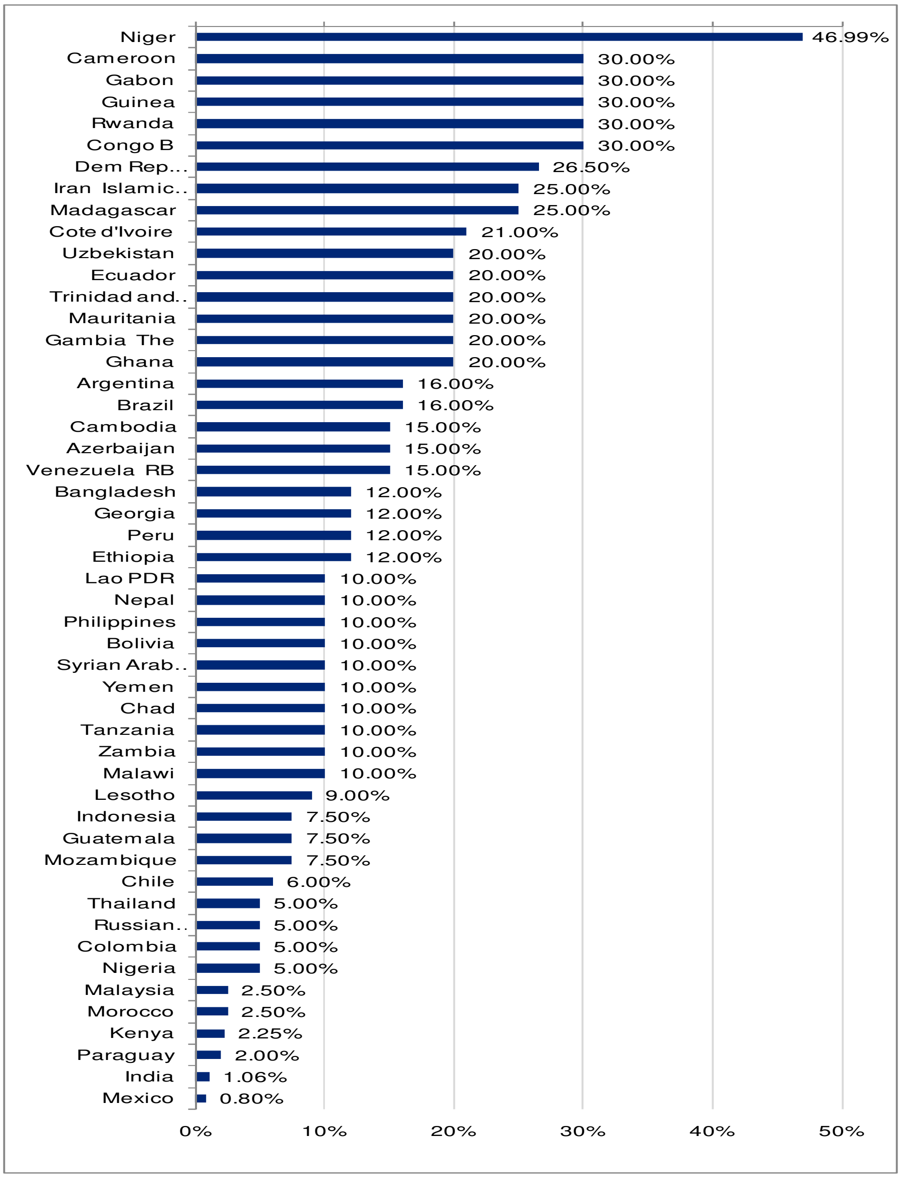
Figure 19 Tax as a proportion of handset cost



Source: Deloitte analysis

Import duties are an important component of handset taxes, and 50 countries impose duties on imported handsets, as shown in Figure 20. Of these, 20 are in Africa. Additionally, 11 countries impose a specific tax on handset purchase, as discussed in more detail in the next section of this report.

Figure 20 Countries imposing a duty on imported handsets



Source: Deloitte analysis

5 Mobile specific taxes on consumers

The results of the taxation analysis have illustrated the impact of taxes on the cost mobile ownership and usage. This included taxation that applies uniformly to all goods and services in an economy as well as taxation that is specific to mobile services. In this section, we focus on the latter.

Most countries do not impose taxation that is specific to mobile services, recognising the economic and social benefits of mobile telephony and supporting the principle that mobile telephony should not be discriminated against other services.

However, a number of countries do impose mobile specific taxation on either handsets or mobile usage, or on both. This type of taxation often discriminates mobile telephony against fixed telephony, despite mobile services being recognised as providers of universal telecom services, especially in developing countries. In addition, mobile specific taxes are often regressive in nature and contribute to reduce both access/penetration and usage. By acting regressively, these taxes can generate perverse consequences on the poorer sectors of the population that taxation intended to benefit.

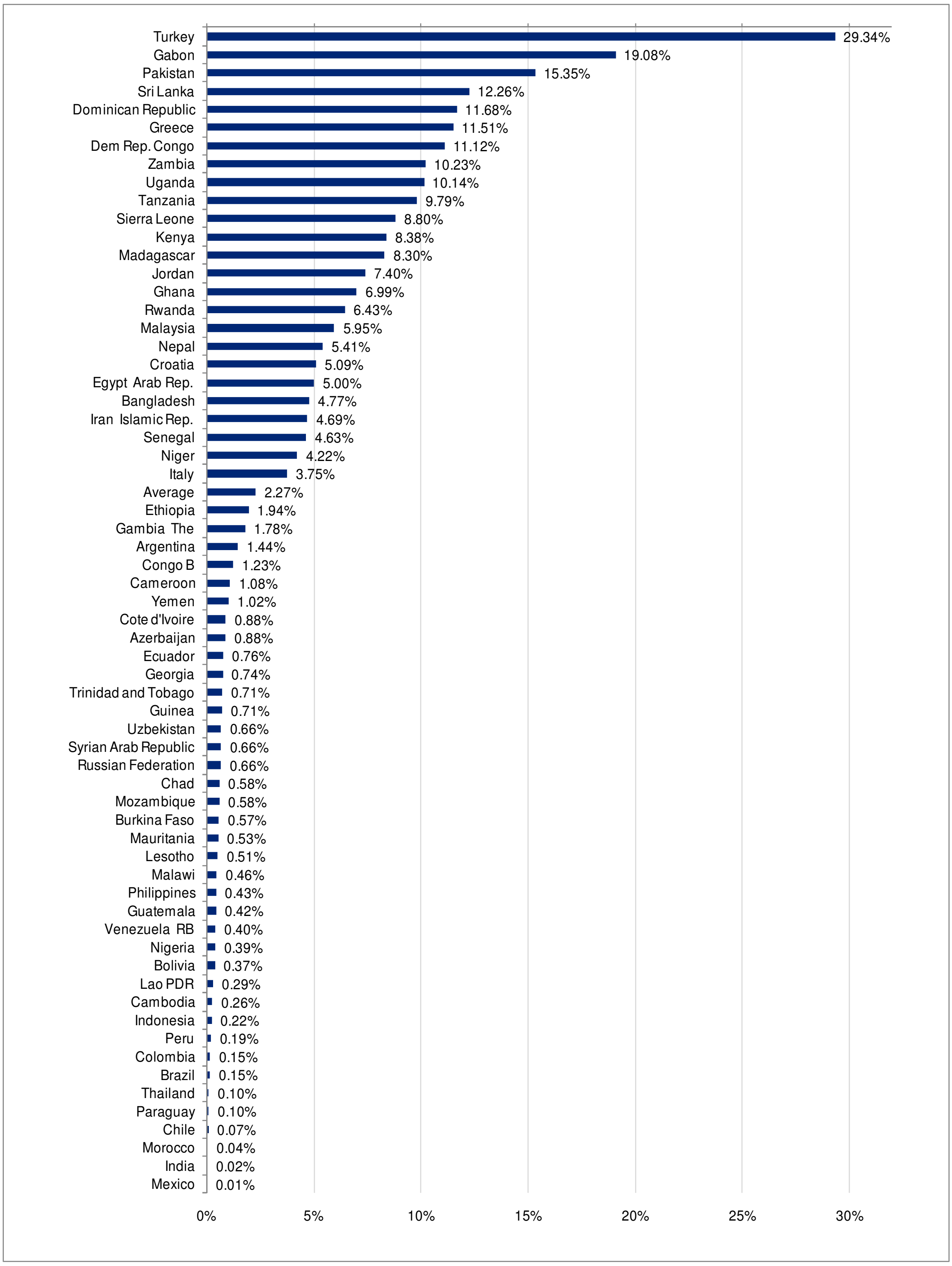
In the results presented in the sections above, VAT (or GST) represented the most important source of taxation in all countries in the panel. The rankings, which showed final impact on consumers, reflected the impact of VAT, which is usually applied on handset, connection, rental and usage costs. However, VAT is applied uniformly on all goods and services and in this sense it does not discriminate against mobile telephony usage, except in countries such as Pakistan and Egypt where a higher than normal VAT rate applies to mobile telephony.

If the effect of VAT and other sales taxes is removed from the analysis, such that only mobile specific taxation and custom duties on imported handsets are considered, it is possible to rank countries that impose specific taxation to mobile services beyond standard service taxation, as indicated in Figure 21.

In total, 63 countries charge a form of specific taxation, including custom duties, on mobile handsets and services. Of these, 24 are African countries, and ten African countries rank within the top 20 countries where mobile specific taxation as a proportion of TCMO is the highest.

Turkey, Gabon, and Pakistan are the countries with the highest proportion of taxation on TCMO due to the numerous mobile-specific taxes described previously in this report. Sri Lanka and the Dominican Republic rank fourth and fifth, due to their high airtime excises, amounting respectively to 20% and 12%.

Figure 21 Mobile specific taxation (including import duties on handsets) as a proportion of TCMO, excluding VAT



Source: Deloitte analysis

Table 2 describes in detail the mobile specific taxation (excluding custom duties on imported handsets) for the countries where it is imposed. Mobile specific taxation is currently imposed in 28 countries in the panel and of these, 14 are in Africa.

Table 2 Mobile specific taxes on consumers by country

Country	Consumer Tax Practices
Argentina	• Pending legislation in Argentina, the government is seeking to increase internal taxes on mobile handsets to a nominal rate of 17% for mobile devices not produced in the Tierra de Fuego special economic area • This is expected to affect 98% of the mobile devices in Argentina, as the vast majority are imported into the country • Mobile handsets suffer a 25.2% tax • Post-pay rental suffers from a 12.9% tax
Bangladesh	• The government in Bangladesh imposes a 100 Taka tax on each new handset • Additionally, an 800 Taka tax is also imposed on each SIM activation
Burkina Faso	• A statistic tax of 1%, a community solidarity tax of 1% and a community tax of 0.5% apply to imported mobile handsets • In addition, intellectual property tax of 10% and income tax of 2% also apply to imported mobile handsets in Burkina Faso
Chad	• A 9.6% special tax applies on all handsets
Colombia	• A special handset tax of 1.2%applies
Croatia	• In August 2009, a mobile-specific 6% fee on operator's gross revenues on invoiced services for mobile SMS, MMS and voice services including roaming services was introduced, indirectly impacting retail prices
Democratic Republic of Congo	• A 10% airtime excise applies on usage of calls and SMS
Dominican Republic	• A 12% special telecom tax is imposed on usage of calls and SMS
Egypt	• Mobile telecom services VAT is applied at a higher rate than standard rate for other goods & services • Mobile VAT is 15%, landline VAT is 5% and standard VAT is 10%
Gabon	• An airtime excise of 18% applies • In addition, a special tax of $5 applies to imported handsets
Ghana	• MNOs pay 2.5% of their revenues to the government as a Health Insurance tax which is used to fund investment in Ghana's health services • This is applied on top of a normal VAT rate of 12.5% across all service components (handset, connection rental and usage) bringing the VAT rate to 15% for mobile services • In addition, Ghana imposes an airtime excise of 6% on usage of calls and SMS
Greece	• Since 1998, a tax has been applied to the monthly bills of post-paid mobile subscribers. Until 2009, there were three different rates (€2, € 5, and € 10) depending on the amount of the total monthly bill. Pre-paid subscribers did not pay this tax • In July 2009, a new law introduced a 12% tax on prepaid mobile subscriptions and also increased the tax rates on post-paid subscriptions to 12%, 15%, 18%, and 20%, depending on the amount of the total monthly bill
Italy	• Post-paid mobile services for non business consumers are taxed at the rate of €5.16

Country	Consumer Tax Practices
	per month • Business post-paid mobile subscriptions are taxed at the rate of €12.91 per month • Since January 2010, companies producing and/or distributing mobile devices should pay a fee (90 eurocent per device) to the National Copyright Collecting Society ("SIAE")
Jordan	• A special cellular phone tax, recently raised from 4% to 8%, applies to mobile phone usage
Kenya	• A 10% airtime excise applies
Madagascar	• A 7% airtime excise on usage applies • A special 1% handset tax also applies
Malaysia	• An airtime excise of 6% applies
Nepal	• An excise service charge of 5% applies to usage
Niger	• A 3% airtime excise applies to usage • Additionally, a CFA 250 special tax applies to connections
Pakistan	• An 11.5% withholding excise applies on postpaid bill amount and on prepaid balance of calling cards • A special duty of Rs 250 applies to each handset • A special tax of Rs 250 applies to each SIM activation • The telecoms sector incurs an additional 3.5% VAT, bringing it to a rate of 19.5% VAT versus a general rate of 16%
Rwanda	• An excise service charge of 5% applies to usage. This is expected to increase to 8%
Senegal	• A telephone usage fee (RUTEL) of 5% applies. This was increased from 2% in October 2010 • According to the 2010/2011 budget, this is expected to increase to 8%
Serbia	• From 2009 to 2010 Serbian mobile telephony services users paid an additional 10% tax on usage • This was a temporary measure by the government and applied to all calls, SMS and MMS and on data transfers
Sierra Leone	• A 10% airtime excise applies
Sri Lanka	• A 20% special tax applies to connection, rental and usage rates
Tanzania	• A 10% airtime tax applies
Turkey	• Special Communications Tax rates are 25% for mobile services, 15% for fixed telecommunications services, and 5% for Internet services • A special consumption tax of 20% applies on mobile handsets • A 34 TL special communications tax applies an connection • A further 13.2 TL wireless connection fee also applies on connection • A 13.2 TL wireless usage fee applies to rental • For each handset, a 0.37 TL fee for registering an IMEI number is paid
Uganda	• A 12% airtime excise applies

Country	Consumer Tax Practices
Zambia	• A 10% airtime excise applies • A special handset tax of 5% is imposed

Source: Deloitte Analysis

6 Other taxes and charges paid by MNOs

The focus of this study is on the impact of consumer taxes on the cost of mobile ownership and usage. However, governments receive significant mobile-related revenues from corporation tax as well as from a number of other regulatory charges paid by MNOs. These taxes are discussed in this section.

