Digital inclusion and mobile sector taxation in Jordan

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Executive Summary

Mobile services deliver significant benefits for Jordan

Since the launch of the first mobile telecommunication network in Jordan in 1995 the market has grown rapidly. Today 70% of the population in Jordan has at least one mobile subscription and over 2 million people have access to the mobile internet[1]. This increase in mobile connectivity, particularly mobile broadband, is bringing wide-ranging benefits to the Jordanian economy and society by boosting productivity, national competitiveness, and increased economic growth.

Mobile broadband has the potential to accelerate Jordan's economic and social development towards the government's Vision 2020 objectives:

- Mobile can enable many more Jordanians to benefit from lower transactions costs, frictionless exchange of information for business and social purposes, and enhanced access to education, healthcare and government services. These benefits can support the development of other sectors such as banking, retail, as well as energy and transportation.

- Mobile connectivity is generating new sources of economic activity in Jordan, both through the direct contribution of the sector and the indirect value added by the wider ICT ecosystem connected to mobile services. The mobile and ICT sectors in Jordan has the potential to be at the forefront of fostering sustainable economic development while allowing a more efficient utilisation of government resources thereby promoting greater economic inclusion and fiscal stability[2].

- Services such as mobile money have the potential to spur economic activity allowing more Jordanians to enter the financial markets and increasing efficiency of payments compared to standard financial services. Similarly, m-Government initiatives can contribute to administration efficiency at local and national government levels, improving ease of doing business and making investment in the Kingdom more attractive.

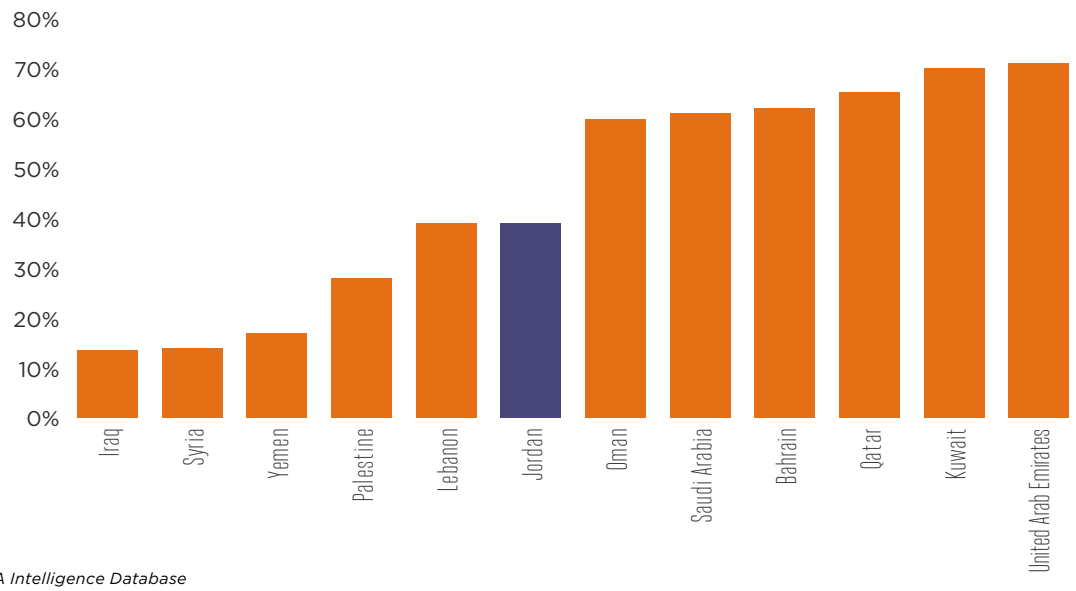
- Mobile is the most cost-effective way of extending access to the internet in Jordan, a key lever for achieving the government's Vision 2020 objectives of expanding the knowledge economy and developing digital capabilities across all sectors of the economy.

- Mobile has the potential to enhance social development and cohesion. For example, in Jordan, where millions of refugees have fled conflicts in neighbouring countries over the past decade, mobile offers a platform for displaced people to search for, and connect with, missing family members[3].

Thanks to the successful roll-out of 3G services by mobile operators in recent years, 39% of the Jordanian population accesses the internet over a mobile connection. However, Jordan lags behind regional leaders in the Gulf States, where mobile internet penetration rates are above 60%[4]. This suggests that there remains a large potential for the growth of mobile internet and in particular mobile broadband.

1. GSMA Intelligence Database.
2. See for example Qiang, C. Z. W., Rossotto, C.M., 2009, Economic Impacts of Broadband, in Information and Communications for Development 2009: Extending Reach and Increasing Impact, World Bank, Washington D.C., 35-50; GSMA/Deloitte, The Impact of Mobile Telephony on Economic Growth, 2012.
3. GSMA, Reconnecting Refugees through Mobile, 2014.
4. GSMA Intelligence Database.

Percentage of the population with access to mobile internet (2G and 3G) in Arab Middle East countries, 2014



Source: GSMA Intelligence Database

Figure 1

Higher taxation on mobile services in Jordan could negatively impact consumption and investment and the long term growth prospects of the country's ICT-enabled knowledge economy

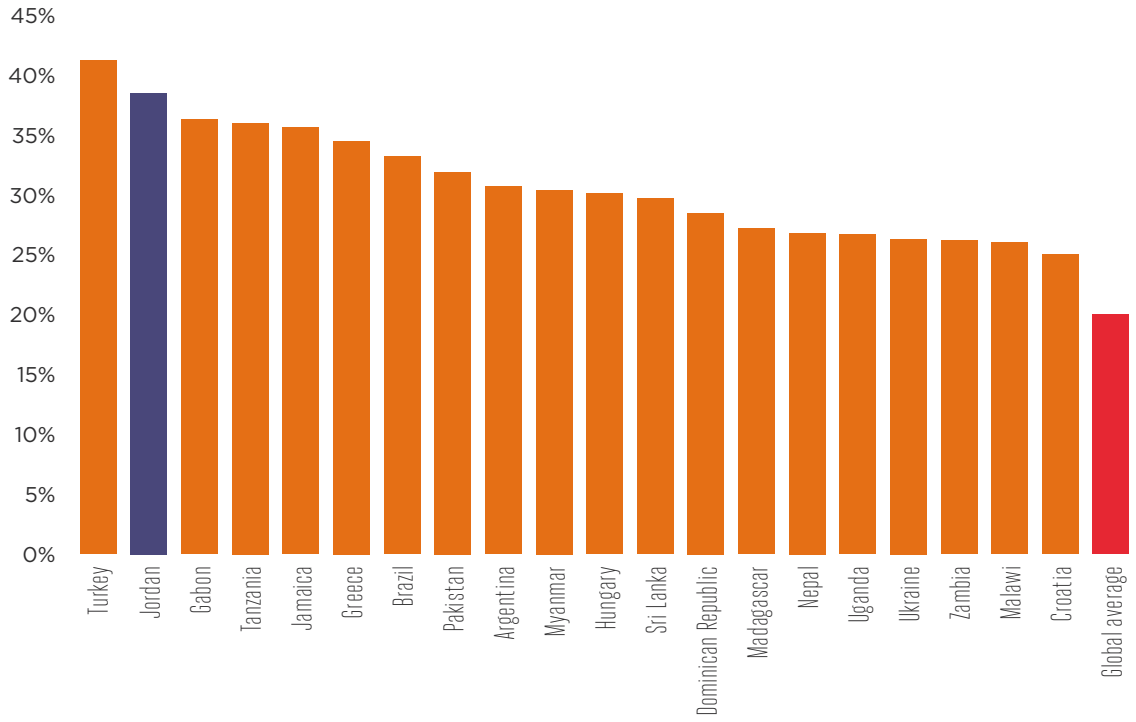
Recent global analysis undertaken by the GSMA and Deloitte on taxation applying specifically to mobile consumers and operators shows that Jordan has one of the highest levels of mobile specific taxation worldwide. This results from the imposition of a set of taxes and fees that are discriminatorily applied to the mobile sector:

- Mobile services, including calls, SMS and mobile broadband bundles, are subject to a specific tax of 24% (the Special Tax), in addition to the General Sales Tax (GST) of 16% applied to most goods and services.
- Mobile operators in Jordan pay a revenue share to the government equivalent to 10% of their operating revenues. This is in addition to a 24% corporation tax on profits. While other sectors in Jordan are subject to varying levels of corporation taxes, only the mobile sector is also subject to the 10% revenue share. **As a result, the mobile industry paid almost US$500 million in recurring tax and fees in 2013, equivalent to over 50% of mobile industry revenues in Jordan during the same period[5]. In Jordan, the proportion of the cost of owning and using a mobile phone that is accounted for by tax is the second highest worldwide[6]. The combination of the valued-added tax and Special Tax, contributes 43.8% to the final retail price of mobile usage in Jordan.** The Special Tax on mobile services contributes directly and significantly to the total cost of mobile ownership for Jordanian consumers and creates barriers to affordability.

5. Deloitte analysis based mobile operator and World Bank data.
6. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.

Today 70% of the population in Jordan has at least one mobile subscription and over 2 million people have access to the mobile internet.

Consumer taxation as a proportion of the total cost of mobile ownership, top 20 countries, 2014



Source: GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming. The figure includes the 20 highest ranked countries over a sample of 110 countries worldwide

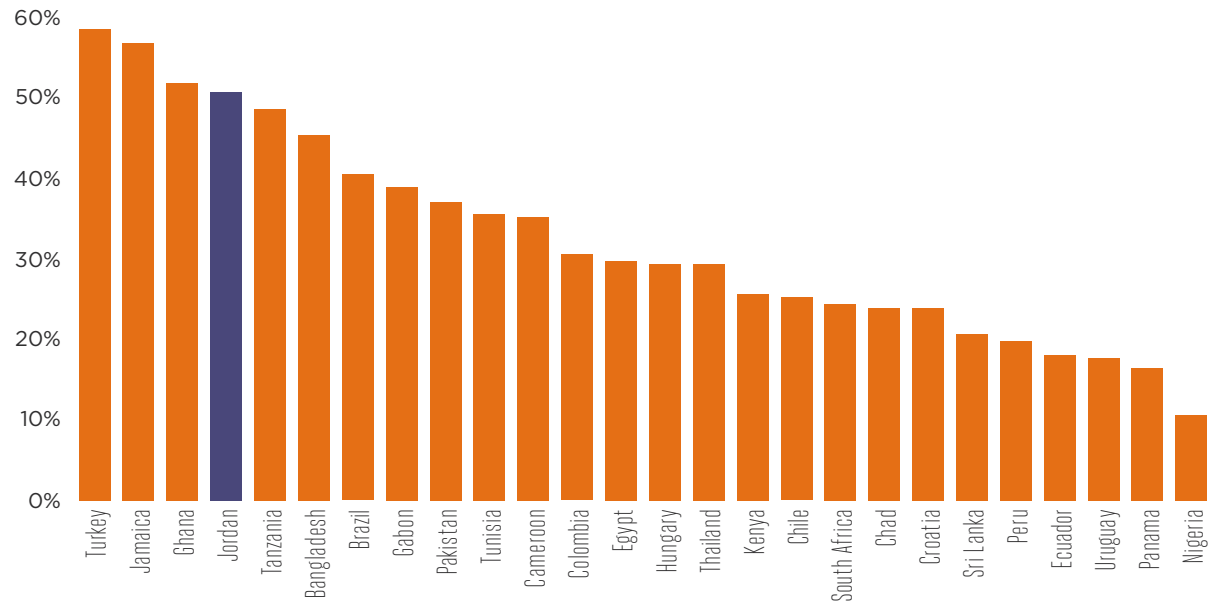
Figure 2

The Special Tax has been increasing rapidly in the last nine years: it was introduced in 2006 at 4%, then increased to 8% in March 2010 and to 12% in August 2010. In July 2013, it increased again from 12% to 24%[7].

7. Financial Times, 16th July 2013, "Jordan to double taxes on mobile phones" and Oxford Business Group, The report: Jordan, 2009.

In addition to a high level of taxes on mobile consumers, the 10% Revenue Share and the 24% corporation taxes contribute to the total payments made by Jordanian operators and consumers, which represent over 50% of market revenues. This is the fourth highest contribution among the 26 countries included in a recent study by GSMA and Deloitte[8]. Considering a selection of countries in the same region, the rate of Revenue Share fee is higher than in Bahrain, Kuwait and higher than the rate applied to non-incumbent mobile operators in Oman, Qatar, Saudi Arabia and the UAE. It is important to note that while these countries impose some degree of revenue share, they do not concurrently impose VAT or other special taxes on consumption of mobile services.

Recurring tax and fees payments as a proportion of market revenues, 2013



Source: GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming. The figure for Jordan has been updated with most recent available data

Figure 3

These tax and fee payments are levied in addition to non-recurring fees paid by mobile operators for telecoms services and spectrum usage rights. In 2014 only, the allocation and renewal of spectrum licences amounted to nearly US$450 million in Jordan, equivalent to approximately 50% of annual market revenues. This was preceded by auction payments of US$210 million in 2009 and 2012 for 3G licences and followed by a payment of US$300 million for 4G in 2015.

8. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.

Mobile-specific taxes are inefficient, create barriers to affordability and investment and may hold back the realisation of sustainable economic growth and digital inclusion.

The structure and level of taxes applied to mobile consumers and operators in Jordan has the potential to generate a number of economic and social inefficiencies:

- High consumer taxes may act as a disincentive to consumption of the good that attracts higher than normal tax: when the Special Tax on mobile services increased from 12% to 24% in July 2013, sales of mobile subscriptions and pre-paid cards dropped by around 15%[9] and mobile operators' revenues by 8%[10].
- Governments typically apply higher taxes to products such as alcohol and tobacco for which it is desirable to discourage consumption. Conversely, increased usage and take up of mobile services can bring wide spread benefits to society and the economy, which could be hindered by distortive taxation.
- Mobile specific taxation affects the cost of mobile ownership for consumers and potentially disincentivises digital inclusion and the benefits it provides to society. Taxes that target mobile services could potentially create a significant obstacle to mobile use by the poorer segments of the population, which could derive significant benefits from being connected. This is an important consideration given that in Jordan mobile is the primary way to access broadband for certain segments of the population.
- The 10% Revenue Share is imposed on mobile operators' revenues. Mobile operators cannot itemise such taxes in prices or receipts. The net effect of this is that mobile operators must either suffer a consistent reduction in their profitability or pass these taxes through to consumers in a non-transparent way. International comparisons of tax regimes suggest that such taxes and fees are atypical in other markets such as the United States or Europe. Such taxes reduce incentives to mobile operators to invest and encourage them to profit maximise over older networks.
- Frequent changes in taxation potentially increase market uncertainty and investment risk. A mobile operator purchasing a licence in 2009 based its valuation of the licence on a tax regime where mobile consumers paid a 4% mobile specific tax. Continuous increases to this tax, now at 24%, are likely to have affected market volumes and prices, with implications on investment returns.