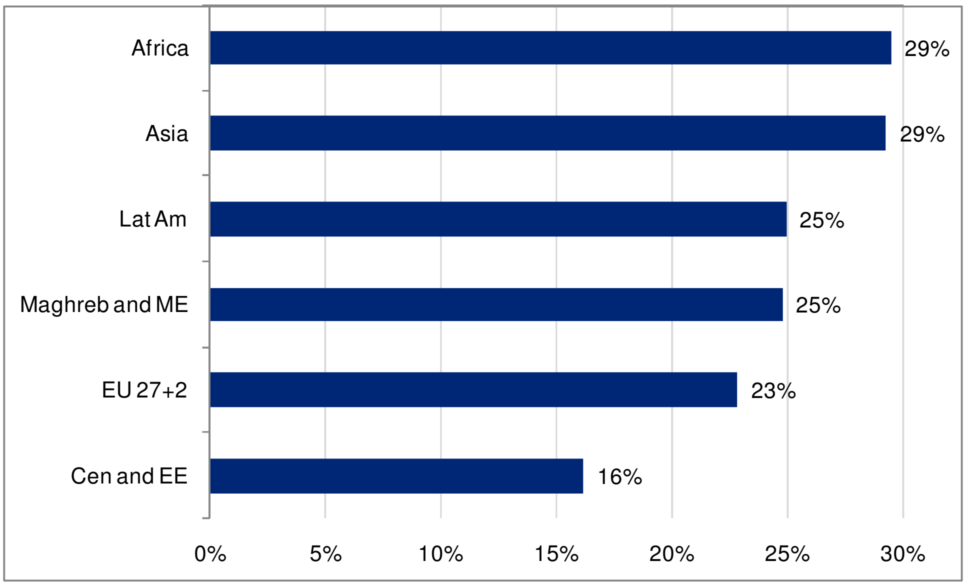
6.1 Corporate taxes

All countries in this study levy a corporate tax charge on MNOs' profits and the average corporation tax rate for all countries in the panel is 25%, compared to 28% in 2007.

Figure 22 and Figure 23 rank corporate tax rates by region and country and show that Bangladesh, Chad and DRC have the highest corporate tax rate, while Guatemala, Uzbekistan, and Montenegro exhibit relatively low rates.

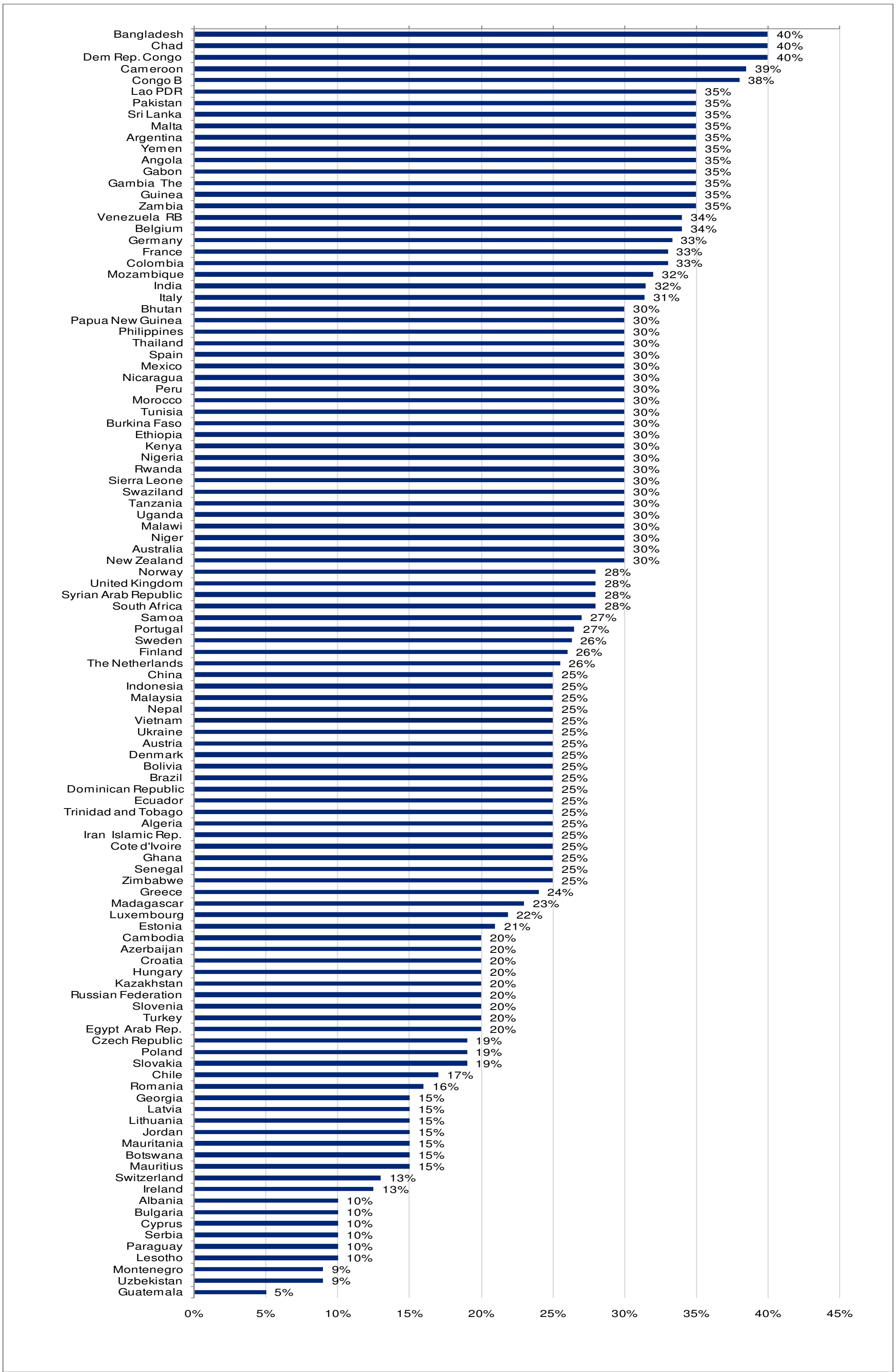
Considering regional averages, Figure 22 shows Africa and Asia as the regions with the highest average corporation tax rates globally in the study, while the lowest corporate tax rates are found in Central and Eastern Europe (at 16% and 23% respectively). In Africa, the average corporation tax rate has decreased slightly since 2007 from 32% to 29%, while in Asia the average corporation tax rate has decreased slightly from 30% in 2007 to 29%.

Figure 22 Corporate tax rates by region



Source: Deloitte analysis

Figure 23 Corporate tax applying to MNOs



Source: Deloitte analysis

6.2 Regulatory charges

In addition to corporate taxes, MNOs are subject to a variety of additional taxes and fees that they pay directly to governments or to regulators.

These include regulatory fees for the operation of regulatory authorities, often calculated as a proportion of revenues. In developing countries these represent up to 3% of revenues, e.g. in Chad and Congo B.

Other regulatory charges include:

- Numbering fees are also often charged, and set as a proportion to revenues, e.g. 2% in the Democratic Republic of Congo.
- Universal Service Fund contributions: these take numerous forms, e.g. technology taxes, investment funds, funding for public broadcasters. These are usually charged as a share of revenues, e.g. up to 2% in Gabon.
- Spectrum fees, which represent a de facto tax on an essential resource for MNOs. Often spectrum fees discourage investment, e.g. in Kenya, where a fixed spectrum contribution is paid for every base station added.
- Special fees such as Health Insurance Tax, e.g. in Ghana.

Examples of these charges in a selected number of countries are reported in Appendix C to this paper.

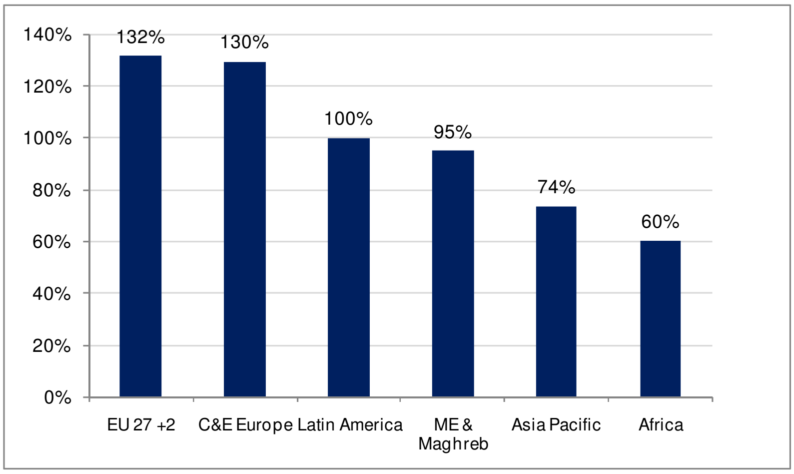
Regulatory taxes, spectrum and licence fees are charged by governments in many countries as a proportion of the MNOs' revenue. As such, these taxes can have a similar counter balancing impact on total government revenues (albeit often paid to the regulatory authority rather than directly to the government) following a reduction in consumer taxation. Therefore, the combination of special mobile consumer taxes and corporate taxes acts to reduce not only MNOs' profitability but also revenues for government.

When added together, these contributions represent a significant burden for MNOs and may act as a constraint to network and service investment at a time when LTE network expansion requires funds to upgrade the existing networks and provide valuable wireless mobile services to consumers. In addition, as a result of the global financial crisis, Foreign Direct Investment becomes more sensitive to taxation burdens, and high corporate taxation risks reducing investment inflows in developing countries.

7 Regional analysis

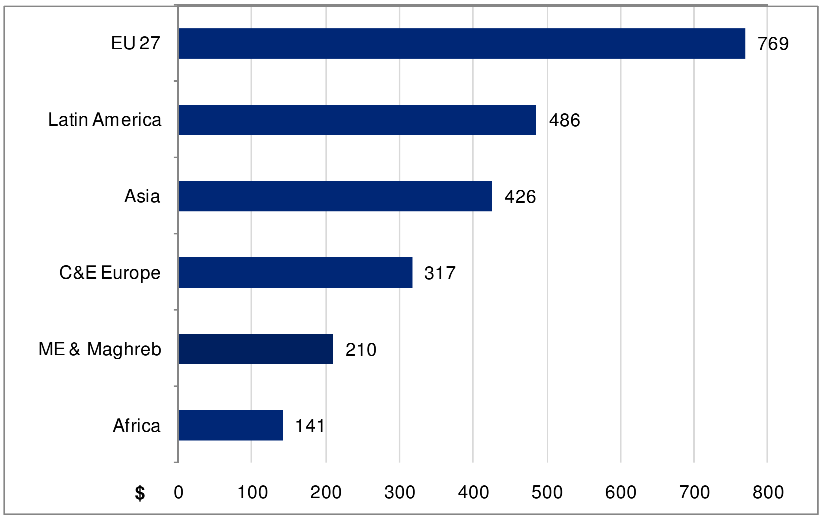
Mobile services have developed at a fast pace throughout the world and there are now over 5.5 billion mobile connections worldwide. However, penetration levels and cost of mobile services remain different across regions, as indicated in Figure 24 and Figure 25.

Figure 24 Penetration across regions



Source: Wireless Intelligence

Figure 25 Average TCMO values by region ($)



Source: Deloitte Analysis

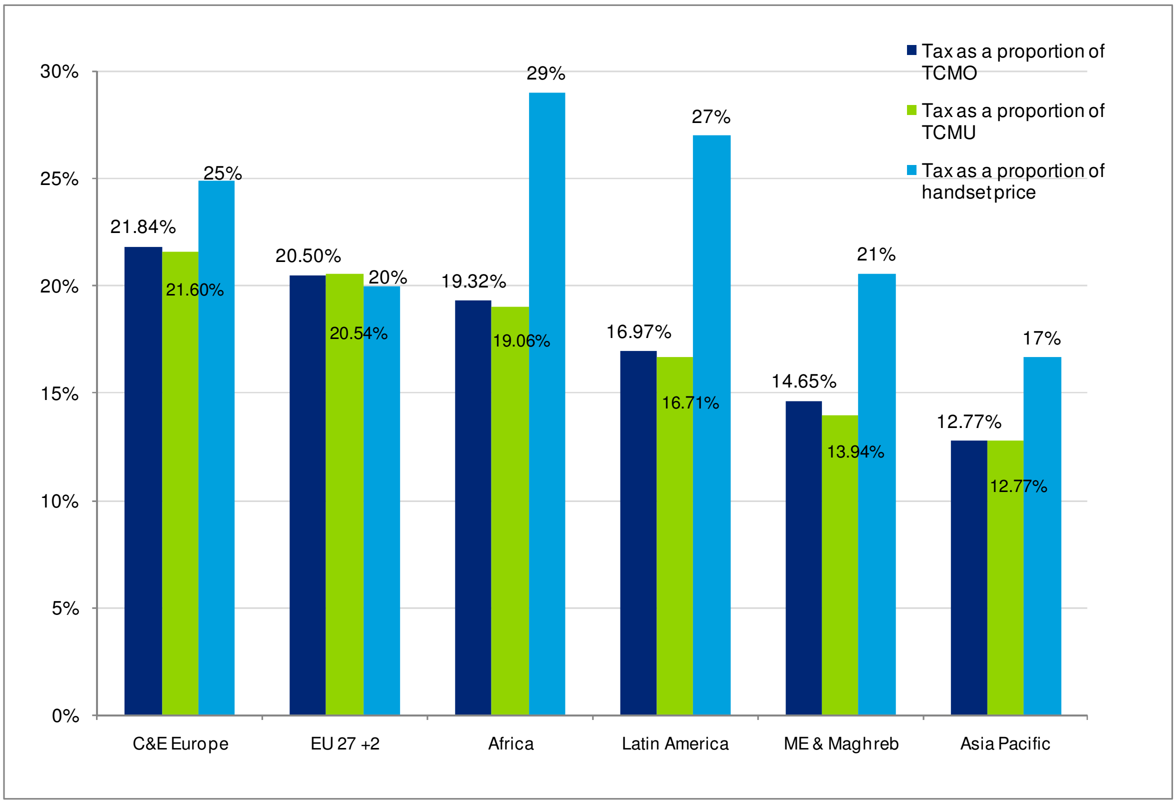
Market penetration is the highest in the European markets and in C&E Europe, where levels are well above 100% due to consumers owning more than one SIM card or handset. The EU has also the highest TCMO, due to high usage of mobile services and to the higher incidence of smartphones, which are more expensive than standard handsets. Africa, in contrast, shows the lowest mobile penetration worldwide along with the lowest TCMO levels, as usage is lower and handsets cheaper.