Furthermore, the mobile-specific taxes that are levied in Jordan do not appear to fully align with many of the recognised principles of taxation outlined by organisations such as the International Monetary Fund (IMF). The table below highlights these principles and the potential impacts upon the Jordanian economy of mobile specific taxation.

9. TeleGeography, 24th July 2013, Tax hike takes its toll on sales in Jordan.
10. https://www.telegeography.com/products/commsupdate/articles/2013/11/06/trio-call-for-govt-to-undo-tax-hike-and-scrap-fourth-licence/

Alignment of taxes and regulatory fees on the mobile sector in Jordan with the principles of taxation

1. In general, taxation should be broad based

Sector-specific taxes lead to inefficiently low consumption and investment in the mobile sector.
- In Jordan, the 24% Special Tax on mobile services may discourage consumption of mobile compared to other goods and services that are subject to standard taxation.

2. Taxes should account for sector and product externalities

Tax policy should provide incentives to the development of industries that make a positive contribution to the wider economy.
- Mobile-specific taxes in Jordan, such as the Special Tax and the Revenue Share fee, fail to account for positive network effects and spillovers onto other sectors.

3. The tax system should be simple, understandable and enforceable

Uncertainty and lack of transparency over taxation systems and liabilities may deter investors and are also likely to increase enforcement costs for government.
- Taxes on the mobile sector have varied often in Jordan, with frequent increases in the Special Tax over recent years.

4. Incentives for competition and investment should be unaffected

Higher taxes on a given industry compared to other sectors reduce the incentives for investment in the industry, both domestically and internationally
- The mobile industry in Jordan has one of the highest proportion of taxes and fees to revenues worldwide and could reduce investment in infrastructure and quality of service improvements.

5. Taxes should not be regressive

Taxes on mobile lead to a disproportionate burden on poorer citizens, and risk excluding them from the benefits of digital and financial inclusion.
- High taxation on mobile usage in Jordan may prevent access to mobile for the poorest consumers.

Table 1

By transitioning to a tax system where mobile is treated equally to other goods, the Jordanian government can promote digital inclusion, economic growth and fiscal stability.

Interviews with the mobile sector demonstrated a recognition of its role in supporting Jordanian government revenues and contribution to public services. However, while higher than standard taxation on the mobile sector may potentially deliver short-term benefits to the government, it would need to be balanced with the impacts on the cost of long-run socio-economic development and higher long-term government revenues.

This is particularly relevant for Jordan given the high level of mobile consumption taxes. Economic theory suggests that there exists an optimal level of taxation which will maximise government revenues, so that if at any point taxation is excessive, it will be beneficial for government policymakers to reduce the burden of taxation in order to widen the tax base. This relationship, explained by the "Laffer Curve", is shown in the figure below.

The Laffer curve

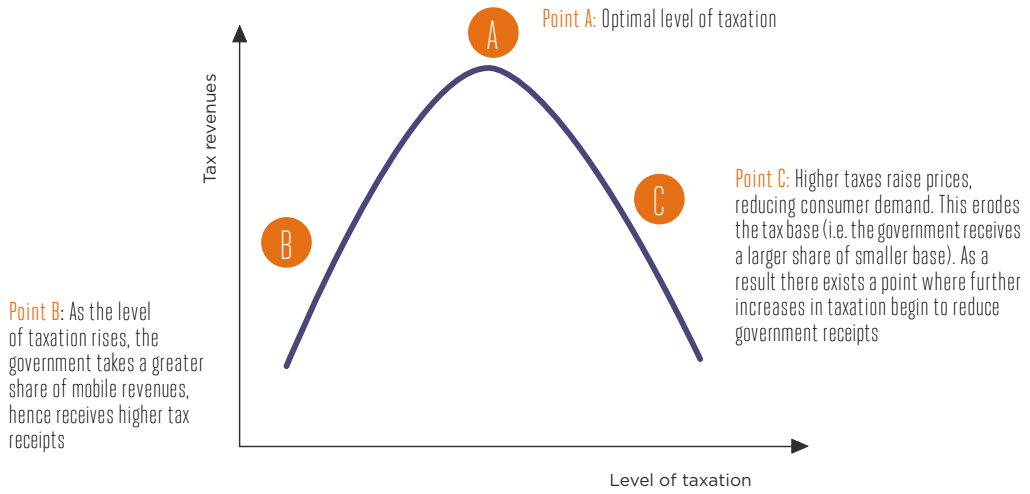


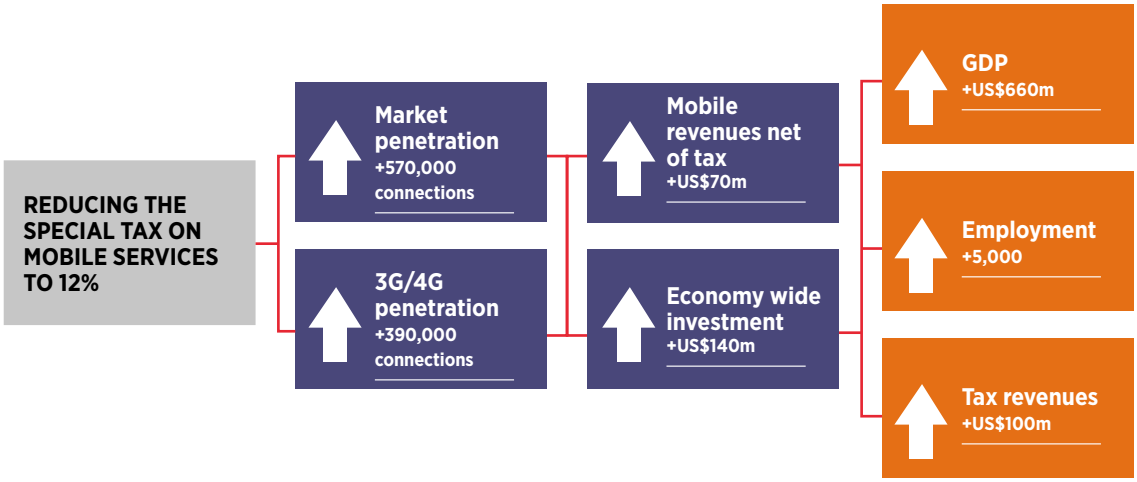
Figure 4

By transitioning to a taxation structure where the mobile industry is treated equally to other sectors of the economy, the Jordanian government can not only increase digital and financial inclusion and economic growth, but also has the potential to generate higher tax revenues through more efficient and broader-based taxation. Reforming mobile taxation has the potential to further increase and enable the investment required to expand mobile broadband network infrastructure, next generation technologies, and digital services.

A model of the Jordanian mobile sector and its macroeconomic impacts was used to estimate the impacts of changes to taxation on mobile penetration, economic growth and tax revenues. The quantitative impacts of a series of potential reforms are estimated in this report.

Reducing the Special Tax on mobile services to 12% has the potential to increase mobile connections by 570,000 in 2020. Over the period 2015-2020, the cumulative impact of the tax change could amount to 3 million additional connections. The spill over effects of such growth could increase GDP by US$660 million in 2020 and over 2.6 billion cumulatively over the period, while the increase employment could be up to 5,000 jobs in 2020 and 17,000 cumulatively. As a result, the government of Jordan could achieve revenue neutrality within three years and gain up to US$100 million in additional revenues in 2020.

Potential impact of reducing the Special Tax on mobile services, 2020

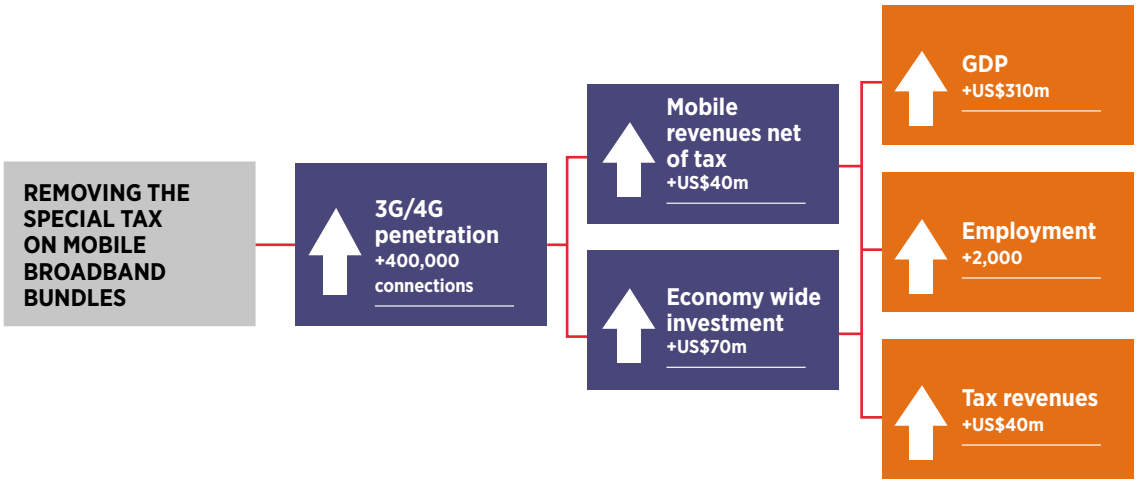


Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 5

Removing the Special Tax on mobile broadband bundles[11] could provide further incentives for the take-up of mobile internet and potentially enable an additional 400,000 broadband connections in Jordan in 2020. Over the period 2015-2020, mobile broadband connections could increase by 2 million. This increase in mobile penetration could add 2,000 new jobs and contribute an additional US$310 million to GDP in 2020. This is equivalent to a cumulative increase over the period of over 1.2 billion in GDP and 7,000 in additional jobs. As a result, the Jordanian government could achieve revenue neutrality within three years, and enjoy US$40 million in additional revenues in 2020.

Potential impact of removing the Special Tax on mobile broadband bundles, 2020



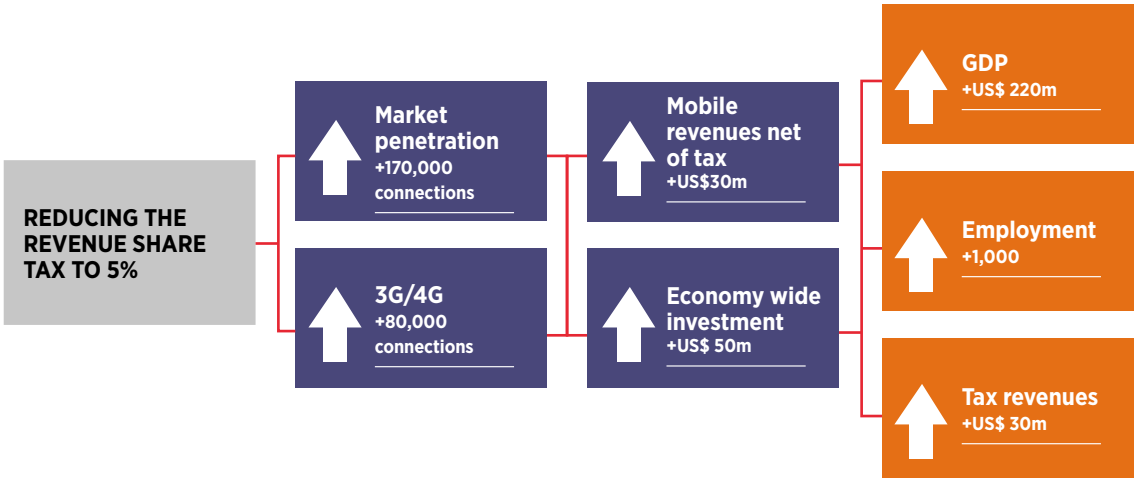
Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 6

11. Stand-alone (i.e. unbundled) mobile broadband services are subject only to 8% sales tax, whereas when mobile broadband services are included in a bundle (i.e. including voice and SMS), they are subject to the 24% Special Tax.

Reducing the Revenue Share fee to 5% has the potential to lead to an additional 170,000 connections in 2020 and US$50 million in additional investment. Over the period 2015-2020, mobile connections could increase by almost 900,000. The impacts would affect the whole Jordanian economy: in 2020, annual GDP could increase by up to US$220 million, with over 1,000 new jobs created. This is equivalent to a cumulative increase over the period of approximately 870 million in GDP and 3,000 in additional jobs. As a result, the government could achieve revenue neutrality within three years, and additional tax revenues of about US$30 million in 2020.

Potential impact of reducing the Revenue Share fee to 5%, 2020



Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 7

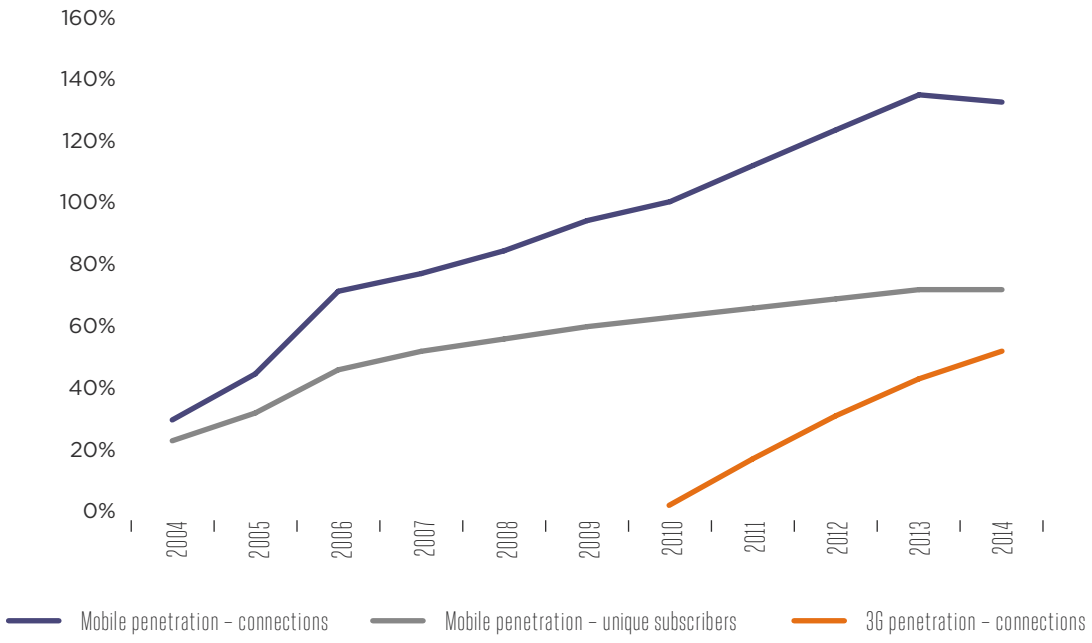
In conjunction with the tax reform alternatives modelled above, **ensuring appropriate and predictable pricing of spectrum has the potential to support government revenues while incentivising the development of new technologies and encourage mobile operators to invest in new spectrum and network roll-out.** Regulatory fees represent a significant part of mobile operators' payments and are a key determinant of investment in the sector. Therefore, inefficient pricing could reduce incentives to invest and create distortions across industries. Moreover, fees that are subject to frequent changes increase uncertainty and discourage investment both domestically and internationally. Appropriate pricing of spectrum appears a key issue if Jordan is to embrace further uptake of mobile broadband services, while covering the cost of spectrum management, ensuring efficient use of spectrum and providing a source of revenue to the government.

1 The mobile sector in Jordan

1.1 Mobile technology investment, innovation and evolution is enabling digital inclusion in Jordan

Since the launch of the first mobile telecommunication network in Jordan in 1995 the market has grown rapidly, especially after the award of the third licence to Umniah in 2005 and the subsequent increase in competition[12]. The market is now led by three mobile network operators, Orange, Zain and Umniah, which serve a total of 11 million subscribers with over 5.3 million unique subscribers.[13] 3G services have also developed quickly since the award of the first 3G licence in 2009 and now all three mobile operators have launched 3G services, while Zain was awarded a 4G license in April 2014[14]. As a result, total mobile penetration in Jordan is 132% and over 70% of the Jordanian population has at least one mobile connection. Similarly, 3G connection penetration stands at 51% and over 2 million people have access to mobile internet[15].

Mobile penetration and 3G penetration in Jordan



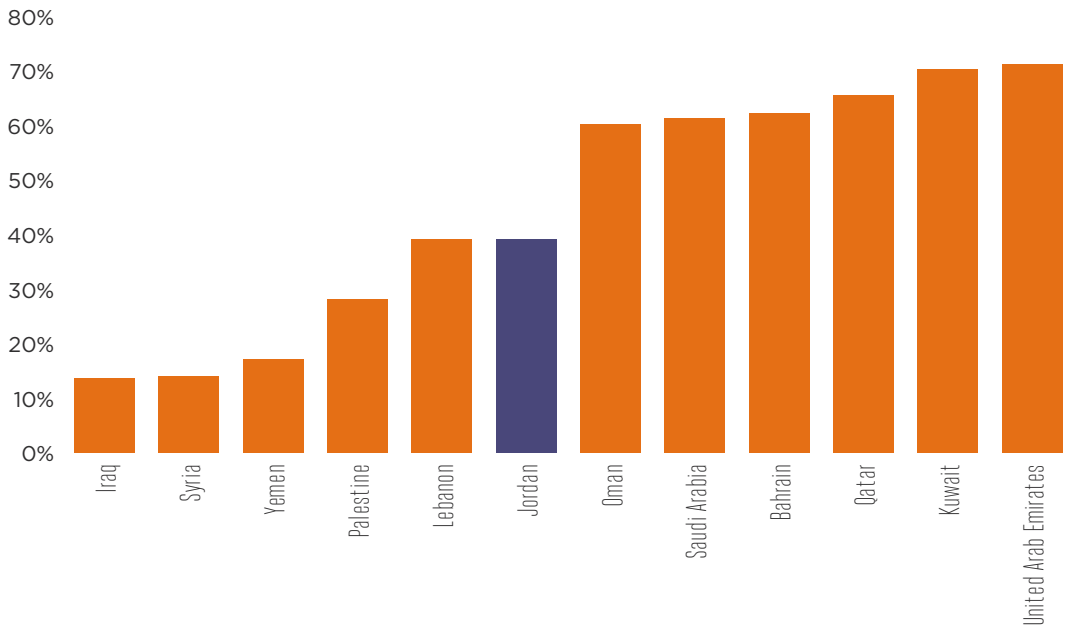
Source: GSMA Intelligence Database

Figure 8

12. BuddeCom, Jordan Telecoms: IP networks, digital media and forecasts, 2013.
13. The number of unique subscribers in Jordan is estimated by GSMA Intelligence in order to reflect the fact that many subscribers have multiple SIM cards.
14. BuddeCom, Jordan Telecoms: IP networks, digital media and forecasts, 2013.
15. GSMA Intelligence Database. 3G penetration is expressed in terms of total connections, while people with access to the internet are measured as unique subscribers. These two measures differ in two ways: a unique subscribers can have multiple connections and mobile internet subscribers include those accessing the internet through 2G connections.

However, despite a high level of mobile penetration and rapid growth in the 3G market, Jordan continues to lag behind other countries in the region in terms of mobile internet penetration. In Jordan, 39% of the population has access to internet services through 2G or 3G, behind regional leaders in the Gulf States, where penetration rates are above 60%[16].

Percentage of the population with access to mobile internet (2G and 3G) in Arab Middle East countries, 2014



Source: GSMA Intelligence Database

Figure 9

1.2 The expansion of mobile services – including mobile broadband – are key to achieving the government's ICT and development objectives

The development of mobile services has brought an extensive range of benefits to both consumers and businesses in Jordan. Mobile has the potential to make an even greater contribution with the growth of 3G and 4G mobile broadband and help Jordan develop the 'information society', as outlined in Jordan Vision 2020[17]. Specifically, mobile services provide widespread benefits across a country's economy and society by promoting digital inclusion and supporting economic and social development.

16. GSMA Intelligence Database.
17. Jordan Vision 2020 – Phase 2, 2006.

1. Mobile broadband connectivity provides the foundation for expansion of a knowledge-based economy

Digital inclusion means that the benefits of Information and Communication Technology (ICT) should be available to all, regardless of location or socioeconomic status. Mobile broadband connectivity provides the most cost-effective way of achieving digital inclusion and, by facilitating the exchange of ideas and information, dramatically lowering transaction costs for consumers, businesses, investors, and government.

The World Bank[18] has stated that the movement towards a knowledge-based economy should be the aim of all governments, as knowledge becomes increasingly crucial to preserving national competitiveness. It identifies four pillars of knowledge-based economies, one of which is information infrastructure, with technology such as mobile phones required to facilitate effective communication and the dissemination and processing of information.

2. Mobile technology enhances productivity, innovation and social development

By enabling businesses and government to deliver services more efficiently and at a lower cost, mobile connectivity has had a positive impact on productivity and economic activity across the Jordanian economy. Mobile services can reduce transaction costs, making it less costly for Jordanians to communicate and conduct everyday business operations, supporting the expansion of businesses and enterprises. Through wider effects on the economy, this helps to increase living standards in Jordan and improve Jordan's international competitiveness.

Mobile services also create opportunities for investment, innovation and employment in the mobile sector and the broader ICT ecosystem, which INTAJ and the Ministry of ICT have estimated to account for over 100,000 direct and indirect jobs[19]. Mobile can also enable more effective delivery of public services and support social development. In particular, mobile and broadband communication offers a cost effective means of bringing healthcare and education services to remote and under-served communities.

Many initiatives have been launched in Jordan and around the world that harness the potential of mobile to support social development, innovation and productivity:

- **Supporting ICT start-up businesses in Jordan.** Recognising the important role of ICT in promoting innovation and growth, the government of Jordan supports initiatives to provide funds to digital entrepreneurs. For example, Oasis500 aims at accelerating the development of entrepreneurial ideas in ICT, mobile, and digital media. It gives businesses at the start-up stage the chance to participate in a training programme and be selected for several stages of funding. Winning entrepreneurs can then apply for further funding through a network of angel investors that Oasis500 operates in the MENA region[20].

- **Extending financial inclusion through mobile.** Through mobile money (m-Money), mobile access contributes to greater financial inclusion, enabling consumers and businesses to manage their savings, insure themselves against uncertainty and reduce the cost of business transactions. In Jordan, the government is supporting the development of m-Money services through the Jordanian Mobile Payments project (JoMoPay) and a new 'e-transactions' law allows mobile phone subscribers to open a mobile wallet, either directly with the mobile operator or with local banks and other service providers, by which users will be able to make small purchases and withdrawals from ATMs. The Central Bank of Jordan plans to expand the role of mobile payments to include benefits payments (including for example fuel subsidies which are currently paid in cash) and international transfers[21].

18. World Bank, The four pillars of a knowledge-based economy, 2009.
19. INTAJ and MoICT ICT & ITES Industry Statistics 2013
20. http://www.kafd.jo/node/70
21. GSMA, The Mobile Economy Arab States, 2014.

- **Reconnecting refugees through mobile.** Jordan receives thousands of refugees fleeing the conflict in Syria each year, who have now reached 20 percent of the population[22]. Together with the government's efforts to achieve adequate levels of humanitarian assistance, the mobile industry has the potential to contribute to reconnecting separated families across borders and conflict zones and measurably improve the lives of thousands of families by leveraging their scale and access to millions of subscribers. Refugees United has partnered with mobile operators in Jordan and other countries to launch a global family reconnection platform for displaced people looking for missing family members registered in its database. Users can register themselves and access a centralised database via simple, low-end mobile phones using SMS, as well as online connectivity[23].

3. Mobile services promote long-run economic growth and fiscal stability

The mobile sector also makes an important contribution to the revenues of the Jordanian government. This includes the direct contribution made by mobile operators, which is estimated at 6% of Jordanian's total tax revenues[24], and also the tax revenues generated by the wider ecosystem of industries supported by mobile services, which in turn supports fiscal stability and long-run economic growth.

Moreover, a number of studies have already recognised the economic growth potential of mobile, in particular:

- Studies by the GSMA and the Word Bank have estimated that a 1% increase in mobile penetration could lead to an increase in the GDP growth rate of 0.28%, while a 1% increase in internet user penetration in high-income countries can lead to an increase of up to 0.077% in the GDP growth rate[25].
- The World Bank has found that in developing economies, such as Jordan, every 10% increase in broadband subscriber penetration[26] accelerates economic growth by 1.38%[27].
- Other research suggests that for every new job created in the mobile sector, 11 are generated in the wider economy[28].

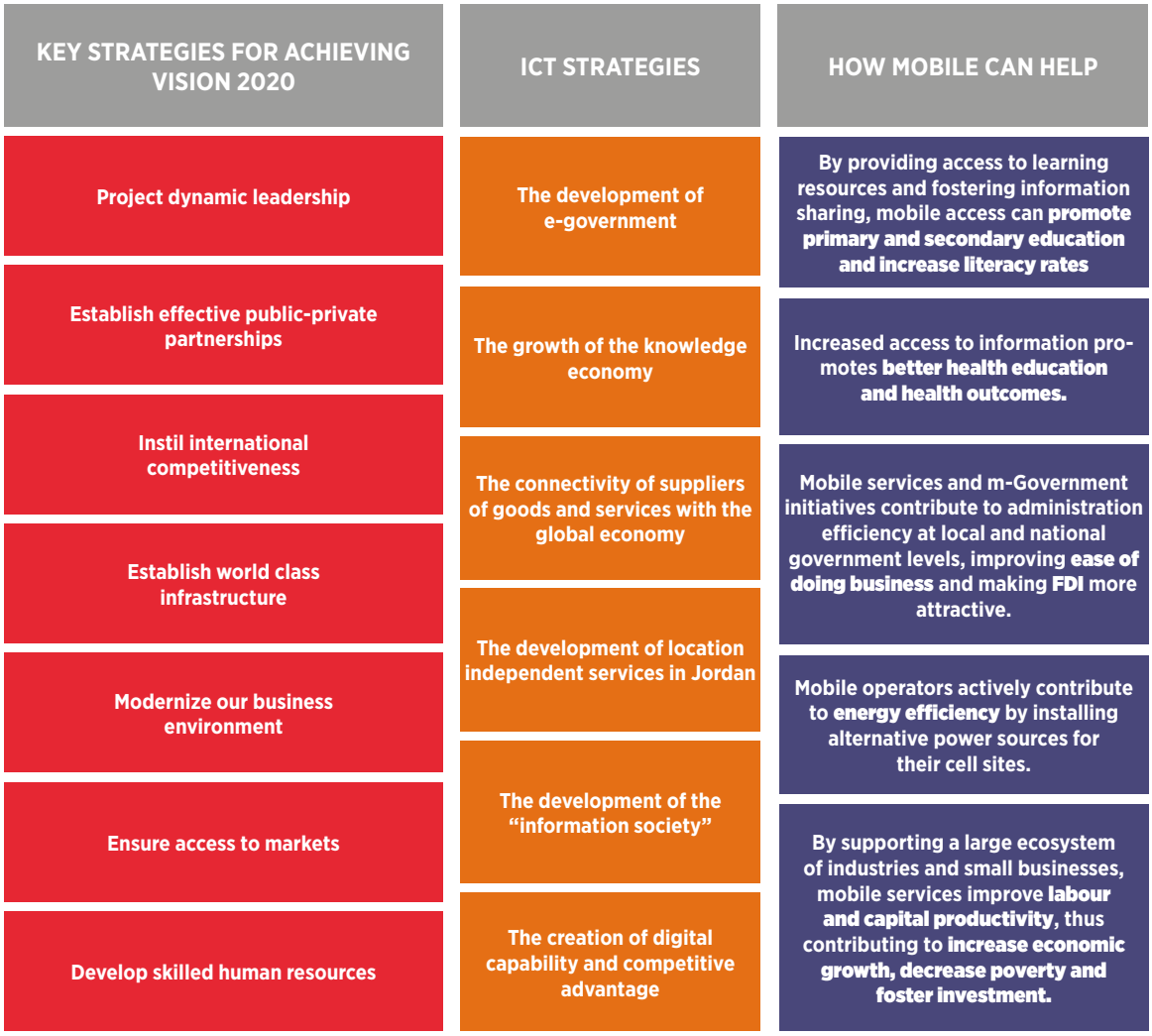
4. Mobile services support Jordan's development objectives

Through these positive impacts, the mobile industry can support many of the government's objectives outlined in Jordan Vision 2020. Jordan Vision 2020 sets out the government's 20 year plan to achieve comprehensive economic development and stability. Revised in 2006, the document estimated an average real GDP per capita growth rate of at 3.5% every year in order to sustain the desired level of economic growth[29].