Figure 26 illustrates tax as a share of TCMO, TCMU and handset costs across these geographic regions. As with penetration and TCMO, taxation profiles are different.

In Europe, tax represents the same proportion of mobile ownership, usage and handset costs. In other countries, taxes as proportion of handset costs are much higher than taxes on usage.

C&E Europe shows the highest average tax as a proportion of TCMO, due to the high mobile specific taxes levied in Turkey and Croatia in particular. The EU is the region with the second highest tax as a proportion of TCMO and TCMU; this is driven by higher VAT rates.

Figure 26 Tax as a proportion of TCMO, TCMU and handset costs across all regions



Source: Deloitte Analysis

The strongest variation within a region exists in Africa. While Africa ranks third for tax as a proportion of ownership and usage, 17 African nations out of the total 30 African countries in this study have taxation as a proportion of TCMO at above the global average level, largely as a result of the high incidence of airtime taxes.

Africa has also the highest proportion of handset tax globally, representing on average 29% of handset costs. This is due to a number of handset-specific taxes, and to the level custom duties that are levied on imported handset. While movements have been observed in Kenya, and Senegal, where governments have abolished VAT and custom duties on handsets to encourage access to mobile services, other countries still retain higher than average levels of handset taxation.

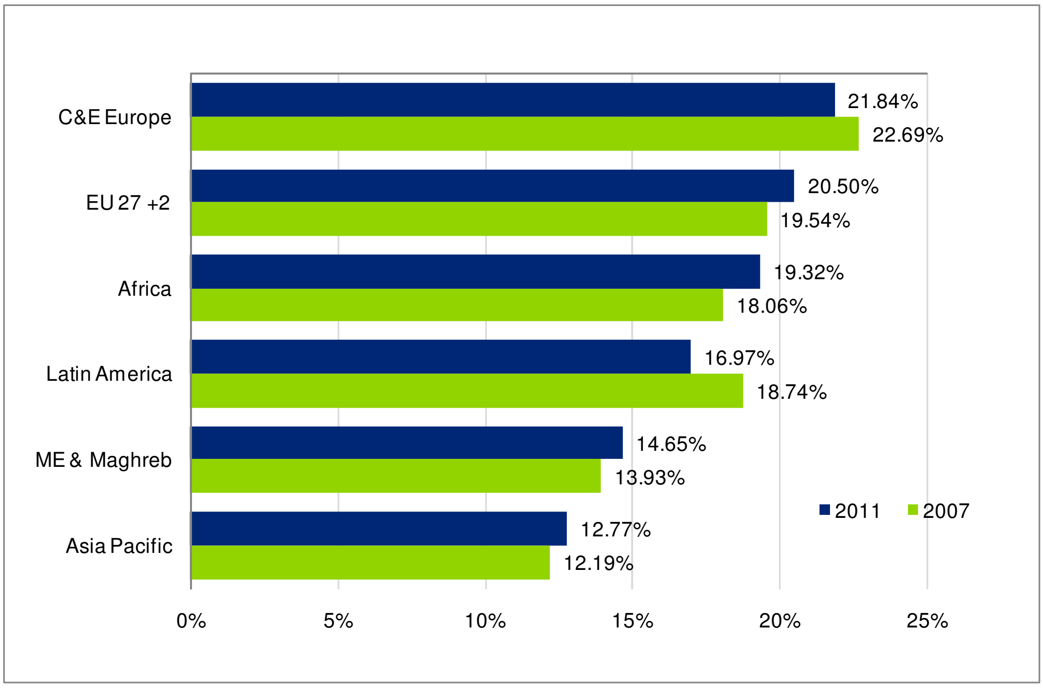
In Latin America, taxes as a proportion of handset costs are also remarkably high, due to custom duties on imported handsets and to mobile specific taxation on handsets in Argentina and Colombia.

Asian consumers pay the lowest tax as a proportion of mobile service ownership, due to low VAT rates and limited mobile-specific taxation.

While there is no clear relationship between mobile taxation and penetration, lower taxes on mobile services are likely to encourage greater adoption of mobile communications in developing countries. Whilst handsets are the cheapest in Africa, almost a third of the handset cost is composed of taxes. With handsets being the largest barrier to mobile penetration in this developing region, the high incidence of tax plays a significant role in increasing this barrier.

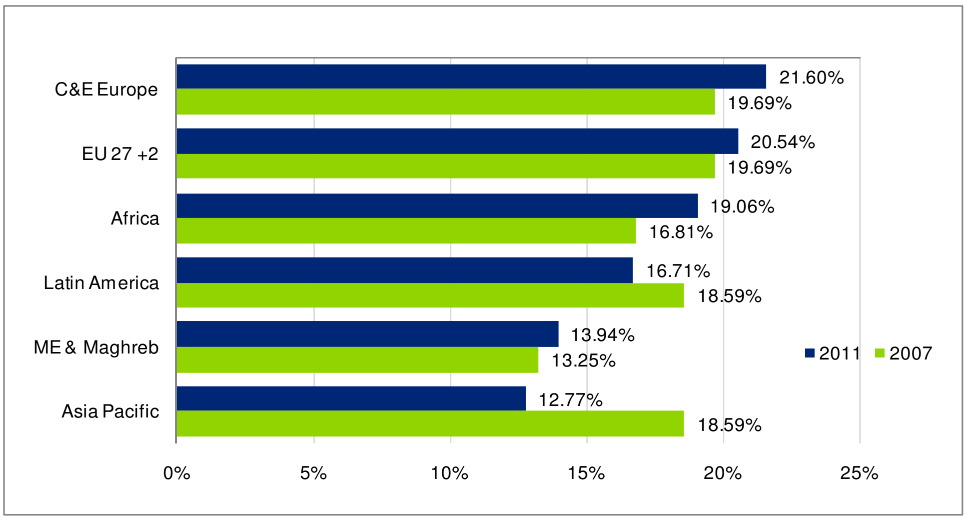
As shown in Figure 27 and Figure 28, compared to 2007, the average tax as a proportion of mobile ownership has increased in EU, Africa, ME and Maghreb and Asia, while there has been a slight decline in average tax as a proportion of TCMO in C&E Europe and Latin America. Taxes as a proportion of usage costs have increased by a notable 13% in Africa, and the increase has been driven mainly by airtime excise taxes. Taxes as a proportion of usage cost have decreased in Asia and Latin America.

Figure 27 Tax as a proportion of TCMO across regions, comparison with 2007 survey



Source: Deloitte Analysis

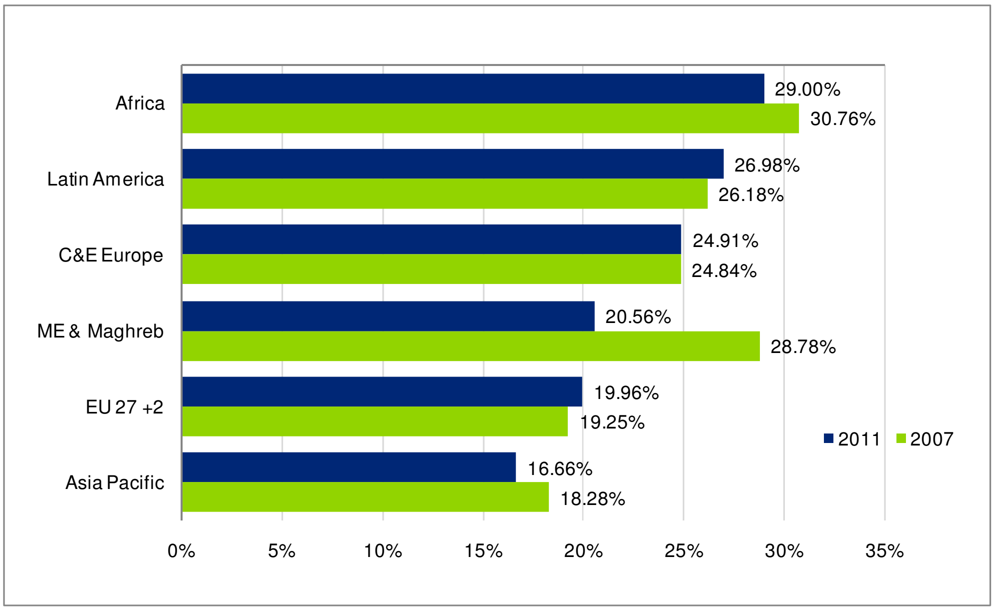
Figure 28 Tax as a proportion of TCMU across regions, comparison with 2007 survey



Source: Deloitte Analysis

Finally, Figure 29 indicates that tax as a proportion of handset costs has decreased in Africa, largely due to the policies of countries such as Kenya and Senegal where handset specific taxes have been reduced.

Figure 29 Tax as a proportion of handset cost across regions, comparison with 2007 survey

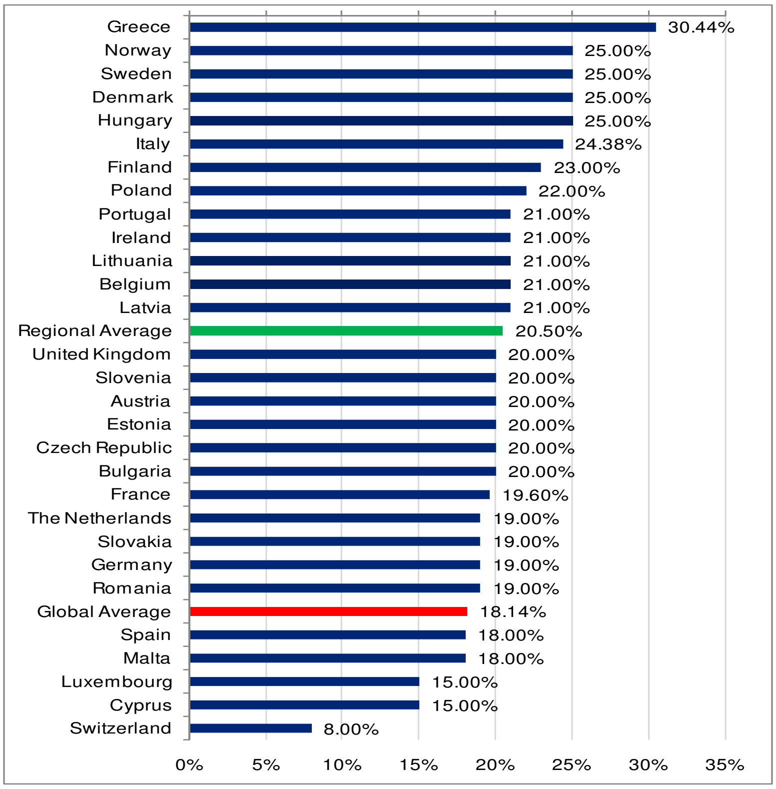


Source: Deloitte Analysis

7.1 Europe

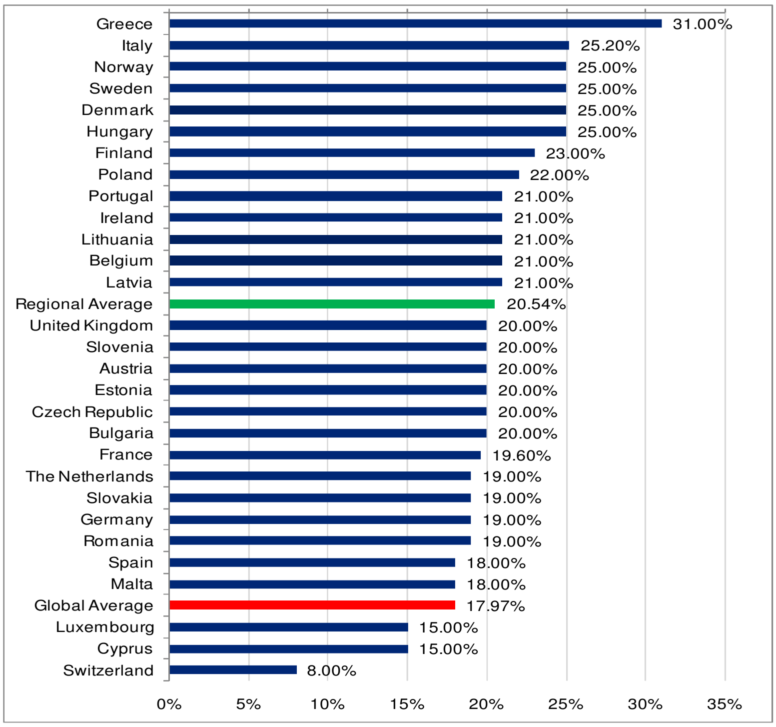
In Europe, the countries with a higher taxation as a proportion of TCMO include Greece, Norway, Sweden Denmark, Hungary and Italy, as shown in Figure 30, Figure 31 and Figure 32. While in Greece (and to a lower degree in Italy) mobile specific taxes apply, the Nordic countries suffer from higher levels of VAT on usage and handsets.