The Vision identifies a number of key strategies to further Jordan's competitiveness, increase access to education and healthcare, incentivise investment in R&D and infrastructure, and decrease poverty rates. Among these, the Vision focuses on the development of the ICT sector, including the growth of the knowledge economy and of digital capabilities throughout society. These areas have also been recognised as priorities for the next Jordan Vision 2025, which be launched in the upcoming months[30].

22. http://kingabdullah.jo/index.php/en_US/speeches/view/id/541/videoDisplay/0.html
23. GSMA, Reconnecting Refugees through Mobile, 2014.
24. Deloitte analysis based mobile operator and World Bank data.
25. This is based on a study of 40 economies over the period 1996-2011; for full details of the methodology, see http://www.gsma.com/publicpolicy/wp-content/uploads/2012/11/gsma-deloitte-impact-mobile-telephony-economic-growth.pdf; Qiang, C. Z. W., Rossotto, C.M., 2009. Economic Impacts of Broadband, in Information and Communications for Development 2009: Extending Reach and Increasing Impact, World Bank, Washington D.C., 35-50.
26. The distinction between users and subscribers of telecommunications services should be noted. Users refer to individuals who do not necessarily own or pay for telecommunications services, but who have access to such services through work, family etc. Subscribers, on the other hand, are individuals who pay for subscriptions to such services, to which a number of individuals may have access. Based on ITU, 2014. Manual for measuring ICT Access and Use by Households and Individuals.
27. Qiang, C. Z. W., Rossotto, C.M., 2009.
28. This figure was based on a number of studies conducted in developing and developed countries; see, for example, Moretti, 2010, O2 for ONS, 2002, Ovum, 2010; Zain, Ericsson, 2009,Kaliba et al, 2006.
29. Jordan Vision 2020 – Phase 2, 2006.
30. http://kingabdullah.jo/index.php/en_US/speeches/view/id/541/videoDisplay/0.html

The role of mobile in Jordan Vision 2020



Source: Jordan Vision 2020 and Deloitte

Figure 10

Jordan Vision 2020 identified foreign direct investment (FDI) as a key strategic objective to supplement domestic sources of investment and estimated that Jordan would require an average of US$3.3 billion investment every year for 20 years to meet its growth target. Against this backdrop, in 2015, the ICT sector was estimated to provide US$200 million in FDI[31].

31. Jordan Vision 2020 – Phase 2, 2006.

1.3 This report

Although Jordan presents a mature 2G market, over 2 million Jordanians remain without access to mobile internet and more advanced technologies. This suggests that there is considerable potential for growth, in particular in the market for mobile broadband.

In order for Jordan to realise the full benefits of mobile services and to promote sustainable and long-term economic growth, further steps can be taken to support digital inclusion and extend access to mobile broadband to the remainder of the population.

Affordability of services for all consumers is a key issue that affects access to mobile services, while declining Average Revenue per User (ARPU) may discourage investment in new technologies. Both issues risk being exacerbated by high levels of taxation on the mobile sector.

This report, which is based on an economic model of the Jordanian mobile sector and economy, suggests a number of options for the government to transition to a tax structure where mobile is taxed equally to other goods, in a way that promotes economic growth and protects the government's tax revenue position in the medium term.

- Section 2 describes the taxes levied on the mobile sector in Jordan, and the implications of these taxes for the mobile sector and the wider economy. It also compares the taxes levied in Jordan with international benchmarks and with best practice on taxation principles as recommended by leading international organisations.
- Section 3 considers effective recommendations for rebalancing taxes on the mobile sector. These policies can support the Jordanian government's goal of digital and financial inclusion, while increasing economic growth and productivity.
- Section 4 concludes by demonstrating how the recommendations presented in section 3 can help the government achieve its ICT objectives while maintaining revenue neutrality in the medium term.
- The Appendix describes the economic model of the Jordanian mobile sector and economy that has been used in the analysis to estimate the impacts of rebalancing mobile sector taxes.

2 Taxation on the mobile sector in Jordan

Similarly to the mobile sector internationally, the mobile sector in Jordan is subject to a set of taxes levied both on mobile operators and consumers. The extent to which these charges ultimately fall on the mobile operator or consumer depends on the type of tax and market conditions. Some taxes and fees may be absorbed by mobile operators in the form of lower profits thus impacting investment, whilst others may be passed through in terms of higher prices for consumers, or a combination of the two.

This section reviews the taxes applied to mobile consumers and operators in Jordan, focusing on those that are mobile-specific, i.e. those which do not apply to other goods in the economy. It also compares the mobile taxation system with similar countries and with other Jordanian industries.

2.1 Taxes on mobile consumers in Jordan

Consumer taxes in Jordan apply to devices, to usage of services, and to SIM cards. In addition to standard taxation, some mobile services are subject to a Special Tax applied ad valorem on the value of the service including GST.

Consumer taxes on mobile devices and services in Jordan

PAYMENT BASE	TYPE	RATE
Devices	General Sales Tax	16%
	Custom duty	Exempt
Calls, SMS and mobile broadband (if part of a bundle)	General Sales Tax	16%
	★ Special Tax	24%
M-Money	General Sales Tax	16%
Mobile broadband only services	General Sales Tax	8%

★ Mobile specific

Source: International Bureau of Fiscal Documentation (IBFD) and mobile operator data

Table 2

The combination of the valued-added tax and Special Tax, contributes 43.8% to the final retail price of mobile usage in Jordan.

2.1.1 The General Service Tax on mobile services

All mobile services, including calls, SMS, mobile broadband, m-Money and devices are subject to the standard GST rate of 16%.

A lower GST rate of 8% applies to mobile broadband when it is sold stand-alone, i.e. not as part of a bundle with other services such as calls. This has the objective of incentivising mobile broadband take-up; however it is likely to have limited effect given bundles are predominant in Jordan[32].

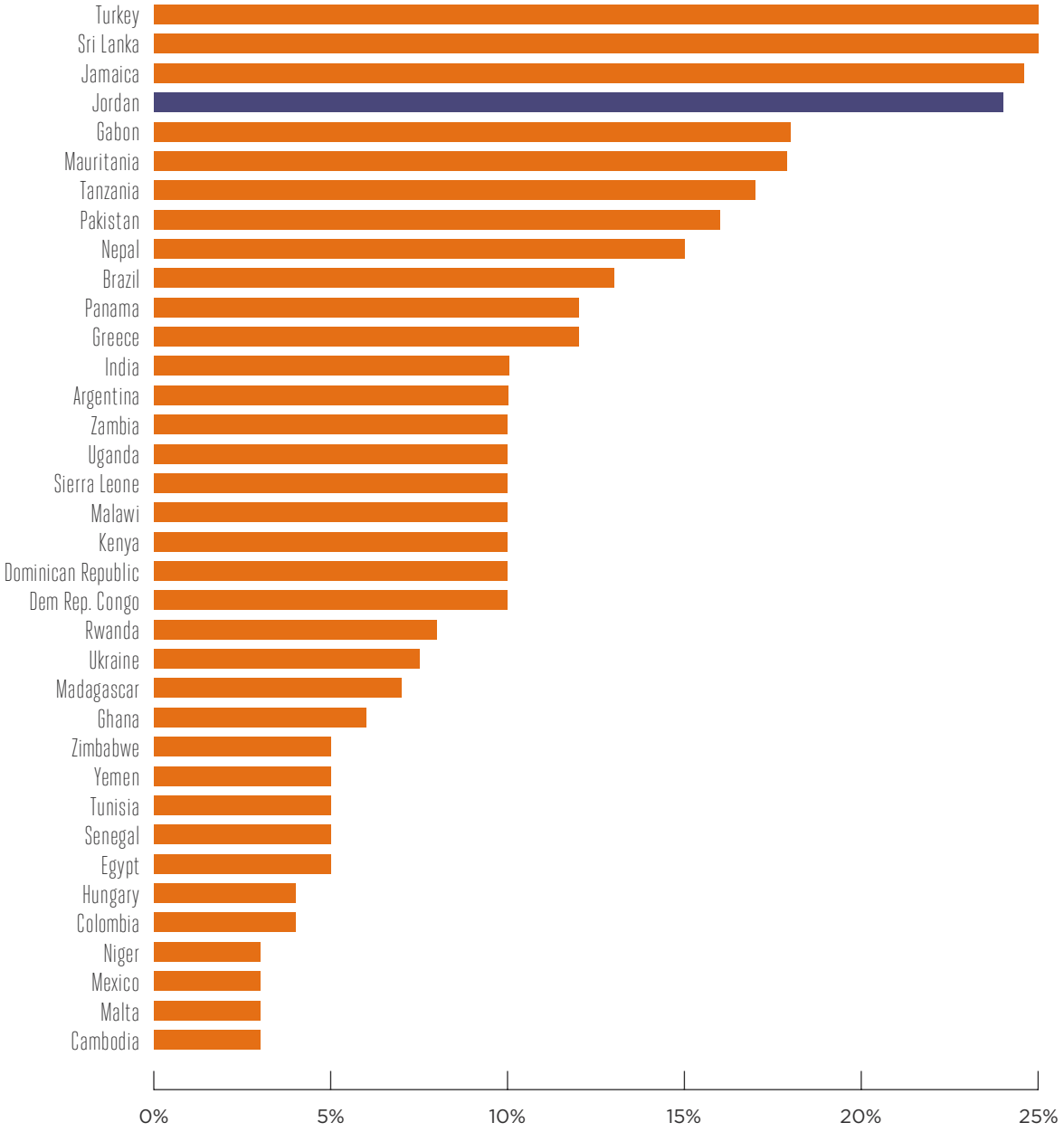
2.1.2 The Special Tax on mobile services

A Special Tax applies to mobile calls, SMS and mobile broadband (when part of a bundle). This tax has been gradually increased in recent years and is now levied at a rate of 24%[33]. It applies to the value of the services sold inclusive of GST. In 2014, cell phones, smart phones, tablets and other mobile were exempted from the Special Tax and are instead subject to the 16% GST, which did not apply previously[34].

Due to the Special Tax, Jordan was the fourth country with the highest rate of taxes on mobile usage in a recent survey of mobile taxes worldwide[35].

32. Based on mobile operator data.
33. Tax Administration Jordan.
34. http://www.kpmg.com/global/en/issuesandinsights/articlespublications/mesa-tax-update/pages/jordan-2014-tax-rates.aspx
35. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.

Countries that impose special taxes on mobile usage and corresponding rates, 2014



Source: GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming

Figure 11

2.1.3 Mobile taxation and the impact on mobile affordability in Jordan

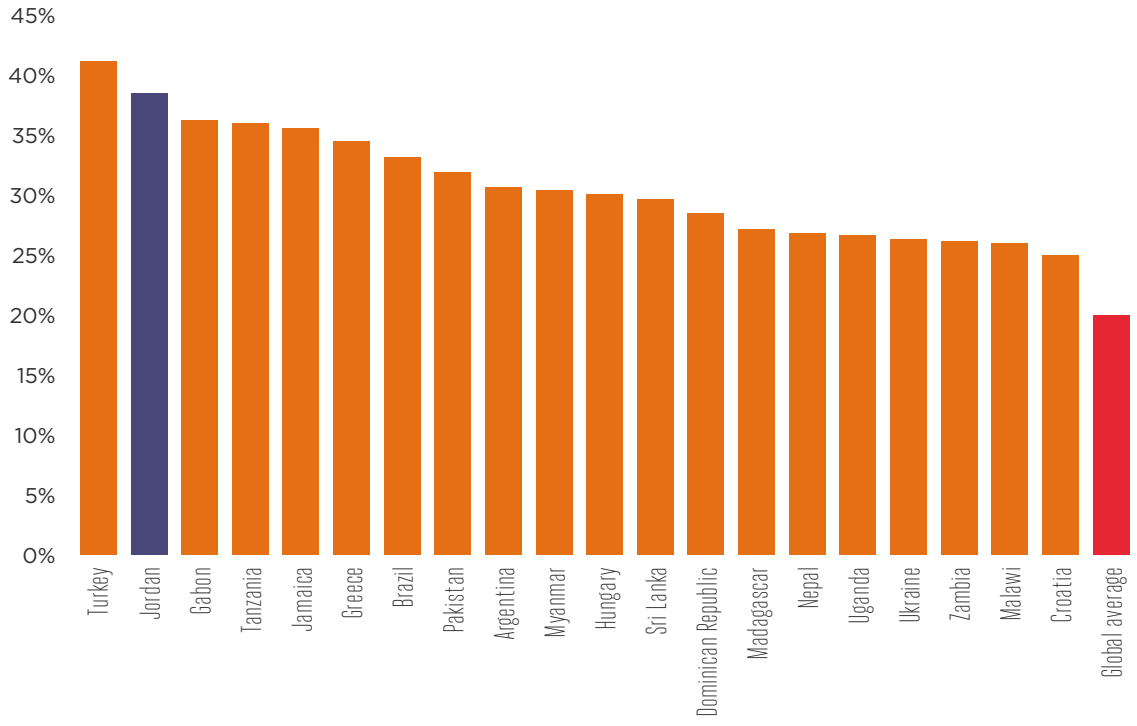
These consumer taxes could potentially have distortive effects on the consumption of mobile services:

- They can potentially reduce demand for mobile services, slowing the growth of the sector, and are particularly distortionary when they are mobile-specific such as the Special Tax, i.e. when they are applied only on the mobile sector, in contrast with broad-based taxes.

- By contributing to a rise in the final price of mobile services, they have the potential to create affordability barriers that may constrain usage and take-up of new generation services such as mobile broadband.

Mobile-specific taxation in Jordan accounts for a significant proportion of the total cost of purchasing and using a mobile phone for the average consumer. These taxes, together with the GST, were found to account for 38.5% of the Total Cost of Mobile Ownership (TCMO) in Jordan in 2014, representing the second value highest across 110 countries worldwide[36].

Consumer taxation as a proportion of the total cost of mobile ownership, top 20 countries, 2014



Source: GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming. The figure includes the 20 highest ranked countries over a sample of 110 countries worldwide

Figure 12

36. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.

2.2 Taxes and fees levied on mobile operators in Jordan

Mobile operators in Jordan are subject to general taxes such as the corporation tax as well as mobile-specific taxes and fees. Moreover, mobile operators may subsidise part of the taxes that are applied to consumers in order to improve affordability and expand market demand. The mobile-specific taxes and fees levied on mobile operators include revenue taxes, various regulatory fees, both annual and non-recurring.

Taxes and fees levied on mobile operators in Jordan

PAYMENT BASE	TYPE	RATE
Imported network equipment, SIM cards and vouchers	General Sales Tax	16% Network equipment exempt
	Custom duty	Up to 30% 3G core equipment exempt for an initial 4 year period, then standard duties apply
	Customs fee	1% capped to a maximum of 2,000 JDs per shipment
Profits	☆ Corporation Tax	24%
Revenues	★ Revenue share fee	10% of revenues
Annual regulatory fees	★ Annual licence fee	Up to 1% of revenues
	★ Annual spectrum fee	Fixed amount based on area, power, bandwidth and frequency
Non-recurring regulatory fees	★ One-off licence fee	Varies
	★ One-off spectrum fee	Varies

★ Mobile specific ★ Telecoms-sector specific ☆ Higher rate for mobile

Source: IBFD and mobile operator data

Figure 13

2.2.1 General taxation on mobile operators

A corporation tax is applied on incomes derived by Jordanian resident companies. The standard rate of corporation tax in Jordan is 20%, while mobile operators and financial companies are subject to a 24% rate and banks to a 30% rate[37].

Mobile operators also pay customs duties on imported equipment, SIM cards and vouchers. 3G network equipment has been exempt from customs duty for a limited period of time (4 years), although a 1% customs fee is levied on exempted items, up to a maximum of JOD 2,000 (US$3,000) per invoice[38]. The standard rate of custom duty on 2G and other equipment at standard rates up to 30%.

2.2.2 Mobile-specific fees on mobile operators

Mobile operators pay a number of different regulatory fees to the Telecommunications Regulatory Commission (TRC), which include a Revenue Share fee, recurring and non-recurring spectrum and licence fees.

THE REVENUE SHARE FEE

Mobile operators pay to the TRC an annual contribution of 10% of their operating revenues. This is adjusted for interconnection revenues to avoid double taxation (that is, revenues from interconnection less interconnection costs are subject to the fee). It is estimated that mobile operators in Jordan paid US$77 million in Revenue Share fee in 2013[39].

The rate of Revenue Share fee is higher than in Bahrain, Kuwait and higher than the rate applied to non-incumbent mobile operators in Oman, Qatar, Saudi Arabia and the UAE. It is important to note that these countries have no VAT or other special taxes on consumption of mobile services.

Telecom-specific revenue and profit taxes in Gulf countries

Country	Telecom specific royalty taxes
Bahrain	Annual licence fee of 1% of gross annual turnover attributable to licensed activity
Kuwait	No telecom specific taxes
Oman	Mobile: 12.5% (Oman Mobile),7% (Nawras), 7% (Samatel) of revenues and 1% of licensee gross revenue as a contribution to TRA for Samatel only
Qatar	Royalty 12.5% of domestic earnings before tax (EBT) Licence fees: 1% of revenues on all telecom operations
Saudi Arabia	15% fee of net operating revenues for mobile services Annual licence fee of 1% of total revenue
UAE	Royalty on profit: 35% for Etisalat, 20% for du Royalty on revenues: 15% for Etisalat, 7.5% for du

Source: Deloitte analysis

Table 3

37. IBFD.
38. Based on IBFD and discussions with mobile operators.
39. Deloitte analysis based on mobile operator data.

RECURRING SPECTRUM AND LICENCE FEES

Mobile operators are also subject to recurring spectrum and licence fees, which represent a significant part of their payments. These are intended to cover the costs of spectrum management and ensure the efficient use of spectrum[40].

- A fixed price is paid annually in spectrum fees. This is based on the amount and type of spectrum holdings and adjusted by coverage area, transmitted power, bandwidth and frequency. In 2013, mobile operators in Jordan are estimated to have paid over US$33 million in annual spectrum fees, nearly 7% of all taxes and fees paid[41].

- The annual license fees are based on a percentage of the operating revenues. This percentage varies and is determined by the TRC, but does not exceed 1% of such revenues[42]. The annual fee is intended to recover the costs of the TRC in regulating the telecoms sector. Annual licence payments in Jordan amounted to approximately US$8 million in 2013[43].

NON-RECURRING SPECTRUM AND LICENCE FEES

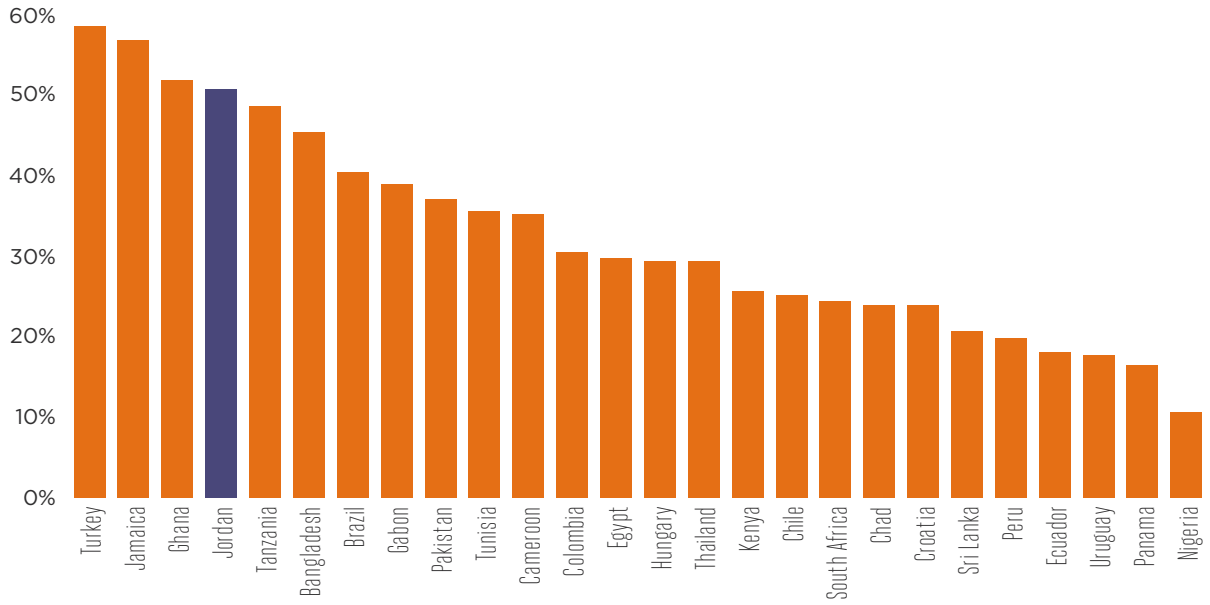
In addition to annual fees, mobile operators pay non-recurring fees in order to be licenced to provide telecoms services and to acquire spectrum. In 2014, the allocation and renewal of spectrum licences generated approximately US$450 million in Jordan[44]. Mobile operators paid US$71 million each for 3G licences[45] – Orange in 2009, Zain in 2011 and Umniah in 2012. 4G licenses were awarded to Zain and Orange, in 2014 and 2015 respectively, for a cumulative amount of over US$300 million[46].

40. ITU, ICT Regulation Toolkit, http://www.ictregulationtoolkit.org/5.5
41. Deloitte analysis based on mobile operator data.
42. TRC and discussions with mobile operators.
43. Deloitte analysis based on mobile operator data.
44. GSMA, The Mobile Economy Arab states, 2014.
45. Equivalent to circa JOD 50 million. Figure based on mobile operator data and BuddeCom.
46. Deloitte analysis based on mobile operator data.

2.2.3 Total recurring mobile tax and fee payments in Jordan

As a result of these taxes and fees, the total recurring payments paid by Jordanian mobile operators and consumers represent over 50% of market revenues. This is the fourth highest contribution among the 26 countries included in a recent study by GSMA and Deloitte[47].

Recurring tax and fees payments as a proportion of market revenues, 2013



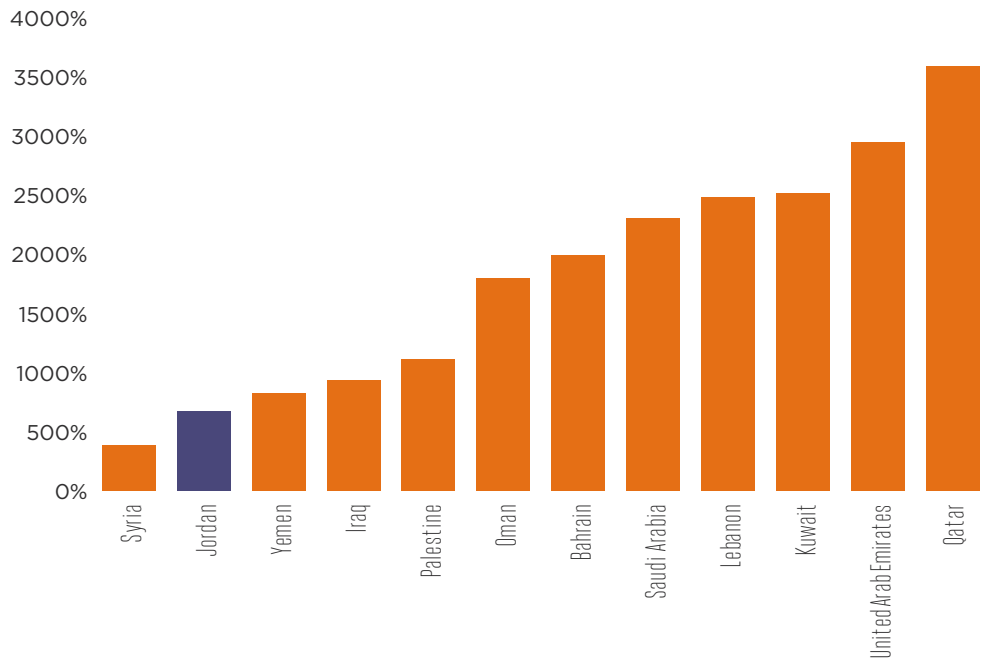
Source: GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming. The figure for Jordan has been updated with most recent available data

Figure 14

47. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.

This excludes the one-off fees that mobile operators paid for spectrum and licences in order to provide services, therefore the total payments incurred are likely to be higher than those represented in figure 14. This may affect significantly profitability of the sector and is particularly relevant in Jordan, given the low ARPU levels of mobile services in the country compared to other regional benchmarks.

ARPU in Arab Middle East countries, 2014



Source: GSMA Intelligence Database

Figure 15

2.3 Best practice in taxation policy

Total taxes and fees on mobile consumers and operators in Jordan are amongst the highest worldwide. An effective tax policy has to balance a number of potentially competing factors. These include the government's revenue needs, supporting key sectors and the practicalities of enforcement and collection, as well as the desire to minimise any detrimental impact on the wider economy. Consequently tax policy frequently must strike a balance between the theoretically correct response and one that recognises the practicalities of taxation in a market[48].

There are however a number of principles that are generally recognised as contributing to an effective tax system and, if applied in Jordan, these principles have the potential to expand investment in the mobile sector and lead to significant economic growth and increased tax revenues for the government. The following principles have been indicated by organisations such as the IMF:

1. **In general, taxation should be broad-based:** Taxation alters incentives for production and consumption, and so economic distortions will generally be minimised where the burden of taxation is spread evenly across the economy. In practice this equates to adopting broadly defined bases for taxation, limiting rate variations and effectively enforcing tax compliance.

2. **Taxes should account for sector and product externalities:** The case for taxation to address negative externalities[49] (such as those arising from tobacco consumption) is recognised. The same logic also applies to sectors and products with positive externalities. Taxation policy should encourage sectors, such as mobile, that create positive externalities in the wider economy. Higher taxation on mobile may discourage consumption of mobile services and prevent the realisation of the positive spillovers from the sector.

3. **The tax and regulatory system should be simple, easily understandable and enforceable:** Uncertainty and lack of transparency over taxation systems and liabilities may deter investors and are also likely to increase enforcement costs for government.

4. **Dynamic incentives for mobile operators should be unaffected:** Taxation should not disincentivise efficient investment or competition in the ICT sector. In situations where the tax system does provide disincentives, tax revenue could be significantly reduced in the long run.

5. In addition, it is widely accepted that **taxes should be equitable, and that the burden of taxation should not fall disproportionately on the poorer members of society.**

6. Spectrum prices and other regulatory fees should cover the cost of spectrum management and reflect the rent associated with this scarce resource. At the same time, they should maintain the incentives to invest, by appropriately incorporating all costs incurred during the duration of a licence, including taxes[50].

48. IMF, Tax policy for developing countries, 2001.
49. An externality refers to an impact on the wider economy that is not accounted for by the consumer purchasing the good. For example, consumers of tobacco create an additional cost for others through second-hand smoke, but do not take into account this impact when choosing whether to smoke.
50. ITU, ICT regulation toolkit, 2014.

In addition to general and specific taxes levied on the mobile sector, spectrum and licence fees are intended to correct the externalities related to the use of these scarce resources and cover the costs related to spectrum management, while at the same time maintaining the incentives on investment. In particular, these fees should achieve the following objectives[51]:

- Cover the costs of spectrum management.
- Ensure the efficient use of the spectrum scarce resource by ensuring sufficient incentives are in place.
- Maximise the economic benefits to society obtained from telecommunication services.
- Ensure that users benefiting from the use of the spectrum resource pay for the cost of using spectrum.

These principles are intended to minimise the inefficiencies associated with taxation and regulatory fees and the distortive impacts that they may have on the wider economy. Table 4 below summarises how the taxes and fees levied in Jordan align with these principles.