Figure 30 Tax as a share of TCMO in the EU



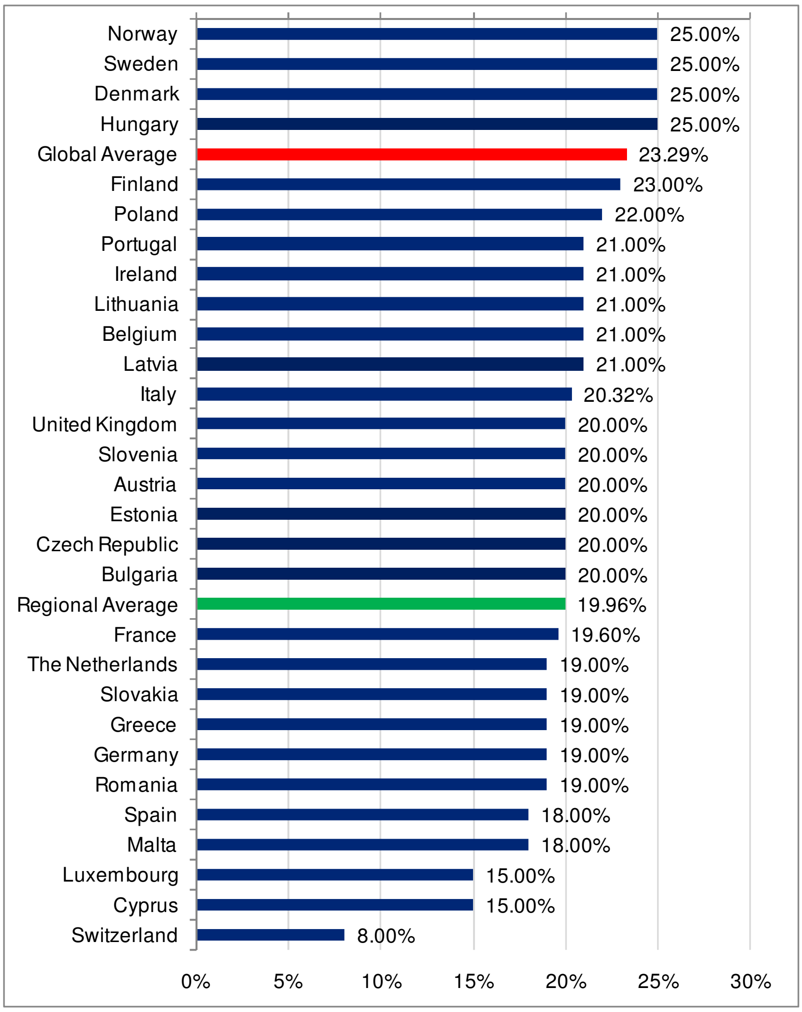
Source: Deloitte Analysis

Figure 31 Tax as a proportion of TCMU in the EU



Source: Deloitte Analysis

Figure 32 Tax as a proportion of handset cost in the EU



Source: Deloitte Analysis

7.2 Central and Eastern Europe

In Central and Eastern Europe, the countries with the highest taxation as a proportion of service cost are Turkey and Croatia as shown in Figure 33, Figure 34 and Figure 35.

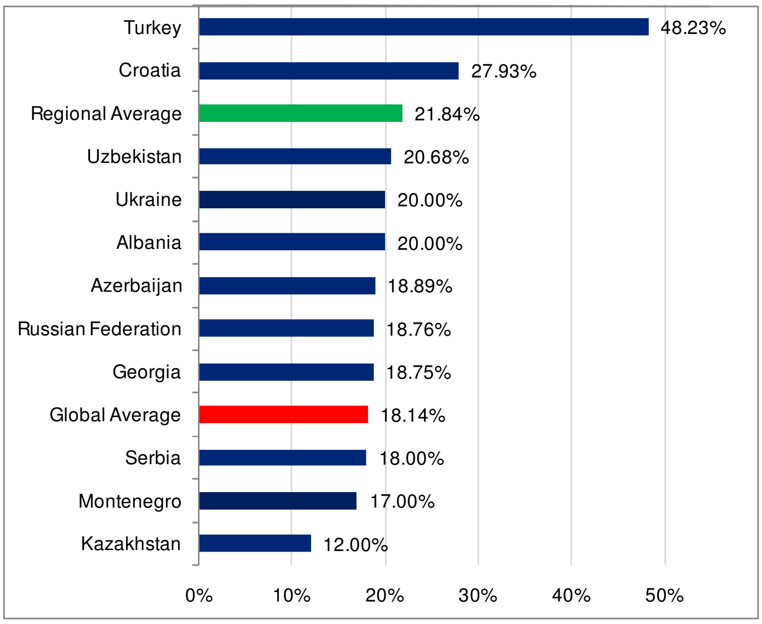
As described above, consumers in Turkey suffer from special consumption, special communication and fixed taxes on each type of service component.

In Croatia, in 2009 the government introduced a mobile-only 6% charge on MNOs' gross revenues from calls and SMS/MMS, which indirectly impacts price for mobile voice services, SMS and MMS. While not defined by the Croatian government as an airtime excise tax as in Africa, this charge de facto generates a similar impact on consumers.

In Serbia, in 2009 the government introduced a temporary airtime excise of 10% on usage. This was introduced to raise additional funds during the financial crisis however, recognising the problems it created, in particular on foreign direct investment, the tax was abolished a year later.

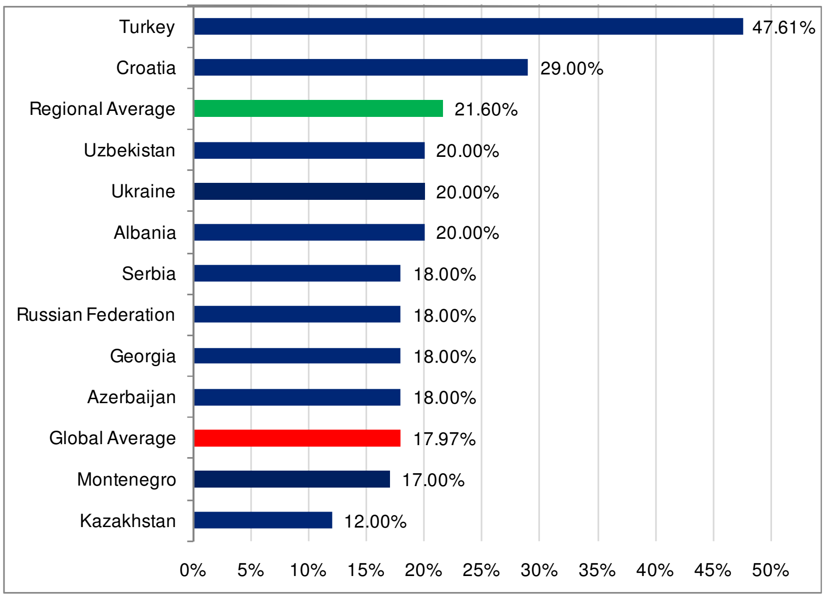
Handset taxes as a proportion of handset costs are the highest in Uzbekistan, Azerbaijan and Georgia (in addition to Turkey) due to high custom duties on imported handsets.

Figure 33 Tax as a share of TCMO in C&E Europe



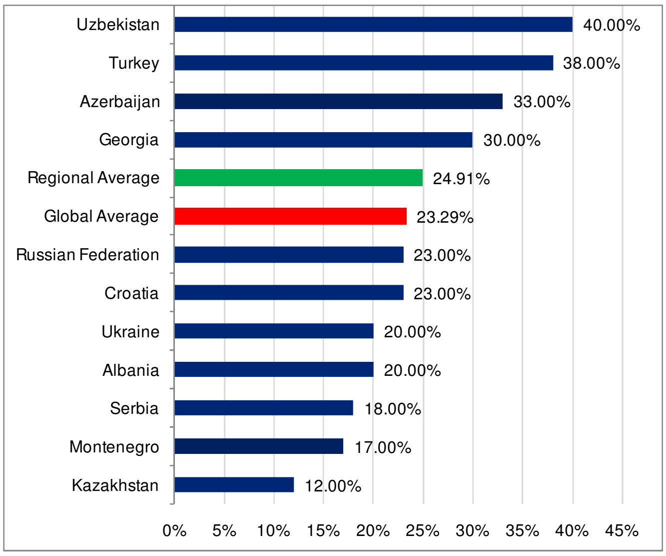
Source: Deloitte Analysis

Figure 34 Tax as a share of TCMU in C&E Europe



Source: Deloitte Analysis

Figure 35 Tax as a proportion of handset cost in C&E Europe

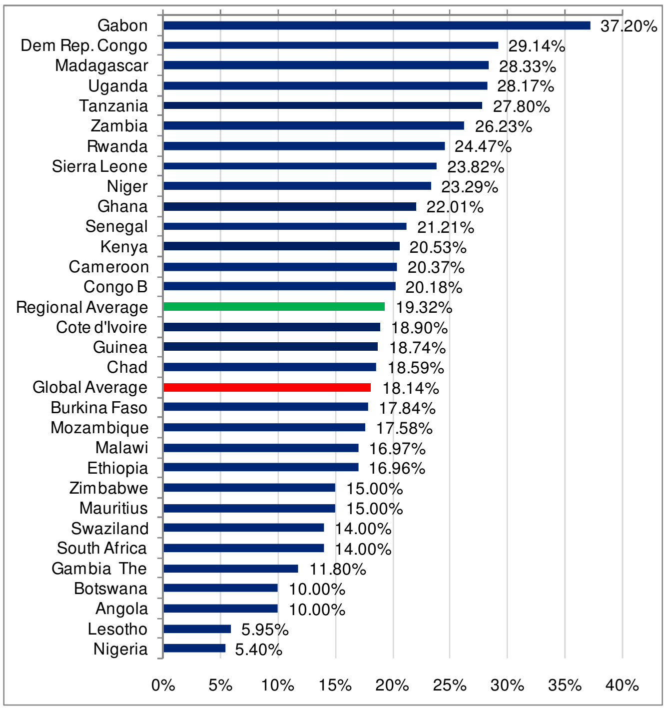


Source: Deloitte Analysis

7.3 Africa

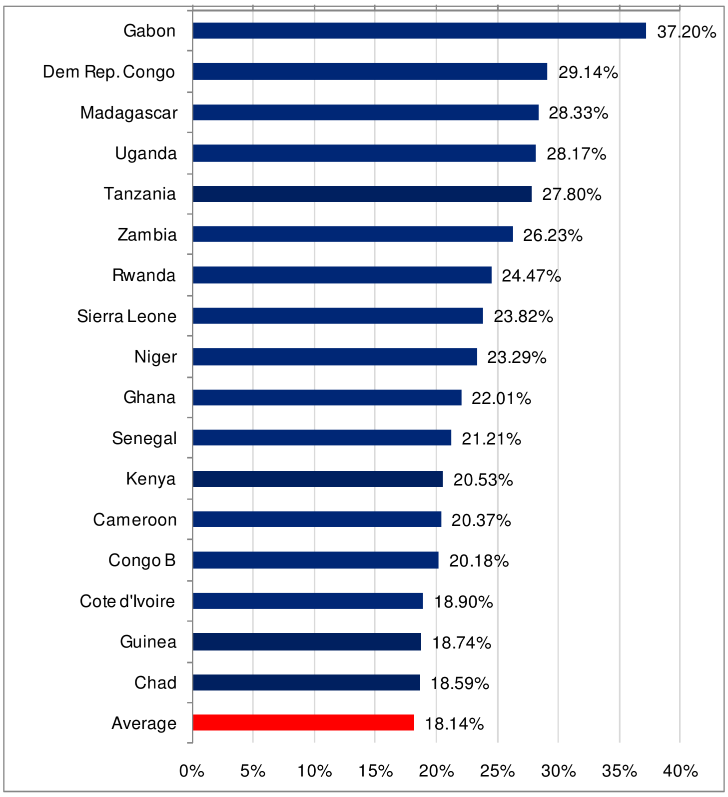
In Africa, tax as a proportion of TCMO has increased from 18.06% in 2007 to 19.32% in 2011, as indicated in Figure 27 above. Taxes as a proportion of TCMO in Africa are reported in Figure 36, while Figure 37 shows that mobile taxation is higher than the global average in 17 African countries.

Figure 36 Tax as a proportion of TCMO in Africa



Source: Deloitte Analysis

Figure 37 African countries where tax as a proportion of TCMO is above the global average level



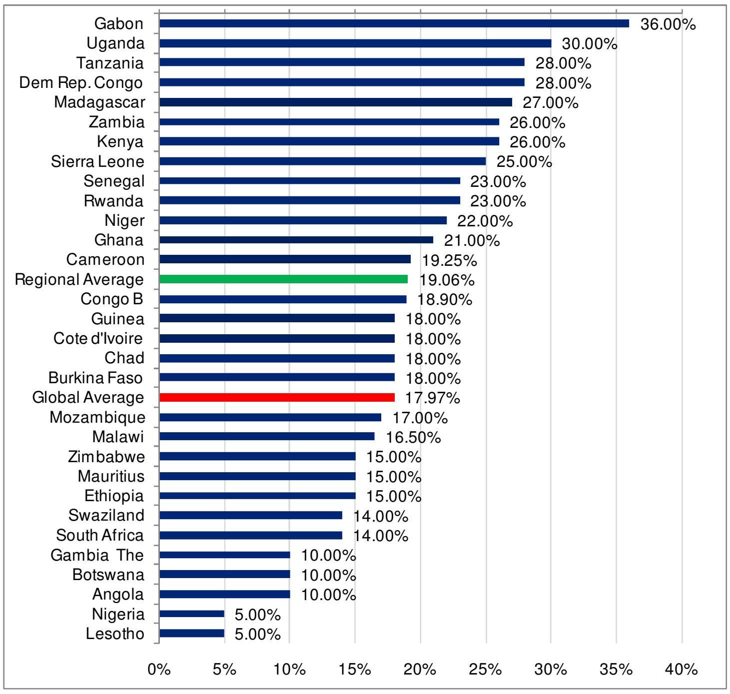
Source: Deloitte Analysis

The top 5 countries with highest taxation burden are Gabon, the DRC, Madagascar, Uganda and Tanzania:

- In Gabon, the tax as a proportion of TCMO IS 37.20% due to a VAT rate of 18% in addition to a custom duty of 30% imposed on imported handsets. Further, there is a $5 fixed tax on each handset in addition to an airtime excise of 18%.
- In the DRC, an airtime excise of 10% applies in addition to a custom duty rate on handsets of 26.5%.
- In Madagascar, consumers pay 28% of TCMO as tax, due to an airtime excise of 7% and a 1% special tax on handsets. In addition, a 25% custom duty applies.
- In Uganda, the tax as a proportion of TCMO is 28%. This is a result of an airtime excise of 12% on usage, in addition to an 18% VAT.
- Tanzania imposes a 10% airtime excise, in addition to a custom duty on handsets at 10%.