Alignment of taxes and regulatory fees on the mobile sector in Jordan with the principles of taxation

Tax	Broad-based	Accounts for externalities	Transparent and enforceable	Incentives for competition and investment	Equitable (not regressive)
Corporation tax	✓	✗	✓	✓	✓
GST	✓	✗	✓	✓	✓
Special Tax	✗	✗	✓	✗	✗
Custom duty	✓	✗	✗	✗	✓
Revenue Share fee	✗	✗	✓	✗	✗
Licence fee	✗	✓	✓	✗	✓
Spectrum fee	✗	✓	✓	✗	✓

Source: Deloitte analysis

Table 4

51. ITU, ICT Regulation Toolkit, http://www.ictregulationtoolkit.org/5.5

As shown in Table 4, many of the taxes are regulatory fees levied on the mobile sector in Jordan do not appear to fully align with these key principles of efficient taxation, which has ramifications for the development of the sector and the wider economy. In particular, those taxes that are mobile-specific have the highest negative impact and lack of alignment with the established principles of taxation:

Mobile-specific taxes such as the Special Tax increase the barriers to access and hit the poorest consumers hardest:

Jordanian mobile consumers are subject to significant mobile-specific taxes, in the form of the Special Tax on calls, SMS and mobile broadband bundles. This tax is not broad-based, as it is specific to mobile services and as such may create distortions. By increasing the final price of mobile services it creates a barrier to affordability and to mobile access. This barrier is greater for low income consumers and therefore risks excluding them from the benefits of mobile and the internet.

All mobile-specific taxes fail to account for positive externalities and discourage consumption:

Mobile has positive impacts in the wider economy through positive spill over effects and facilitation of innovation and productivity in other sectors such as agriculture, healthcare and education. Taxing mobile in a disproportionate manner could be taken as a signal that the government wishes to discourage rather than encourage consumption.

Higher than standard corporation tax rates and revenue fees reduce incentives for domestic and foreign investment:

Higher rates of corporation tax and special revenue taxes applied to mobile only could distort investment decisions by mobile operators as well as Foreign Direct Investment (FDI) in Jordan. In particular, revenue taxes discourage investments by directly reducing the profitability of all mobile operators, independently of their level of profitability. In a given year, these taxes have the same effect on mobile operators with positive profits and mobile operators with no profits due to recent network investment.

High spectrum and other regulatory fees could distort mobile operators' investment decisions:

Regulatory fees represent a significant part of mobile operators' tax and fee payments and are a key determinant of investment in the sector. They could reduce incentives to invest and create distortions across industries. Moreover, fees that are subject to frequent changes increase uncertainty and discourage investment both domestically and internationally. Efficient, equitable and stable pricing of spectrum and licence fees could incentivise the development of new technologies and encourage mobile operators to invest in new spectrum and network roll-out, while covering the cost of spectrum management, ensuring efficient use of spectrum and providing a source of revenue to the government.

The inefficiencies created by these various mobile-specific taxes not only limit the development of the mobile sector, but also hinder economic growth and the realisation of the positive externalities created by mobile services, specifically mobile broadband. **In the medium and long term, the Jordanian government has the potential to generate more tax revenue by transitioning towards a more equitable and balanced taxation structure that treats mobile equally to other industries.**

Economic theory suggests that there exists an optimal level of taxation which will maximise government revenues, so that if at any point taxation is excessive, it will be beneficial for government policymakers to reduce the burden of taxation in order to widen the tax base. At low levels of taxation, buyers and sellers may not be substantially affected by the change in price. At high levels of taxation however, buyers and sellers may substitute away from a given good or service. **At a high level of taxation, it may be optimal to reduce taxes to increase tax revenue**. This principle is widely known as the "Laffer curve", as shown in the figure below.

The Laffer curve

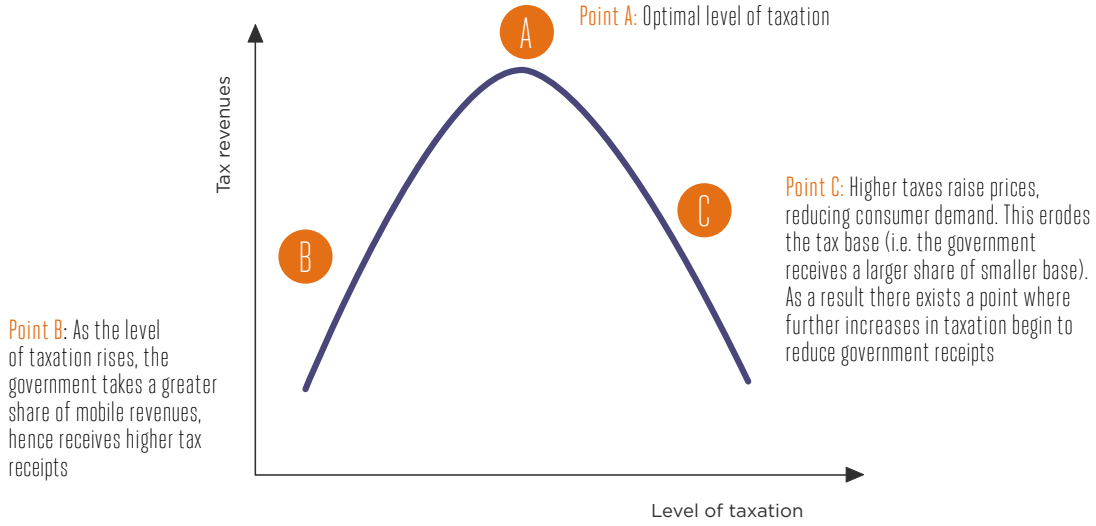


Figure 16

3 Case studies: impacts of mobile taxation changes

The Jordanian government has already experienced the impacts of increases in mobile-specific taxes. When the Special Tax on mobile services was increased from 12% to 24% in July 2013, at the same time sales of mobile subscriptions and pre-paid cards dropped by around 15%[52] and mobile operators' revenues by 8%[53].

Similarly, tax increases in other countries have been associated with decreases in mobile usage and investment. The example below illustrate the impacts that changes in mobile sector taxation can have on usage and other relevant variables.

Case study:

INCREASED MOBILE-SPECIFIC TAXATION AFFECTED INVESTMENT AND USAGE IN CROATIA

After years of growth, Croatia suffered from a recession in 2009 following the global financial crisis. In addition to the direct impact of the recessionary environment on the mobile industry, in June 2009 the Government introduced a 6% tax on mobile operators' gross revenue from mobile calls and SMS.

Following the introduction of this tax, the tax pressure on mobile increased to 28% of the cost of mobile ownership, the highest at the time in Europe.[I] During the same period:

- Volumes of mobile calls and SMS decreased in 2010 by 4% and 14% respectively.
- Mobile-specific taxation as a proportion of mobile operators' revenue increased significantly after 2008. The total tax burden on mobile grew by 2% in 2009 and by 10% in 2010.
- Reductions in mobile operator revenues led to decreases in mobile operator capital expenditure.[II]

The Croatian government removed the 6% tax on calls and SMS in 2012. Mobile operator capital expenditure increased by 5% between 2012 and 2013.

I Deloitte/GSMA, Mobile Taxes and Fees: A toolkit of principles and evidence, 2014.
II GSMA Intelligence Database.

52. TeleGeography, 24th July 2013, Tax hike takes its toll on sales in Jordan.
53. https://www.telegeography.com/products/commsupdate/articles/2013/11/06/trio-call-for-govt-to-undo-tax-hike-and-scrap-fourth-licence/

However, countries worldwide have started to recognise the upside of an equitable and balanced taxation on the mobile sector and the potential to improve affordability and unlock digital inclusion, as illustrated by the examples below.

Case study:

REDUCTION OF SIM TAXES ON CELLULAR M2M SERVICES IN TURKEY AND BRAZIL

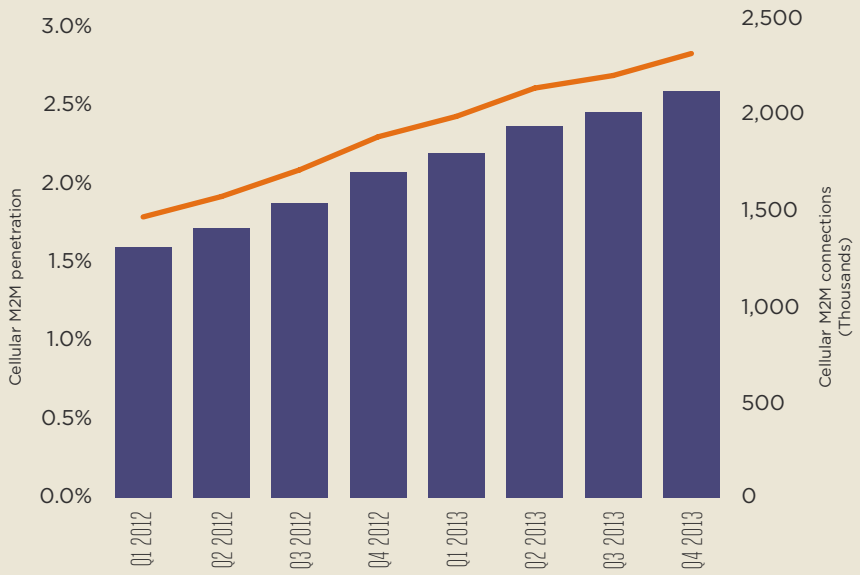
In July 2012, M2M SIM cards were exempted from the TRY 37 connections tax that applies to standard SIM cards in Turkey.I Prior to the tax exemption, mobile operators in Turkey had identified the connection tax as one of the biggest obstacles to growth in the cellular M2M market due to the low ARPU of these services,II which would otherwise present considerable potential for growth.III

The number of cellular M2M connections in Turkey increased from 1.3 million in March 2012 before the tax exemption to 2.1 million connections in December 2013. This represents an overall increase of 25% in cellular M2M connections. IV

Similarly, recognising the tax pressure on cellular M2M services in Brazil,VI the Brazilian government decided to introduce tax reductions on M2M SIM over the time period 2012-2014. The reductions were approved in 2012VII and came into effect in April 2014.VIII The SIM card tax for new connections was reduced from BRL28.63 (US$ 11.56) to BRL5.68 (US$ 2.29) for M2M SIM and the annual connection tax was lowered from BRL 8.94 (US$ 3.61) to BRL1.89 (US$ 0.76).IX This equates to a combined reduction of 80 per cent.X

The tax cut is likely to have a significant positive impact on the development of the Brazilian cellular M2M market, providing a positive stimulus for mobile operators to develop these services. Shortly after the tax cut was enacted, mobile operators invested BRL 13 billion (US$ 6 billion) in development of M2M services.XI The Brazilian Communications Minister estimates that as a result of the tax cut the number of M2M devices in Brazil will increase by 33%, from 17.5m to 23.3m in 2016. XII

Cellular M2M market growth in Turkey



Source: GSMA Intelligence Database and Deloitte analysis

I Mobile Marketing Magazine, July 16th 2012, "Turkey lifts SIM tax".
II Wall Street Journal, March 21st 2011, "Turkcell targets smartphones as key to growth".
II Ibid.
IV GSMA Intelligence Database.
VI TechPolis, July 23rd 2013, "The take-off of M2M in Brazil".
VII Ibid.
VIII GSMA, May 9th 2014, "GSMA welcomes Brazilian government decision to reduce machine-to-machine taxation".
IX GSMA, 2014, "The Mobile Economy Latin America 2014".
X GSMA, May 9th 2014, "GSMA welcomes Brazilian government decision to reduce machine-to-machine taxation".
XI TelecomEngine, May 7th 2014, "Brazilian operators invest US$ 6 billion in M2M".
XII Telefonica, June 4th 2014,"Brazil tax reductions: A movement to the leadership".

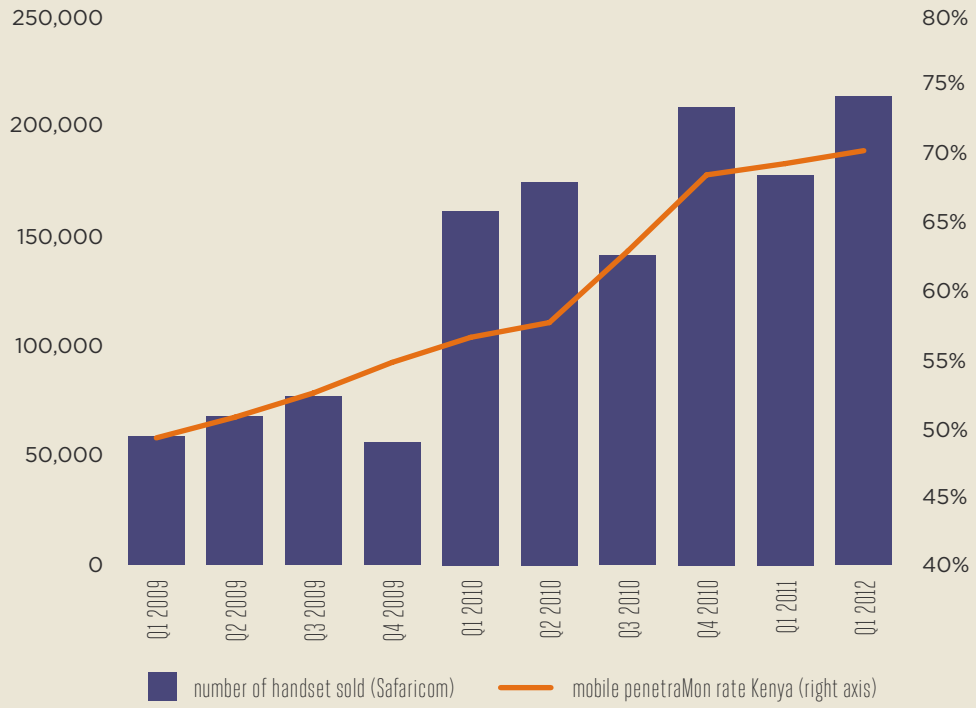
Case study:

VAT EXEMPTIONS ON HANDSETS IN KENYA BENEFITTED PENETRATION AND ECONOMIC GROWTH

The cost of access has been widely recognised as a barrier to the adoption of mobile technology. The Kenyan government removed the 16% VAT rate on mobile handsets in 2009.[I]

- In the three years following, the VAT reduction contributed to an increase in handset sales of 200%, outpacing growth elsewhere in Africa. This increase contributed to increase penetration from 50% to 70%, above the 63% average across Africa.[II]
- Combined with wider market price reductions, the VAT exemption helped to increase access to a wide range of mobile services, with mobile usage increasing by 113%. Over the same period, the contribution of mobile telephony to the Kenyan economy grew by nearly 250%, while mobile-related employment increased by 67%.[III]

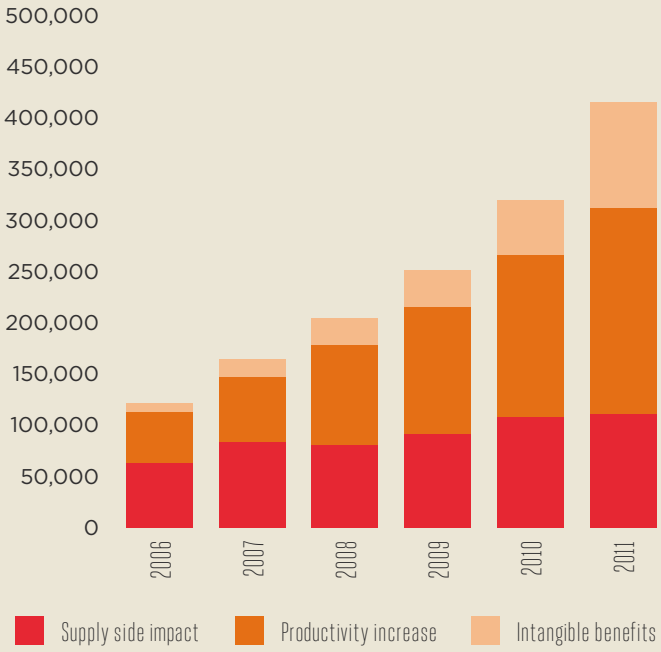
Increase in mobile penetration and handset sales following removal of VAT in Kenya



Source: GSMA 2012

I Deloitte, Mobile telephony and taxation in Kenya, 2011.
II GSMA, Taxation of mobile telecoms: Sector-specific taxes on consumption and international traffic, 2012.
III Deloitte, 'Mobile telephony and taxation in Kenya, 2011.

Economic impact of mobile telephony in Kenya



Source: Deloitte 2011

4 Economic impacts of reforming mobile taxation in Jordan

This section discusses the impacts of reforming taxation through three tax policy changes, using a combination of qualitative evidence and a quantitative model of the mobile sector and its impact on the wider economy in Jordan. Specifically, the quantitative impacts for the following alternatives of tax reform are estimated:

- Reduction of the Special Tax on mobile services from 24% to 12%.
- Abolition of the Special Tax on mobile broadband bundles.
- Reduction of the Revenue Share fee from 10% to 5%.

Balancing recurring and non-recurring licence and other regulatory fees on mobile is also discussed.

4.1 How mobile taxation in Jordan impacts the economy

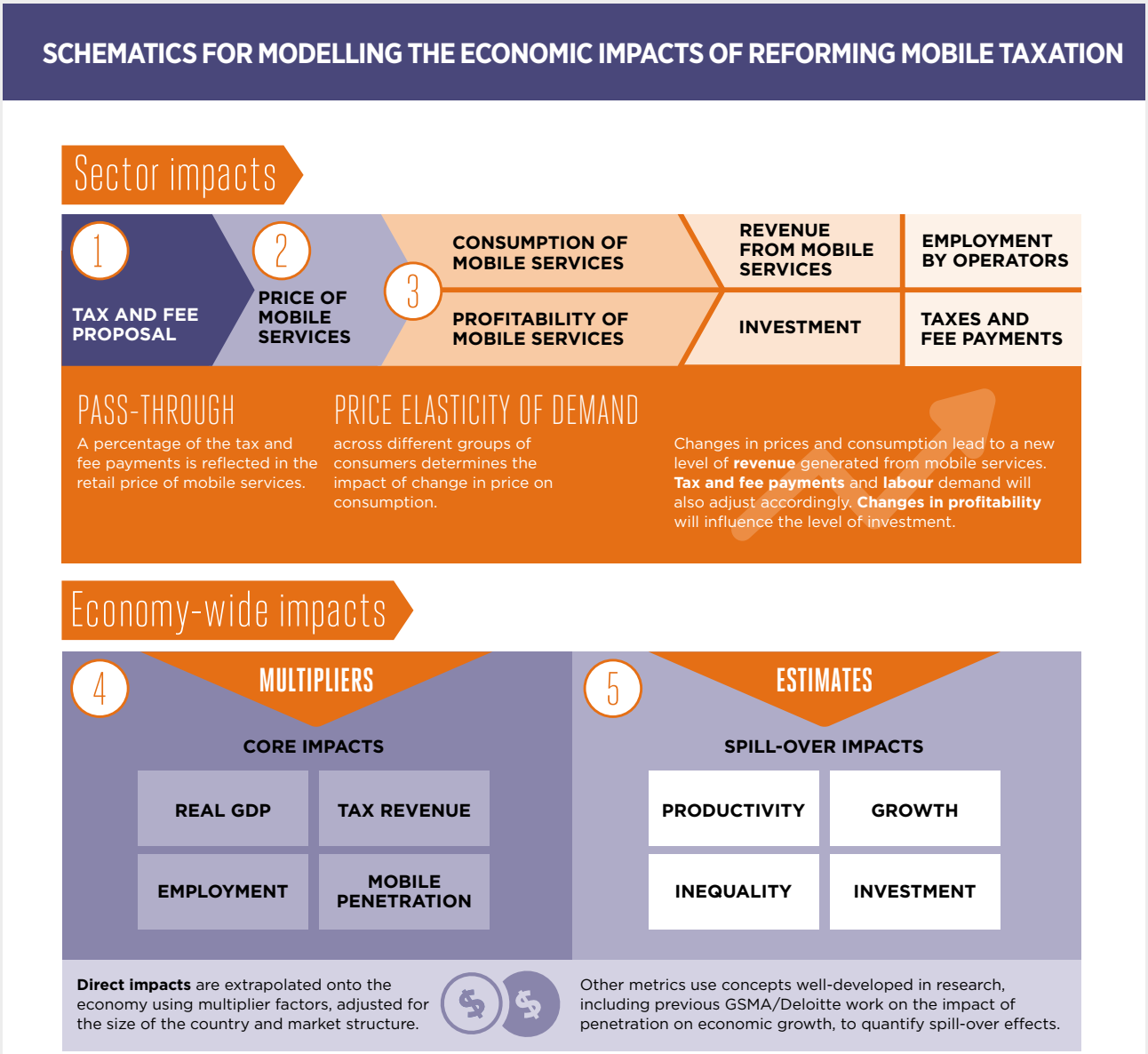
Many of the taxes applied to the mobile sector in Jordan are mobile-specific, such as the Special Tax on mobile services and the Revenue Share fee, or are applied at higher rates in the mobile sector, such as the corporation tax. This puts the mobile industry at a competitive disadvantage with respect to other industries, potentially reducing investment and failing to recognise the positive spillovers of mobile.

By reforming mobile taxation and transitioning to a more balanced taxation structure where mobile is taxed equally to standard goods and services, the government of Jordan can further its Vision agenda of promoting digital inclusion and increasing access to ICT, while potentially benefitting from increased tax revenues in the medium term as a result of GDP growth.

To estimate the quantitative impacts of tax reform, an economic model of the Jordanian economy and mobile sector was constructed, using sector-specific data from the GSMA and mobile operators in Jordan, together with macroeconomic data from the IMF and World Bank. This allows the model to represent both the mobile sector and its impacts on the economy as a whole.

Transitioning to a taxation structure where mobile is taxed equally to other goods and services could benefit digital inclusion and economic development in Jordan.

The figure below illustrates the impacts of tax reform on key economic and sector variables.



Source: Deloitte analysis

Figure 17

The modelling involves several steps which encompass the impacts outlined in the figure above:

1. The level of taxation and fees applied to the mobile sector are reflected in the retail prices mobile operators charge for using their services. Therefore, a change in taxation or fees will lead to a change in the retail price of mobile services. A pass-through rate represents the percentage of the tax and fee payments which is reflected in the retail price of mobile services.

2. The price of mobile services determines the demand and therefore the aggregate consumption of mobile services. The price elasticity of demand describes the responsiveness of demand to a change in the price, and is defined as the percentage change in demand resulting from a given percentage change in price.

3. Changes in the level of consumption of mobile services lead to a new level of revenue generated by mobile operators, which changes the level of taxes and fee payments and labour demand accordingly.

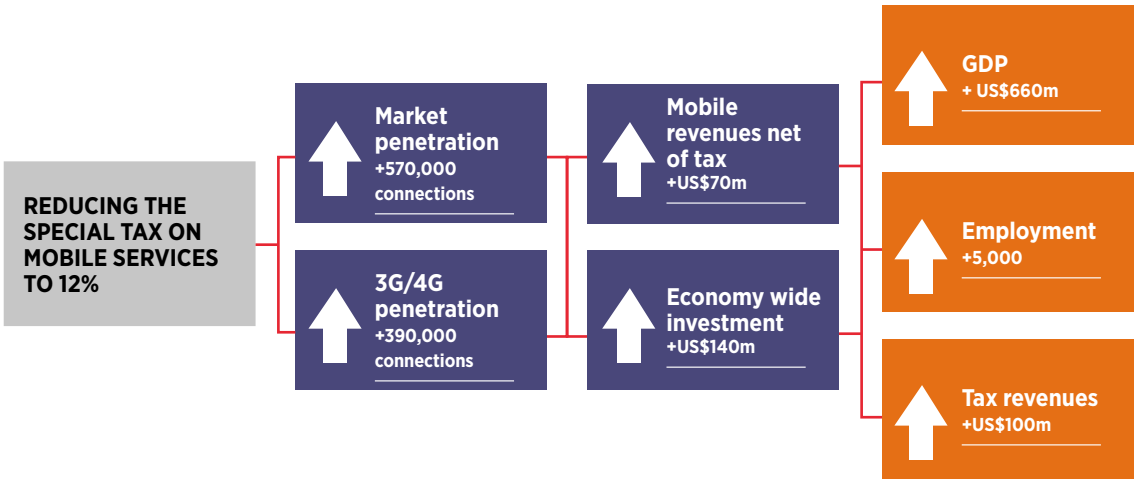
4. There are direct impacts on the wider economy, in particular on real GDP, tax revenues, employment and investment. Multipliers are assumed which allow changes in the mobile sector to affect the wider Bangladeshi economy.

5. These direct impacts lead to spillover effects; changes in Bangladesh's GDP and employment determine productivity and economic growth. An elasticity determines the impact of a change in mobile penetration on GDP growth. Productivity is calculated using the total factor productivity impact, described in the appendix.

4.2 Reducing the Special Tax on mobile services to 12%

The Special Tax currently applied on calls, SMS and mobile broadband bundles at 24% results in an increase in the cost of accessing and using mobile services and a constraint on the overall mobile penetration and the range of uses. It is estimated that reducing the Special Tax on mobile services to 12% could potentially drive the following impacts:

Potential impact of reducing the Special Tax on mobile services to 12%, 2020



Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 18

- In 2020, increased demand for mobile broadband has the potential to add extra 570,000 connections, including 390,000 3G and 4G connections, and increase usage of mobile services with an additional 5% minutes of use. Over the period 2015-2020 a cumulative 3 million mobile connections could be added.
- This uptake in mobile penetration could increase mobile revenues by up to an additional US$70 million in 2020 and the productivity of Jordanian workers and businesses, potentially leading to the Jordanian economy being 0.83% more productive.
- Through the direct impacts of the mobile operators and the indirect impacts generated by the activities enabled by mobile operators, increased mobile usage could lead to additional GDP growth, delivering up to an additional US$660 million in 2020 and potentially providing employment for an additional 5,000 Jordanians. Over the period 2015-2020, a total of US$2.6 billion could be added to the economy and employment could be provided to an additional 17,000 Jordanians.
- Moreover, despite an initial fall in tax revenues after the reduction in tax, the government could potentially achieve tax neutrality within three years and in 2020 the increase in GDP growth has the potential to enable up to an additional US$100 million in tax revenues to be collected through more broad-based taxation. Over the period 2015-2020, and including the initial loss in revenues, the government could gain an additional US$240 million.

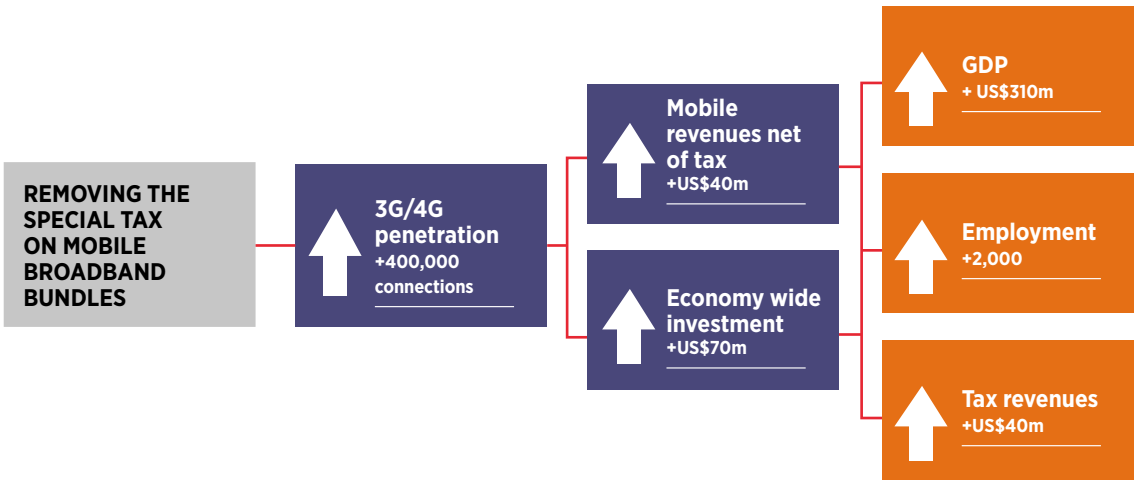
Reducing the Special Tax on mobile services has the potential to encourage consumption and increase access to mobile, thus promoting higher mobile penetration in Jordan. This could have large positive impacts in terms of digital inclusion and adoption of new 3G technologies, while at the same time increasing GDP growth and investment.

4.3 Removing the Special Tax on mobile broadband bundles

The application of the Special Tax includes mobile broadband bundles, while it is not applied to mobile broadband when sold separately from voice and other services. Furthermore, the take-up of mobile broadband is intended to be encouraged by the application of a lower GST rate on mobile broadband stand-alone.

However, mobile broadband is predominantly sold via bundles in Jordan and are estimated to account for over 70% of all broadband sales[54]. Therefore, the impact of the Special Tax could have harmful effects on the take-up of new generation mobile interne services and could also distort the allocation of consumption between bundles and stand-alone services. It is estimated that eliminating the Special Tax on mobile broadband could potentially drive the following impacts.