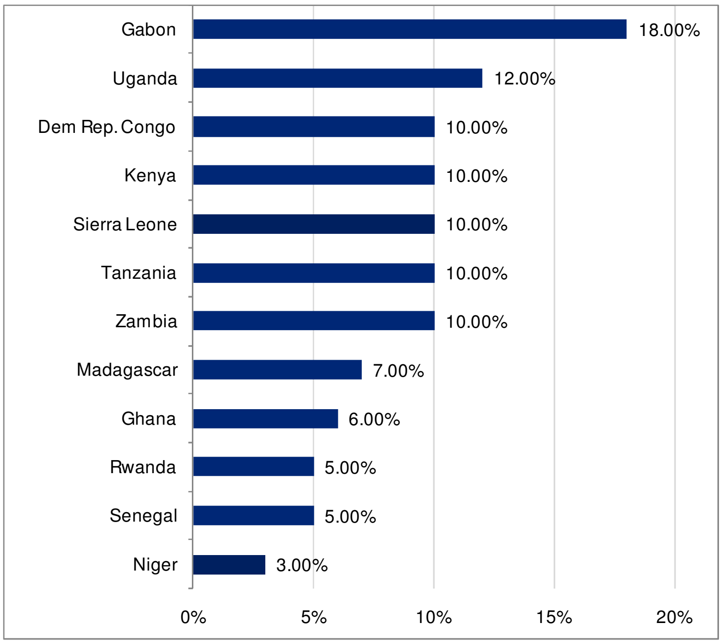
Figure 38 shows levels of taxation on mobile usage in Africa. Of the ten countries worldwide with the highest usage taxation, five are in Africa. Taking into consideration the countries that were part of the 2007 study, 12 African countries impose airtime excises on consumers in 2011, while in 2007 only six African countries had such tax. Since the 2007 study, DRC, Gabon, Madagascar and Sierra Leone and Senegal have introduced airtime excises. In Rwanda, the government expects to raise airtime usage to 8% from the current level of 5% in the next budget round. Airtime excises in Africa are illustrated in Figure 39.

Figure 38 Tax as a proportion of TCMU in Africa



Source: Deloitte Analysis

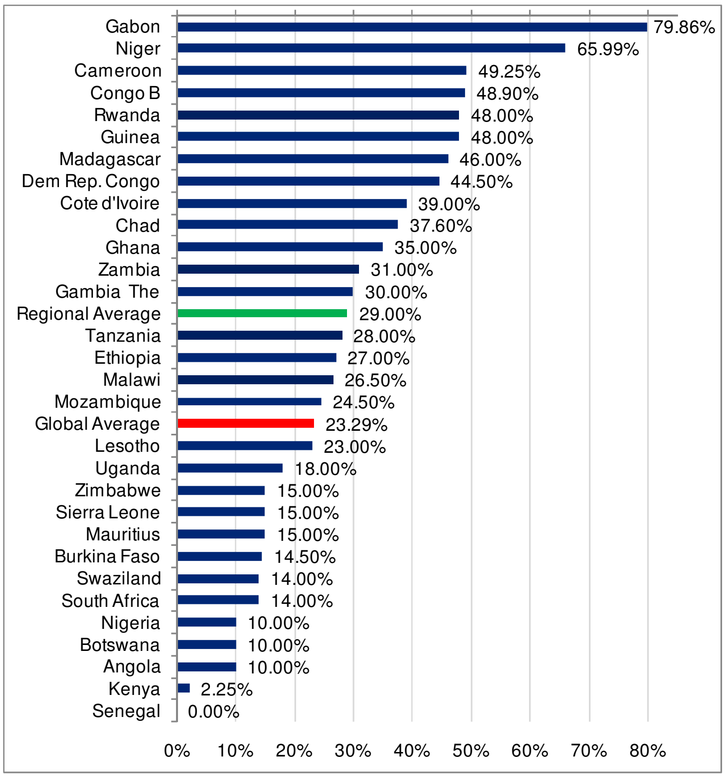
Figure 39 African countries where an airtime tax applies



Source: Deloitte Analysis

Finally, as discussed above, handset taxation is of particular concern in Africa, which shows the highest level of handset taxation globally. Tax as a proportion of handset costs in Africa is indicated in Figure 40. This shows that tax represents over 30% of handset costs in 13 countries in Africa.

Figure 40 Tax as a proportion of handset cost in Africa



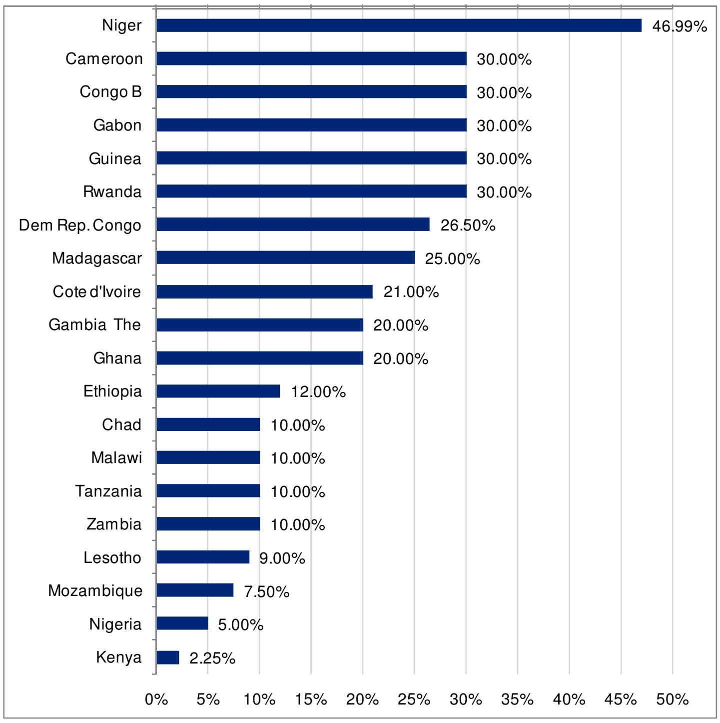
Source: Deloitte Analysis

This high level is driven by a number of handset-specific taxes and fees, which are currently imposed in Burkina Faso, Chad, Gabon, Madagascar, and Zambia. It is also driven by custom duties that apply to handset imports in 20 African countries (out of the 30 in the study), as shown in Figure 41. Of these 20, six impose import duties of 30% or higher.

Positive movements have been observed in Kenya and Senegal, where governments have abolished VAT and custom duties on handsets to encourage access to mobile services, other countries still retain higher than average levels of handset taxation. In Kenya, an analysis of the impact of the removal of handset tax has found that penetration, handset volumes and usage have increased notably[13] after handset taxes were removed. This may indicate that consumers, particularly in developing countries, are price sensitive in relation to their uptake and usage and that tax reductions may therefore boost consumption of mobile services.

[13] See Deloitte/GSMA. "Mobile telephony and taxation in Kenya", 2011

Figure 41 African countries imposing a custom duty on imported handsets



Source: Deloitte Analysis

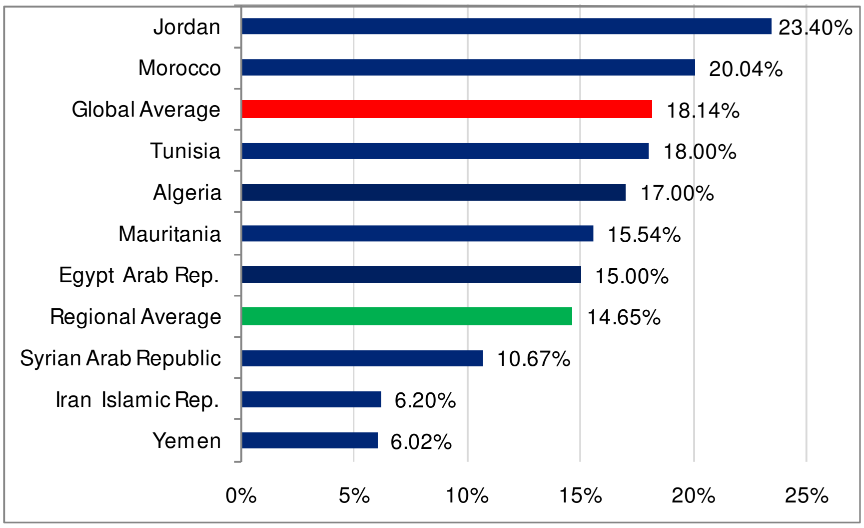
In Africa, the contribution of mobile communications is particularly important to countries' economic and social development, especially as a result of the limited fixed telecommunications infrastructure. Despite the positive impact that mobile communications have on economic activity, employment and social developments, many African countries tax mobile telecommunications at amongst the highest rates in the world, imposing a variety of sector specific taxation in addition to corporate tax and value added or sales tax. Mobile taxation represents a barrier to consumers' access to telecom services, a key problem in Africa, where mobile penetration stands at 60%, the lowest global penetration level.

7.4 Maghreb and Middle East

In Maghreb and Middle East, the countries with highest taxation as a proportion of TCMO Jordan and Morocco, as shown in Figure 42.

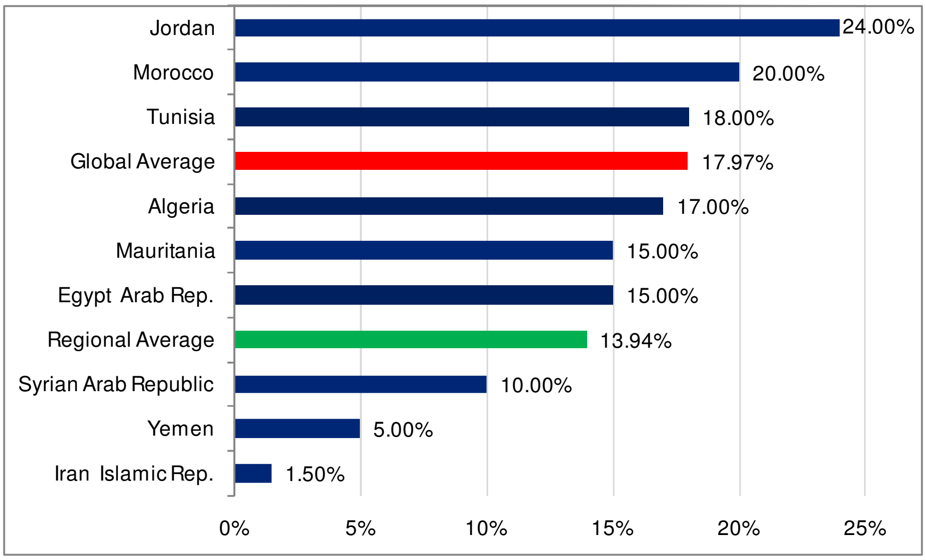
Jordan ranks as the highest in the Middle Eastern region with tax as a proportion of TCMO of 23%. This is due to an airtime excise of 8% in addition to a VAT of 16%. Similarly in Morocco, VAT is 20% and custom duty on imported handset is 2.5%. Other countries in the region show relatively low mobile taxation compared to the global average, however in Egypt mobile services attract a special VAT, 5% higher than other goods and services and 10% higher fixed telephony services. Mauritania and Iran have the highest handset tax due to high custom duties on imported handsets, as shown in Figure 44.

Figure 42 Tax as a share of TCMO in Maghreb and Middle East



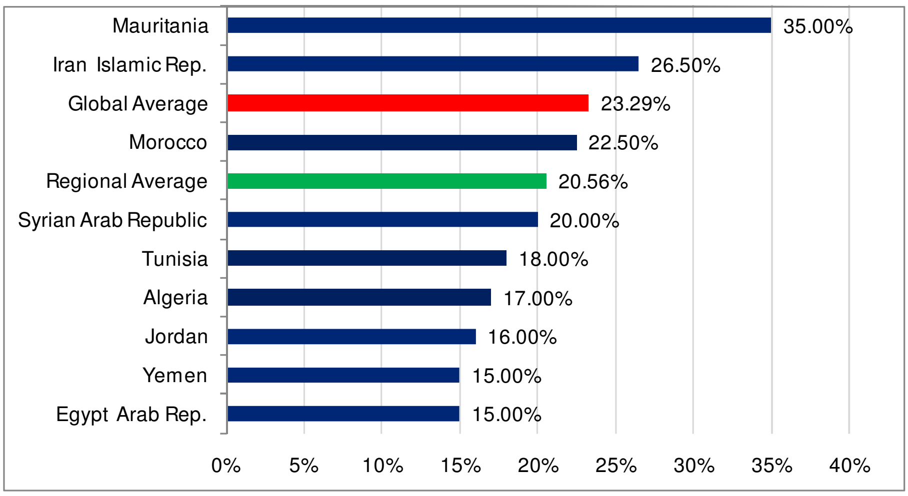
Source: Deloitte Analysis

Figure 43 Tax as a share of TCMU in Maghreb and Middle East



Source: Deloitte Analysis

Figure 44 Tax as a proportion of handset cost in Middle East and Maghreb



Source: Deloitte Analysis

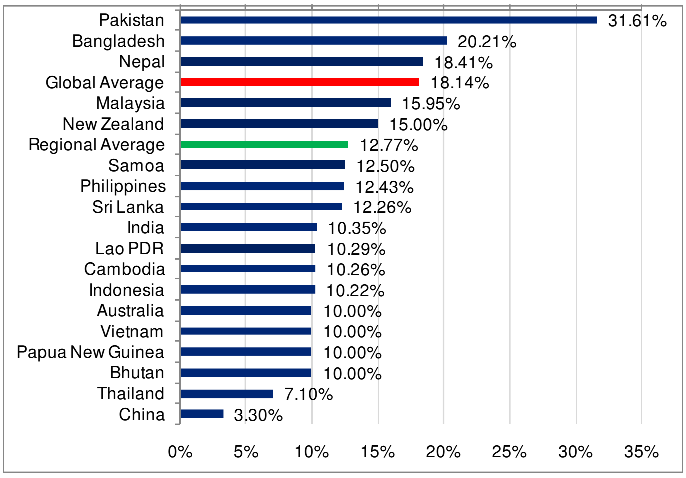
7.5 Asia and Pacific

In Asia and Pacific, tax as a proportion of TCMO has increased from 12.19% in 2007 to 12.77% in 2011, as indicated in Figure 27 above. The countries with highest taxation as a proportion of TCMO are Pakistan, Bangladesh and Nepal, as shown in Figure 45. In all other Asian countries tax as a proportion of TCMO ranked below the global average value.

Pakistan, as discussed above, imposes several special taxes on mobile services and handset. In Bangladesh, a 100 Taka special handset tax applies in addition to an 800 Taka connection tax. This is in addition to a 12% custom duty on all imported handsets and a VAT rate of 15%. In Nepal, a 5% airtime excise applies.

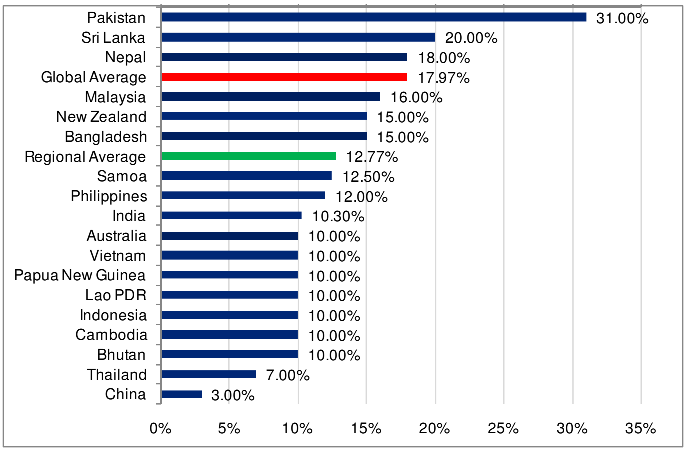
Other high ranking countries within the region include Malaysia, where a 6% airtime excise applies, Sri Lanka, where taxation as a proportion of usage is affected by a 20% usage tax (but here no VAT applies) and Cambodia, where handset tax is higher than the global average due to a 15% custom duty on imported handsets.

Figure 45 Tax as a share of TCMO in Asia and Pacific



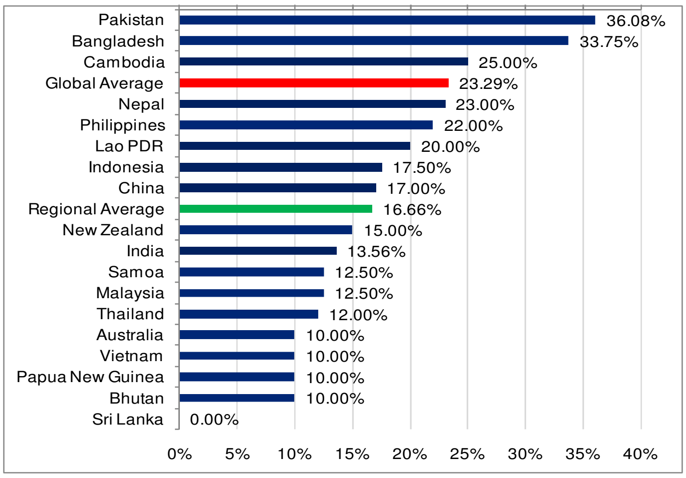
Source: Deloitte Analysis

Figure 46 Tax as a share of TCMU in Asia and Pacific



Source: Deloitte Analysis

Figure 47 Tax as a proportion of handset cost in Asia and Pacific



Source: Deloitte Analysis

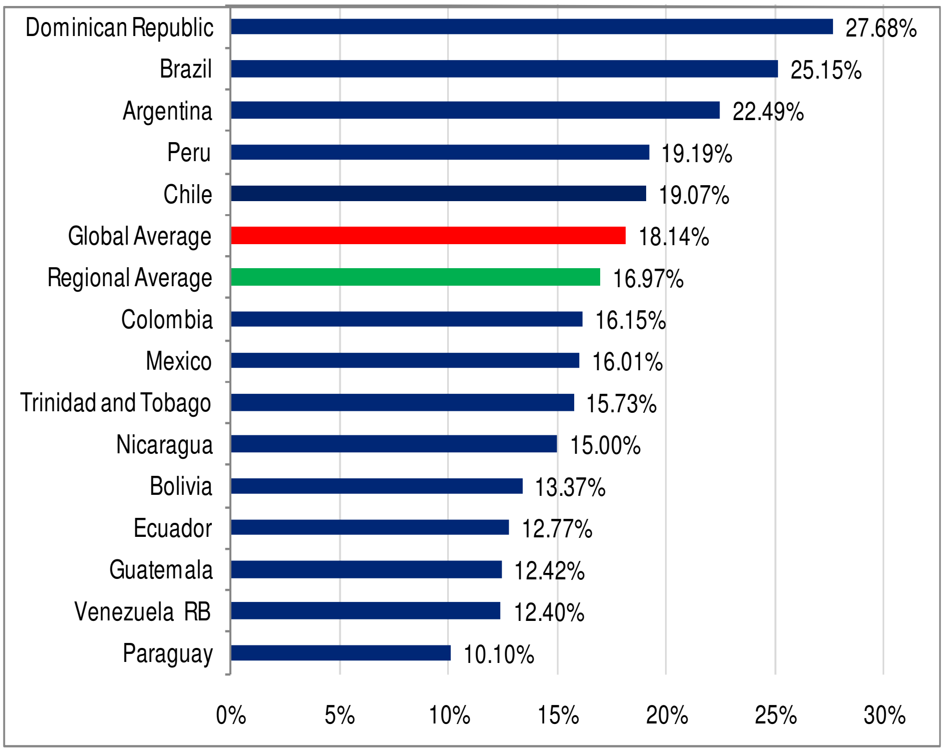
7.6 Latin America

In Latin America, tax as a proportion of TCMO has decreased from 18.74% in 2007 to 16.97% in 2011, as indicated in Figure 27 above.

As illustrated in Figure 48 and Figure 49, the countries where taxation as a proportion of TCMO and TCMU is above global average include the Dominican Republic, where an airtime excise of 12% on usage is imposed in addition to a VAT of 16%; Brazil, where a custom duty of 16% applies on imported handsets in addition to a VAT of 25%; Argentina, where a special tax on imported handsets of 25.21% applies in addition to a custom duty of 16%; Peru, where a custom duty of 12% applies on imported handsets in addition to VAT of 19%; and Chile, where a custom duty of 6% applies on imported handsets in addition to a VAT of 19%.

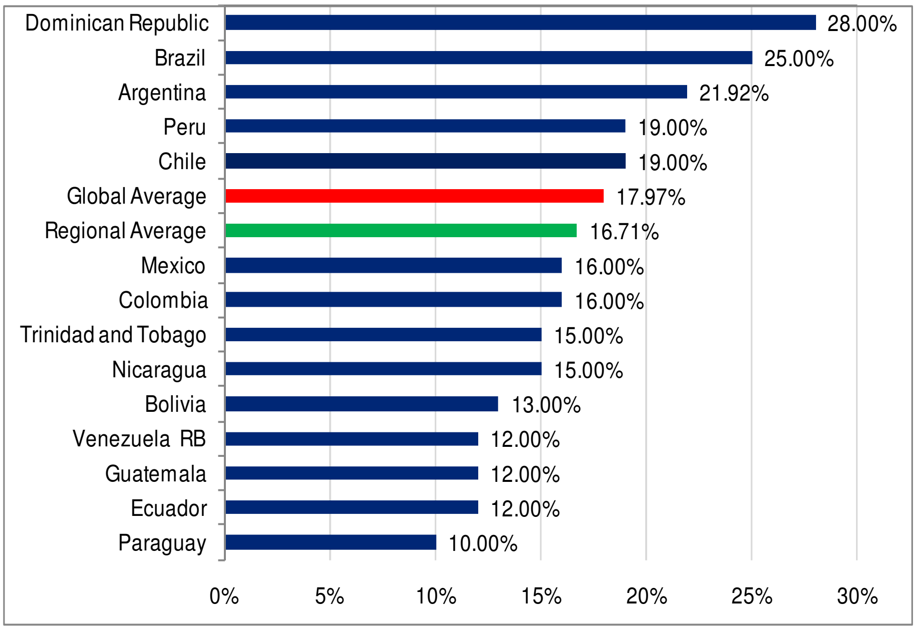
In Trinidad, Ecuador and Venezuela high custom duties on imported handsets contribute to these countries showing a higher than global average handset tax, as illustrated in Figure 50.

Figure 48 Tax as a proportion of TCMO in Latin America



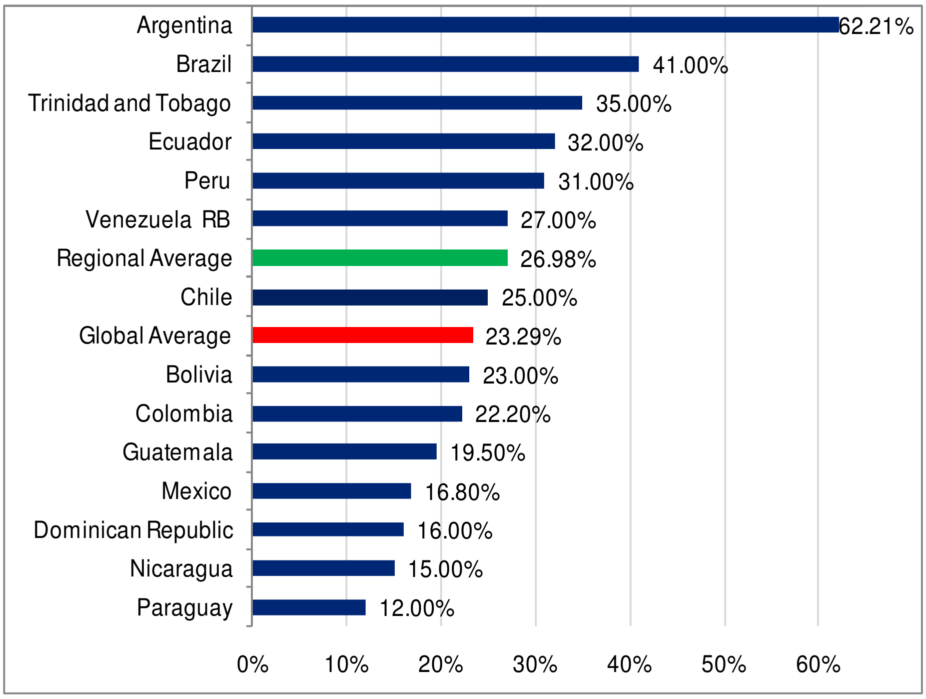
Source: Deloitte Analysis

Figure 49 Tax as a proportion of TCMU in Latin America



Source: Deloitte Analysis

Figure 50 Tax as a proportion of handset cost in Latin America



Source: Deloitte Analysis

8 Conclusions and implications

Governments have a major role to play in supporting mobile communications and wireless data developments. In particular, taxation policies have a significant impact on the value that societies derive from mobile telecom services as they affect the key factors that determine the success of telecom.

Mobile specific taxation may have a number of social and economic impacts, especially in developing countries, where fixed line telephony is more limited:

- Specific taxation on usage, such as airtime taxes, can represent a significant obstacle to usage of mobile services by the poorer sectors of the population, who could derive significant benefits from being connected.
- Taxes on handsets are particularly inefficient as they increase the access barriers to consumption of telecommunications services, especially in developing countries. Since handsets and smartphones may represent the only access to wireless broadband in the developing world, handset taxes may also lead to underconsumption of internet services.
- Unbalanced taxation profiles for related mobile services, where tax represents a much higher proportion of handset costs than of mobile ownership and usage costs, may also give inefficient buying incentives to consumers, and further limit access to mobile services.
- Therefore, increasing mobile-specific taxation may contribute to reducing the economic and social benefits generated by mobile communications and risks endangering the development and uptake of wireless data services.
- Conversely, removing mobile-specific taxation and imposing a balanced taxation profile for mobile related services provides more efficient incentives to consumers for their consumption choices, and can enhance the evolution from basic mobile consumption, such as access and usage, to more advanced services driven by the potential of wireless data and internet through mobile devices.
- In addition to affecting consumers, high mobile-specific taxation negatively affects MNOs' investment plans in at least two ways: MNOs are often forced by access taxation to provide subsidies on connections and handsets, reducing scope for network investment; secondly, usage taxes reduce sales volumes and margins.

This study has shown that, globally, the average level of consumer taxation as a proportion of mobile service costs has risen since 2007. It also illustrates that usage as a service component of mobile phones remains taxed heavily in developing countries and that taxation as a proportion of handset costs in developing markets is higher than other related mobile services, leading to unbalanced taxation profiles within the mobile bundle.

Despite the negative effects of mobile specific taxation, tax as a proportion of mobile communications remains high, especially in developing countries. MNOs are often seen amongst the most tax-compliant companies and become an easy target for taxation, especially in times of financial distress such as the recent financial crisis.

While in recent years mobile coverage has increased well over 80% of population in most developing markets, penetration in poorer countries remains low, often as a result of high mobile-specific taxation on connection services and on handsets. However, in times of high competition in mobile markets, where mobile specific taxation was removed, e.g. in Kenya, penetration, handset volumes and usage have increased notably. This may indicate that consumers, particularly in developing countries, are price sensitive in relation to their uptake and usage.

Governments, particularly in developing countries, could consider focussing their mobile taxation strategies to increase economic development rather than adopt policies that may create barriers to more people owning and using a mobile phone.

Appendix A Methodology and assumptions

This appendix describes the methodology employed to calculate the proportion of taxes related to mobile telephony usage paid by consumers in each of the countries in this study. This appendix also sets out the approach taken to collate the tax information for each country, the other data sources used and the key assumptions that were made in the study.

A.1 Methodology

The objective of this study is to measure the taxes paid by consumers as a proportion of ownership and usage costs of mobile services. This approach has sought to identify the TCMO, the TCMU and the handsets costs and to measure taxes paid as a proportion of each of these elements.

To do so, this approach has considered the two main types of mobile services available to consumers: pre paid services, whereby users purchase mobile services on a "pay as you go" basis by paying for an allowance of minutes/SMS upfront on a prepaid card; and post pay services, whereby consumers receive monthly bills in arrears from their mobile operator for the use of mobile services.

This work considers, for each country, the usage and price patterns for both types of services, and a country average was obtained by considering the relative penetration of post-pay and pre-pay services.

The total cost to an average consumer of owning and using a mobile can be defined using the concept of the TCMO and the TCMU. These components include the handset cost, connection costs, rental costs and call and SMS usage costs. The TCMO should also include internet data usage, in particular in developed markets. However, we were not able to obtain sufficient data for internet usage and prices, in particular for developing countries where little internet data usage is available. Internet usage was therefore not included in this study.

The TCMO consists of all price components associated with owning a mobile phone and purchasing mobile phone services. These cost components include:

- Handset cost: this relates to the cost of the mobile device required to make and receive calls. These are assumed to have a three year lifetime and are replaced at the end of that lifetime. The handset cost is therefore spread across the three years equally. For developed countries, the handset lifetime is assumed to be two years as this is the type of structure that is emerging in these countries as a result of handset proliferation and contracts.

- Connection cost: this component relates to the cost of connecting to the MNOs' network to obtain mobile services. For pre pay customers, this usually consists of an initial start up cost on activating the SIM card. The connection fee is assumed to mimic the lifetime of the handset and that is spread across the three years equally. This assumption may under reflect the churn in developing countries with a high pre pay market share although there is limited basis for an alternative assumption. For post pay consumers in developed countries, this is spread across two years as per handsets.

- Rental costs: this applies to post-pay mobile users only, whereby contract customers pay a monthly rental for being able to connect to the mobile network. Rental prices were provided as monthly prices and were therefore multiplied by 12 to obtain annual figures.

- Call and SMS usage rates: the price of making calls and sending SMS messages, expressed as a price per minute and price per SMS respectively. These may vary between post pay and pre paid customers.

TCMU is a similar measure to TCMO, however it does not include the handset and connection cost.

In summary, this model calculated the TCMO as follows:

$$TCMO = (H / n) + (C / n) + TCMU$$

$$TCMU = 12 * \text{MonthlyRental} + 12 * (\text{Monthlyminutes} * \text{price}) + 12 * (\text{MonthlySMS} * \text{price})$$

Where:

TCMO	Total Cost of Mobile Ownership
TCMU	Total cost of mobile usage.
H	Cost of handset. We assume handsets have an *n* year lifetime and are replaced at the end of that lifetime. The handset cost is therefore spread across the n years equally[14].
n	Lifetime of handsets and connection. This was set at 2 years for developed countries and 3 years for developing countries.
C	Connection fee. We assume that the connection fee mimics the lifetime of the handset and that the connection fee is spread across the *n* years equally.

Each of the cost components identified above includes the actual component price as well taxes paid by consumers. These taxes can vary from standard consumer taxes such as VAT, GST and custom duty, to include telecom or mobile-specific taxes and include:

- VAT or GST: these are consumer taxes incurred when purchasing every component of owning and using a mobile phone. These taxes are often expressed as a proportion of the value of the good or service.

- Custom duty and excise taxes on imported goods. In mobile telephony, users in developing countries typically pay import taxes on handsets and other mobile devices. These can either expressed as a proportion of the handset value or as a fixed sum or both.

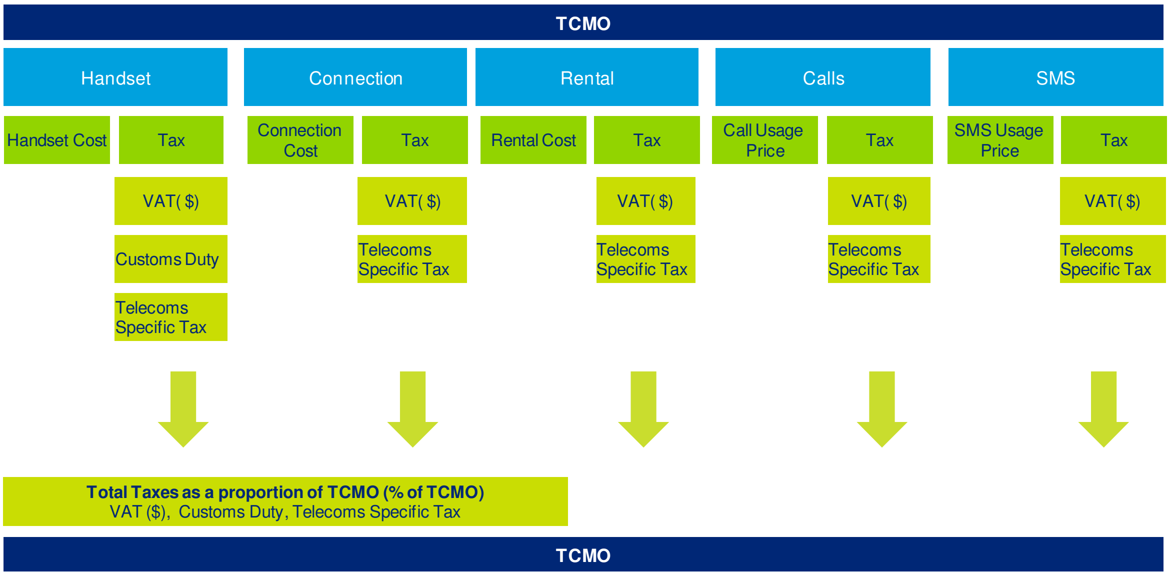
- Other telecoms specific taxes: as discussed in the main body of this report, a number of countries still impose specific taxes on consumers for using mobile services. These can include luxury item duties on handsets, SIM activation taxes or other taxes on connection, special communication taxes on

[14] This analysis does not consider the impact of the black market due to a lack of available data. Discussions with handset vendors suggest that a significant proportion of new handsets come from black market sources, suggesting that this estimate would provide a potential overstatement of the total impact on handset sales. For example, in many African countries with import taxes black market handsets are regarded as the norm by MNOs. However, no reliable data was available on this issue.

mobile usage, and monthly contributions for post-pay customers. These have all been accounted for in these calculations.

Figure 51 below illustrates the approach employed to calculate total taxes incurred by consumers as a proportion of TCMO and TCMU. The methodology is described in greater detail below.

Figure 51: Methodology applied



Source: Deloitte analysis

In order to calculate TCMO, TCMU and total taxes on components as a proportion of each of these, the approach taken was as follows:

- First, for each country, TCMO and TCMU were calculated for pre-pay and post-pay services:
  - These were calculated considering the average handset price, the average call and SMS price, the average connection price and the average rental price.
  - Average usage for pre-pay and post-pay customers was taken into account to estimate the size of the consumption bundle in each country.
- The tax incurred on each mobile component was then calculated by extrapolating the tax value based on the research on tax rates:
  - For example, given the average handset retail price in a country, VAT and any custom duties paid were calculated.
  - This approach was taken for each cost component.
- The different types of paid for each component were then added to calculate total tax incurred by the consumer on the purchase of a typical annual mobile phone bundle of services.
- The proportion of tax of the total price of a mobile phone for a consumer could then be calculated for pre-pay and post-pay users.

- A weighted average of the two user categories was then calculated, using penetration rates in each respective country as the weighting to calculate an overall TCMO and TCMU.
- A total country figure for taxes and a proportion of TCMO and TCMO was finally calculated.

A.2 Data Sources and Assumptions

This section of the methodology describes the data used as inputs for the study for each of the TCMO components and the additional assumptions applied to these inputs.

For **handset retail prices**, average handset market prices for developing countries were taken from the Nokia Index, and provided by Nokia. 2010/11 prices were provided for the majority of developing countries. However, in a few instances, 2010/11 data was unavailable and 2009/10 prices were used as previously provided by Nokia. For developed countries, handset price data was obtained from a detailed Deloitte global survey entitled "Addicted to connectivity: perspectives on the global mobile consumer" carried out for the GSMA Mobile World Congress. One of the outputs of the survey is an estimation of the market share of the main handset brands in a set of developed markets. This data was combined with handset Average Selling Price data for the main handset types and brands provided by Enders Analysis. All handset prices were calibrated to represent a market average handset price excluding taxes.

Prices for other components (connection, rental, and call and SMS usage rates) were provided by Tariff Consultancy Ltd. According to their methodology statement, all final prices are post-tax retail prices, promotions have not been taken into account and the two main MNOs in each of the countries covered have been selected for the relevant data. Deloitte has not verified the accuracy of this data.

Call and SMS volumes and penetration rates were obtained from the Wireless Intelligence Unit. Where data was missing for some countries, regional average figures for the region in which the country is located were used. Deloitte has not verified the accuracy of this data.

For **taxes**, a range of data sources were consulted:

- Deloitte international tax database: the Deloitte database includes information obtained from the tax department on the general tax practices of foreign countries, many of which were included in this study.
- Local Deloitte offices: local Deloitte offices were contacted to obtain specialist input and verification of certain tax data collected.
- Additional desktop based search was required to collect custom duty rates. This included verifying data on Budde reports, Forrester and Gartner.
- GSMA and MNOs: all tax data collated has been verified by the MNOs participating in the GSMA study.

The tax values applied to each country are shown in Table 3. These reflect research undertaken in June 2011 and variations occurred since then may not be included.

Table 3 Tax rates applying to mobile telephony in each country

Countries	VAT on mobile services	Custom Duty on imported handsets	Mobile Specific Tax			Corporation Tax
			Handset	Connection	Usage	
Albania	20.00%	-	-	-	-	10.00%
Algeria	17.00%	-	-	-	-	25.00%
Angola	10.00%	-	-	-	-	35.00%
Argentina	21.00%	16.00%	25.21%	-	12.90% on post paid rental only, no tax on other usage	35.00%
Australia	10.00%	-	-	-	-	30.00%
Austria	20.00%	-	-	-	-	25.00%
Azerbaijan	18.00%	15.00%	-	-	-	20.00%
Bangladesh	15.00%	12.00%	$1.38	$11.03	-	40.00%
Belgium	21.00%	-	-	-	-	33.99%
Bhutan	10.00%	-	-	-	-	30.00%
Bolivia	13.00%	10.00%	-	-	-	25.00%
Botswana	10.00%	-	-	-	-	15.00%
Brazil	25.00%	16.00%	-	-	-	25.00%
Bulgaria	20.00%	-	-	-	-	10.00%
Burkina Faso	18.00% (excluding on handsets)	-	14.50%	-	-	30.00%
Cambodia	10.00%	15.00%	-	-	-	20.00%
Cameroon	19.25%	30.00%	-	-	-	38.50%
Chad	18.00%	10.00%	9.60%	-	-	40.00%
Chile	19.00%	6.00%	-	-	-	17.00%
China	3.00%	-	-	-	-	25.00%
Colombia	16.00%	5.00%	1.20%	-	-	33.00%
Congo B	18.90%	30.00%	-	-	-	38.00%
Cote d'Ivoire	18.00%	21.00%	-	-	-	25.00%
Croatia	23.00%	-	-	-	6.00%	20.00%
Cyprus	15.00%	-	-	-	-	10.00%
Czech Republic	20.00%	-	-	-	-	19.00%
Dem Rep. Congo	18.00%	26.50%	-	-	10.00%	40.00%
Denmark	25.00%	-	-	-	-	25.00%
Dominican Republic	16.00%	-	-	-	12.00%	25.00%
Ecuador	12.00%	20.00%	-	-	-	25.00%
Egypt	15.00% (Standard VAT is 10%)	-	-	-	-	20.00%
Estonia	20.00%	-	-	-	-	21.00%
Ethiopia	15.00%	12.00%	-	-	-	30.00%
Finland	23.00%	-	-	-	-	26.00%
France	19.60%	-	-	-	-	33.00%
Gabon	18.00%	30.00%	$5.00	-	18.00%	35.00%
Gambia	10.00%	20.00%	-	-	-	35.00%
Georgia	18.00%	12.00%	-	-	-	15.00%

Countries	VAT on mobile services	Custom Duty on imported handsets	Mobile Specific Tax			Corporation Tax
			Handset	Connection	Usage	
Germany	19.00%	-	-	-	-	33.30%
Ghana	15.00%	20.00%	-	-	6.00%	25.00%
Greece	19.00%	-	-	-	12.00%	24.00%
Guatemala	12.00%	7.50%	-	-	-	5.00%
Guinea	18.00%	30.00%	-	-	-	35.00%
Hungary	25.00%	-	-	-	-	20.00%
India	10.30%	1.06%	-	-	-	31.50%
Indonesia	10.00%	7.50%	-	-	-	25.00%
Iran	1.50%	25.00%	-	-	-	25.00%
Ireland	21.00%	-	-	-	-	12.50%
Italy	20.00%	-	$0.64 on smartphones	-	$12.91 on post paid rental only, no tax on other usage	31.40%
Jordan	16.00%	-	-	-	8.00%	15.00%
Kazakhstan	12.00%	-	-	-	-	20.00%
Kenya	16.00% (excluding on handsets)	2.25%	-	-	10.00%	30.00%
Lao PDR	10.00%	10.00%		-	-	35.00%
Latvia	21.00%	-	-	-	-	15.00%
Lesotho	5.00%	9.00%	-	-	-	10.00%
Lithuania	21.00%	-	-	-	-	15.00%
Luxembourg	15.00%	-	-	-	-	21.84%
Madagascar	20.00%	25.00%	1.00%	-	7.00%	23.00%
Malawi	16.50%	10.00%	-	-	-	30.00%
Malaysia	10.00%	2.50%	-	-	6.00%	25.00%
Malta	18.00%	-	-	-	-	35.00%
Mauritania	15.00%	20.00%	-	-	-	15.00%
Mauritius	15.00%	-	-	-	-	15.00%
Mexico	16.00%	0.80%	-	-	-	30.00%
Montenegro	17.00%	-	-	-	-	9.00%
Morocco	20.00%	2.50%	-	-	-	30.00%
Mozambique	17.00%	7.50%	-	-	-	32.00%
Nepal	13.00%	10.00%	-	-	5.00%	25.00%
New Zealand	15.00%	-	-	-	-	30.00%
Nicaragua	15.00%	-	-	-	-	30.00%
Niger	19.00%	46.99%	-	$0.54	3.00%	30.00%
Nigeria	5.00%	5.00%	-	-	-	30.00%
Norway	25.00%	-	-	-	-	28.00%
Pakistan	19.50% (Standard VAT is 16%)	-	$2.92	$2.92	11.50%	35.00%
Papua New Guinea	10.00%	-	-	-	-	30.00%
Paraguay	10.00%	2.00%	-	-	-	10.00%

Countries	VAT on mobile services	Custom Duty on imported handsets	Mobile Specific Tax			Corporation Tax
			Handset	Connection	Usage	
Peru	19.00%	12.00%	-	-	-	30.00%
Philippines	12.00%	10.00%	-	-	-	30.00%
Poland	22.00%	-	-	-	-	19.00%
Portugal	21.00%	-	-	-	-	26.50%
Romania	19.00%	-	-	-	-	16.00%
Russian Federation	18.00%	5.00%	-	-	-	20.00%
Rwanda	18.00%	30.00%	-	-	5.00%	30.00%
Samoa	12.50%	-	-	-	-	27.00%
Senegal	18.00% (excluding on handsets)	-	-	-	5.00%	25.00%
Serbia	18.00%	-	-	-	-	10.00%
Sierra Leone	15.00%	-	-	-	10.00%	30.00%
Slovakia	19.00%	-	-	-	-	19.00%
Slovenia	20.00%	-	-	-	-	20.00%
South Africa	14.00%	-	-	-	-	28.00%
Spain	18.00%	-	-	-	-	30.00%
Sri Lanka	-	-	-	20.00%	20.00%	35.00%
Swaziland	14.00%	-	-	-	-	30.00%
Sweden	25.00%	-	-	-	-	26.30%
Switzerland	8.00%	-	-	-	-	13.00%
Syria	10.00%	10.00%	-	-	-	28.00%
Tanzania	18.00%	10.00%	-	-	10.00%	30.00%
Thailand	7.00%	5.00%	-	-	-	30.00%
Netherlands	19.00%	-	-	-	-	25.50%
Trinidad and Tobago	15.00%	20.00%	-	-	-	25.00%
Tunisia	18.00%	-	-	-	-	30.00%
Turkey	18.00%	-	20.00%	$29.50	25% and $8.25 on rental	20.00%
Uganda	18.00%	-	-	-	12.00%	30.00%
Ukraine	20.00%	-	-	-	-	25.00%
United Kingdom	20.00%	-	-	-	-	28.00%
Uzbekistan	20.00%	20.00%	-	-	-	9.00%
Venezuela	12.00%	15.00%	-	-	-	34.00%
Vietnam	10.00%	-	-	-	-	25.00%
Yemen	5.00%	10.00%	-	-	-	35.00%
Zambia	16.00%	10.00%	5.00%	-	10.00%	35.00%
Zimbabwe	15.00%	-	-	-	-	25.00%

Source: Deloitte research based on local sources and MNOs' information

Appendix B Country ranking

Table 4 shows, for each country: the ranking in 2011 study for tax as a proportion of TCMO, the level of tax as a proportion of TCMO in 2011, the country's 2007 ranking and whether tax as a proportion of TCMO has increased or decreased compared to 2007.

Table 4 Country rankings

Ranking	Country	Tax as a proportion of TCMO 2011	2007 Ranking	Increase/Decrease compared to 2007
1	Turkey	48.23%	1	increased
2	Gabon	37.20%	48	increased
3	Pakistan	31.61%	66	increased
4	Greece	30.44%	9	increased
5	Dem Rep. Congo	29.14%	26	increased
6	Madagascar	28.33%	56	increased
7	Uganda	28.17%	3	decreased
8	Croatia	27.93%	NA	NA
9	Tanzania	27.80%	2	decreased
10	Dominican Republic	27.68%	7	increased
11	Zambia	26.23%	6	decreased
12	Brazil	25.15%	4	decreased
13	Sweden	25.00%	13	increased
14	Norway	25.00%	NA	NA
15	Denmark	25.00%	12	increased
16	Hungary	25.00%	31	increased
17	Rwanda	24.47%	23	increased
18	Italy	24.38%	16	increased
19	Sierra Leone	23.82%	91	increased
20	Jordan	23.40%	41	increased
21	Niger	23.29%	NA	NA
22	Finland	23.00%	18	increased
23	Argentina	22.49%	10	decreased
24	Ghana	22.01%	59	increased
25	Poland	22.00%	19	increased
26	Senegal	21.21%	21	decreased
27	Portugal	21.00%	24	increased
28	Ireland	21.00%	25	increased
29	Belgium	21.00%	NA	NA
30	Lithuania	21.00%	52	increased
31	Latvia	21.00%	53	increased
32	Uzbekistan	20.68%	30	increased
33	Kenya	20.53%	11	decreased
34	Cameroon	20.37%	20	decreased
35	Bangladesh	20.21%	47	increased
36	Congo B	20.18%	NA	NA
37	Morocco	20.04%	27	decreased

Ranking	Country	Tax as a proportion of TCMO 2011	2007 Ranking	Increase/Decrease compared to 2007
38	United Kingdom	20.00%	58	increased
39	Austria	20.00%	32	increased
40	Ukraine	20.00%	5	decreased
41	Slovenia	20.00%	29	increased
42	Estonia	20.00%	55	increased
43	Czech Republic	20.00%	45	increased
44	Bulgaria	20.00%	33	increased
45	Albania	20.00%	44	increased
46	France	19.60%	35	increased
47	Peru	19.19%	39	increased
48	Chile	19.07%	38	decreased
49	The Netherlands	19.00%	49	increased
50	Germany	19.00%	65	increased
51	Slovakia	19.00%	46	increased
52	Romania	19.00%	43	increased
53	Cote d'Ivoire	18.90%	50	increased
54	Azerbaijan	18.89%	36	decreased
55	Russian Federation	18.76%	51	increased
56	Georgia	18.75%	37	decreased
57	Guinea	18.74%	42	decreased
58	Chad	18.59%	22	decreased
59	Nepal	18.41%	15	decreased
60	Tunisia	18.00%	57	increased
61	Spain	18.00%	63	increased
62	Serbia	18.00%	NA	NA
63	Malta	18.00%	54	increased
64	Burkina Faso	17.84%	40	decreased
65	Mozambique	17.58%	14	decreased
66	Algeria	17.00%	NA	NA
67	Montenegro	17.00%	NA	NA
68	Malawi	16.97%	NA	NA
69	Ethiopia	16.96%	64	increased
70	Colombia	16.15%	28	decreased
71	Mexico	16.01%	62	decreased
72	Malaysia	15.95%	96	increased
73	Trinidad and Tobago	15.73%	61	decreased
74	Mauritania	15.54%	78	increased
75	New Zealand	15.00%	NA	NA
76	Zimbabwe	15.00%	17	decreased
77	Mauritius	15.00%	68	increased
78	Egypt Arab Rep.	15.00%	75	increased
79	Nicaragua	15.00%	69	increased
80	Luxembourg	15.00%	70	increased
81	Cyprus	15.00%	74	increased
82	Swaziland	14.00%	100	increased

Ranking	Country	Tax as a proportion of TCMO 2011	2007 Ranking	Increase/Decrease compared to 2007
83	South Africa	14.00%	76	decreased
84	Bolivia	13.37%	79	decreased
85	Ecuador	12.77%	8	decreased
86	Samoa	12.50%	77	decreased
87	Philippines	12.43%	83	increased
88	Guatemala	12.42%	81	increased
89	Venezuela RB	12.40%	67	decreased
90	Sri Lanka	12.26%	73	decreased
91	Kazakhstan	12.00%	71	decreased
92	Gambia The	11.80%	34	decreased
93	Syrian Arab Republic	10.67%	95	increased
94	India	10.35%	82	decreased
95	Lao PDR	10.29%	86	decreased
96	Cambodia	10.26%	80	decreased
97	Indonesia	10.22%	84	decreased
98	Paraguay	10.10%	89	increased
99	Australia	10.00%	NA	NA
100	Botswana	10.00%	88	decreased
101	Angola	10.00%	NA	NA
102	Vietnam	10.00%	87	decreased
103	Papua New Guinea	10.00%	92	increased
104	Bhutan	10.00%	98	increased
105	Switzerland	8.00%	NA	NA
106	Thailand	7.10%	60	decreased
107	Iran Islamic Rep.	6.20%	85	decreased
108	Yemen	6.02%	90	decreased
109	Lesotho	5.95%	93	decreased
110	Nigeria	5.40%	94	decreased
111	China	3.30%	97	decreased

Source: Deloitte analysis

Appendix C Mobile specific charges applying to MNOs

Table 5 below describes in more detail the mobile-specific charges, including regulatory fees, spectrum fees, licence fees, USF fees and other taxes incurred by MNOs in a number of selected countries in the panel. It also discusses certain accounting procedures that MNOs have reported as particularly inefficient for their business. Data in this table has been provided directly by MNOs.

Table 5: Other charges applying to MNOs

Country	Charges
Australia	• MNOs have reported that they are required to withhold tax in relation to Interest and Royalty payments under the Pay-As-You-Go withholding regime
Argentina	• A 0.5% tax is incurred by MNOs on revenues for regulatory tax purposes
Bangladesh	• Separate corporate tax rate for telecommunications sector, being 10% higher than the norm • Mobile phone operator companies pay 45% corporation tax • Publicly traded mobile operator companies pay a 35% corporation tax rate • MNOs pay 5.5% of their revenue as tax, called "Revenue share tax", which is used by the government to pay for the lease of Bangladesh Railways' fibre optic network • MNOs have reported a number of unpredictable tax authority policies • For example, MNOs have reported that bona fide business expenses are often disallowed on an arbitrary basis
Burkina Faso	• 2% of revenue paid as a universal service fee • 1% of revenue is paid to the government in regulatory fees • 0.5% of revenue is paid to the government's Research and Training Fund
Cambodia	• A 3% special tax applies on mobile operator revenue
Cameroon	• Contribution to special telecommunications fund set at 3% of turnover • Licence fee payable to the regulator stands at 1.5% of turnover • MNOs have reported that often variations in licence fees are received without a fore notice from the regulator
Chad	• 3% of annual revenue paid as regulatory fees
Congo B.	• 3% of domestic revenue paid as regulatory fees • 6% of international revenue paid as regulatory fees
Democratic Republic of Congo	• 2% of mobile operator revenue paid as an annual licence fee • 2.4% of mobile operator revenue paid as an annual spectrum frequency fee • 2% of mobile operator revenue paid as an annual numbering fee • Airtime purchased by the customer is first booked on the deferred revenue account and then accounted progressively in the revenue account when the consumption is made • This results in a distortion with other sectors for which ICA tax (equivalent to GST) is calculated on the revenue account, while for telecoms companies it is based on the deferred revenue account • The tax authorities claim ICA on airtime discounts from both the MNOs and indirectly also from the dealers
France	• On 5 March 2009, France introduced a tax of 0.9% on electronic communication

Country	Charges
	service provider revenues, including telecom, mobile and internet service revenues to fund public television following the cessation of advertising on those channels
Gabon	• 0.5% of mobile operator revenue is paid towards Frequency and Spectrum fees • 0.5% of mobile operator revenue is paid towards Numbering fees • 2% of mobile operator revenue is paid towards Universal/Service Fees • 2% of mobile operator revenue is paid towards Technology taxes • 5% of mobile operator revenue paid as an annual licence fee
Ghana	• As discussed above, MNOs by law are obliged to pay 2.5% of their revenues to the government as a Health Insurance tax which is used by the government to fund investment in and development of Ghana's health services • 2% of revenue is also paid in regulatory fees to the government
Greece	• The Greek government is reported to be planning to impose a special levy on the most profitable companies (which could include telecommunications companies) for the next three years, worth € 1.8bn • Licensing requires the involvement of 9 Public Authorities, relative to the rest of Europe where licensing is fulfilled by only one to three Public Authorities. The process in Greece is also lengthier, taking two years relative to an average of eight months in the EU
Hungary	• Hungary imposes a 4-6% tax on revenues of telecoms MNOs based on their revenue size • With regards to tax deductions following bad debt, a court decision is required to obtain actual tax deductions. In the telecom sector bad debt may be significant, and typically formed by many small unpaid bills. MNOs have complained that, to get a court decision on each unsettled bill, is not realistic • These rules, whilst not being telecommunication specific, are nevertheless not in line with international best practice and distortionary to telecom businesses with high volume of low payments
India	• India's levies on telecommunications services include a license fee of 6-10% of annual gross revenue (depending on the license provided), and a spectrum charge of 2-6% of annual revenue • India's regulator, TRAI, has recently recommended a uniform license fee of 6% across all license categories, but this suggested reform has yet to be ratified by the Indian government
Kenya	• 0.5% of mobile operator revenue paid as regulatory fees • 0.5% of mobile operator revenue paid as universal service fee to the government
Lesotho	• Universal access fee is set at 1% of Net Operating Income • This is expected to rise to 2%
New Zealand	• The New Zealand government imposes a Telecommunications Service Obligation (TSO) (formerly known as Kiwi Share) on all telecommunications companies operating in New Zealand • The levy is currently in the vicinity of NZD 70 million per annum
Nigeria	• MNOs pay 0.14% of revenues in Frequency/Spectrum fee tax • 0.15% of revenue is paid in Numbering fee tax by MNOs • 0.04% of revenue is paid as a Technology tax or R&D contribution • 2.9% of mobile operator revenue is paid as regulatory fees
Niger	• 2% of revenue paid as regulatory fees to the government • 4% of revenue paid as USO to the government

Country	Charges
Paraguay	• 1% regulatory tax imposed on MNOs
Spain	• The Spanish government levies a General Operators Tax on the telecoms industry at 1.5% of their gross turnover • A Spectrum Reservation tax also applies. This annual tax is paid for the reservation of exclusive use of any frequency of the spectrum by persons or entities • A Transfer Tax applies on public concessions of spectrum. This tax is paid once on each concession of the right to use new spectrum and is 7% of the 'real value' of such spectrum • For this purpose, 'real value' is considered as the aggregation of the spectrum fees that are expected to be paid during the whole life of the concession plus the initial payment offered • On 31 August 2009, Spain introduced a tax of 0.9% of gross retail revenues of telecom operators providing media services to finance RTVE, the public service broadcaster, following the removal of advertising from public service television
Tanzania	• Overseas providers of communications (e.g. roaming partners) with no presence or physical assets in Tanzania providing mobile communications services to Tanzanian customers (e.g. mobile phone operator) will now be subject to Tanzania withholding tax (to be deducted by his customer). The overseas provider will normally not be able to claim credit for such tax in his home jurisdiction • VAT: Each of the two sides of the Union (Mainland Tanzania and the Isles - Zanzibar) has its own VAT legislation (i.e. VAT is not a union tax) • The two legislations have not been properly aligned between themselves and with other legislations
Uganda	• 2.5% of mobile operator revenue paid as regulatory fees to the government
Zambia	• 1.5% of mobile operator revenue paid as regulatory fees to the government

Source: Deloitte analysis based on discussions with MNOs

List of Figures and Tables

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