Potential impact of removing the Special Tax on mobile broadband bundles, 2020



Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 19

54. Based on mobile operator data.

- In 2020, increased demand for mobile broadband has the potential to add extra 400,000 3G and 4G connections. Over the period 2015-2020 a cumulative 2 million mobile broadband connections could be added.

- This uptake in mobile penetration could increase mobile revenues by up to an additional US$40 million in 2020 and the productivity of Jordanian workers and businesses, potentially leading to the Jordanian economy being 0.40% more productive.

- Through the direct impacts of the mobile operators and the indirect impacts generated by the activities enabled by mobile operators, increased mobile usage could lead to additional GDP growth, delivering up to an additional US$310 million in 2020 and potentially providing employment for an additional 2,000 Jordanians. Over the period 2015-2020, a total of US$1.2 billion could be added to the economy and employment could be provided to an additional 7,000 Jordanians.

- Moreover, despite an initial fall in tax revenues after the reduction in tax, the government could potentially achieve tax neutrality within three years and in 2020 the increase in GDP growth has the potential to enable up to an additional US$40 million in annual tax revenues.

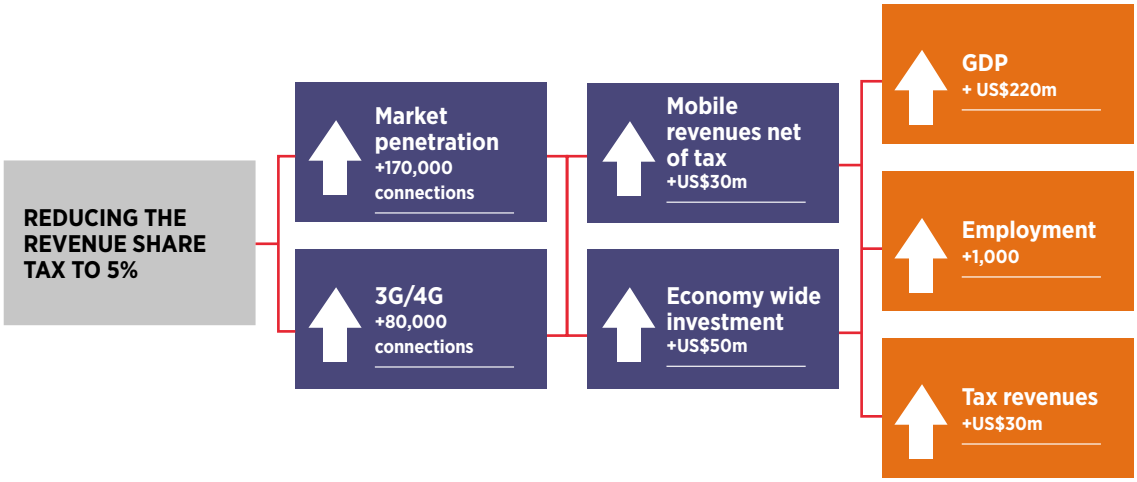
Eliminating the Special Tax on mobile broadband has the potential to increase digital inclusion and the take-up of mobile internet, supporting the development of the knowledge economy in Jordan. This could lead to higher sector growth, foster economic development and domestic and international investment.

4.4 Reducing the Revenue Share fee to 5%

Taxes levied on revenues, such as the 10% Revenue Share fee applied on the mobile sector in Jordan, can have a distortive effect on investment as they impact equally companies with high and low capital expenditure. Therefore, this type of tax can further discourage network investment and the roll-out of new generation infrastructure. They are particularly adverse where ARPU levels have been declining, which has been the case in Jordan in recent years.

Reducing the Revenue Share fee to 5% has the potential to generate the impacts illustrated below. Further reductions could be envisaged, particularly given the already higher rate of corporation tax applied to mobile operators in Jordan.

Potential impact of reducing the Revenue Share fee to 5%, 2020



Source: Deloitte analysis based on mobile operator, GSMA intelligence database, IMF and World Bank data

Figure 20

- In 2020, increased demand for mobile services could add an extra 170,000 connections, including 80,000 3G and 4G connections, and increase usage of mobile services by 1.5%.
- This uptake in penetration could increase the revenues from the mobile sector by US$30 million in 2020 and aggregate investment in Jordan by up to US$200 million over the period 2015-2020.
- Through the direct impacts of the mobile operators and the indirect impacts generated by the activities enabled by mobile operators, increased mobile usage could lead to additional GDP growth, potentially delivering an additional US$220 million in 2020 and providing employment for an additional 1,000 Jordanians.
- Moreover, despite an initial fall in tax revenues after the reduction in tax, the government could potentially achieve tax neutrality within three years and in 2020 the increase in GDP growth could enable up to an additional US$30 million in annual tax revenues to be collected through more broad-based taxation.

By incentivising investment, the reduction of the Revenue Share fee could further encourage network roll-out and FDI in Jordan. At the same time, it could spur mobile penetration and reduce barriers to affordability, as mobile operators pass on their savings to consumers. This has wider economic impacts: specifically higher economic growth, greater productivity and growth in employment.

4.5 Pricing of spectrum and other regulatory fees

As seen in section 2, the recurring tax and fee payments that mobile operators pay in Jordan were found to represent almost half of market revenues and the second highest proportion worldwide[55]. Against this backdrop, non-recurring spectrum fees should be balanced against the burden of recurring taxation in order to maintain the incentives to investment and competition in the market, while capturing the economic rent associated with spectrum ownership and covering the costs related to spectrum management[56].

Mobile operators are estimated to have paid circa US$700 million since 2009 in non-recurring payments for licence renewals, 3G and 4G spectrum. In 2014, the allocation and renewal of spectrum licences generated approximately US$350 million in Jordan, nearly 40% of annual revenues[57]. At the same time, annual licence and spectrum fees amount to circa US$40 million per year[58], nearly 7% of all taxes and fees paid in 2013[59].

Non-recurring spectrum license fees have also increased over time, as shown in Table 4. For example, while Orange paid US$10 million (JOD 7 million) in 2000 for its 2G license, it paid US$74 million (JOD 52.125) million for renewal of the same license in 2014 for a restricted 5-year term. The Revenue Share fee, which was introduced in the initial licenses, has been maintained at a rate of 10% of revenues in subsequent license renewals.

Spectrum fee payments, US$ million

OPERATOR	INITIAL SPECTRUM ALLOCATION FEES	RECENT SPECTRUM ALLOCATION FEES
Zain	7 (1995)	71 (2011 – 3G) 71 (2014 – 3G) 201 (2014 – 4G)
Orange	10 (2000)	71 (2010 – 3G) 74 (2014 – 2G renewal) 100 (4G)
Umniah	7 (2004)	71 (2012 - 3G)

Source: Mobile operator data

Table 5

55. GSMA/Deloitte, Digital Inclusion and Mobile Sector Taxation, forthcoming.
56. Ofcom. Spectrum pricing. A statement on proposals for setting Wireless Telegraphy Act prices, 2005.
57. GSMA, The Mobile Economy Arab states, 2014.
58. As estimated for 2013.
59. Deloitte analysis based on mobile operator data.

If spectrum payments and other payments were excessive this would have the potential to negatively affect the roll-out of network infrastructure[60], through:

- Reduced incentives to invest due to lower returns on the capital employed.
- Increased uncertainty on future tax liability, which is also likely to impact investment decisions.
- Distortions across industries and within ICT sector due to higher costs for mobile operators, further driving (local and foreign) investment away from mobile.
- Fees that are subject to frequent changes increase uncertainty and discourage investment both domestically and internationally.

Furthermore, when a licence or spectrum band is awarded, the final price paid reflects mobile operators' expectations on future cash flows, including tax disbursements, at the time the investment decision is made. If new taxes are introduced or increased after the auction or during the duration of a licence, this negatively impacts the mobile operators' business case and can have adverse effects on consumers if some mobile operators were to hold off investment due to taxation uncertainty. In Jordan, after the significant investment incurred to acquire 3G licences, mobile operators saw the Special Tax on mobile services increase in 2010 and then again in 2013.

Efficient, equitable and stable pricing of spectrum and licence fees has the potential to support government revenues while ensuring the development of new technologies and encourage mobile operators to invest in new spectrum and network roll-out. Appropriate pricing of spectrum appears a key issue if Jordan is to embrace further uptake of mobile broadband services.

60. Gorecki, Hennessy, Lyons, How impact fees and local planning regulation can influence deployment of telecoms infrastructure, 2011.

5 Mobile taxation in Jordan: an agenda for reform

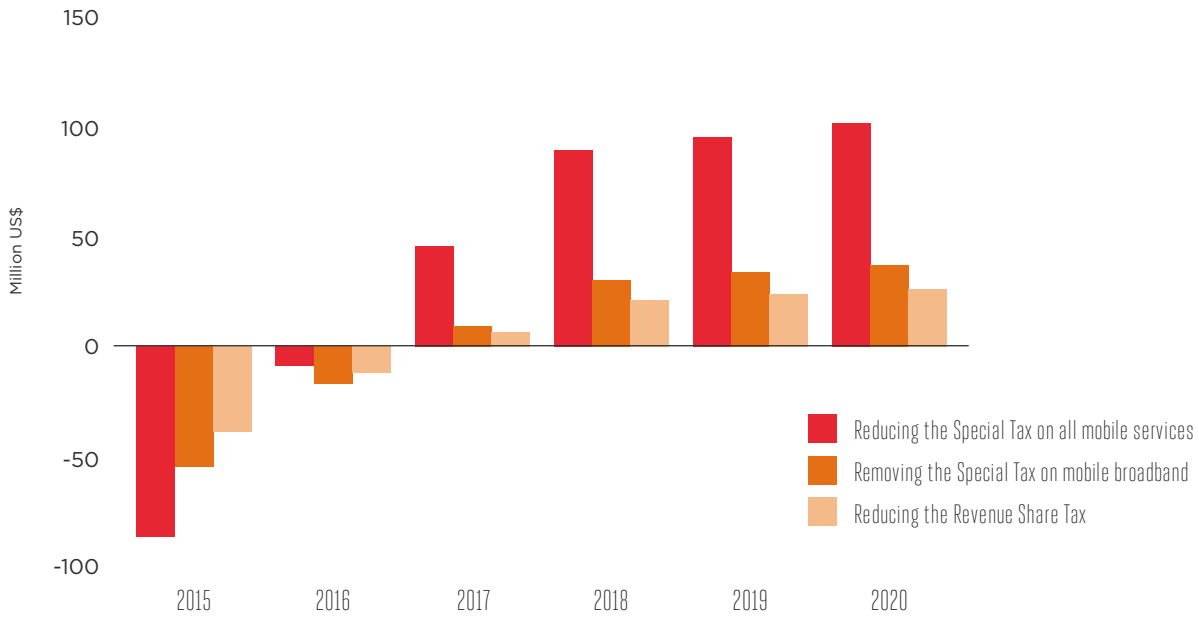
5.1 Contribution to fiscal stability

Total taxes and fees on mobile consumers and operators in Jordan are amongst the highest worldwide. Reducing the level of taxation on the mobile sector may impact government revenues in the short-term. However, **by increasing mobile penetration and promoting economic growth, reducing the tax burden on mobile could also increase the tax base, enabling the government to recover these revenues.**

The additional economic growth arising from the reduction of the Special Tax or the Revenue Share tax could create more revenue for the government and potentially **enable the government to reach tax neutrality within three to four years.**

The impact on government revenues of the tax policy alternatives analysed in this report are illustrated in the figure below. The impacts of each policy are estimated independently and their interaction is not considered.

Potential additional tax revenues compared to the base case under tax policy alternatives



Source: Deloitte analysis based on operator, GSMA intelligence database, IMF and World Bank data

Figure 21

5.2 Options to align mobile taxation to standard goods taxation

By transitioning to a taxation structure where mobile is taxed equally to other goods and sectors, the government of Jordan can promote digital inclusion, increase productivity and generate economic growth, whilst also benefitting from increased tax revenues. This could produce positive spillovers throughout the Jordanian economy and society: the government, mobile operators, consumers and the economy as a whole. Moreover, the subsequent spread of mobile services could contribute to the economic and social objectives of Jordan, improving access to life-enhancing services such as education and health applications and facilitating the country's transition to a knowledge-based economy.

Interviews with the mobile sector demonstrated a recognition of its role in supporting Jordanian government revenues and contribute to public services. However, while higher than standard taxation on the mobile sector can potentially deliver short-term benefits to the government, it would need to be balanced with the impacts on the cost of long-run socio-economic development.

By working in partnership with the mobile operators to minimise the distortions and inefficiencies created by sector-specific taxation, the Jordanian government has the opportunity to make progress on its key ICT and development ambitions.

Development of ICT usage across sectors

By reducing mobile-specific taxation, the government could increase the number of mobile broadband connections, promoting digital inclusion. This has the potential to enable the widespread use of ICT across areas such as healthcare, education and the provision of government services. Moreover, this could provide new opportunities for innovation and the development of new applications and content, fostering further growth within the sector.

Increased economic development

Based on the modelling described above, the tax reform alternatives examined have the potential to increase the usage of mobile services and uptake of mobile broadband and generate up to US$140 million in additional investment and increase GDP by up to US$660 million in 2020 if the Special Tax on mobile services were halved.

Support in the transition towards a knowledge-based economy

Reforming mobile sector taxation has the potential to encourage wide spread use of mobile broadband and the development of mobile applications for use in agriculture, healthcare and education, and the creation of local content can also promote higher-skilled employment and the transition to a knowledge-based economy.

Improved network infrastructure

Ensuring an equitable structure of regulatory fees has the potential to increase the investment required to further improve mobile broadband network infrastructure. Moreover, further international investment could allow for economies of scale for mobile operators, allowing reduced prices for consumers in the longer term and facilitating the spread of mobile broadband.

Sustainable government revenues

Achieving the government's ICT objectives need not result in a reduction in government revenues in the medium to long term. By increasing productivity and economic growth, a reduction of taxes on the mobile sector has the potential to generate up to almost US$240 million in additional tax revenues cumulatively over the period 2015-2020 through the expansion of the tax base.

Based on evidence from a series of studies[61] and the best practice principles outlined in Table 4[62], as well as on consultation with GSMA and mobile operators, a number of areas for tax reform have been identified which could support the mobile sector to further contribute to economic growth and government revenues over and above its current impact:

Reduce specific taxation of the mobile sector

Higher than normal taxation on mobile operators and consumers distorts production and consumption behaviour; it may limit usage of digital services, reduce the ability of mobile operators to finance investment in digital infrastructure, and can in the long term reduce government revenues.

Apply phased reductions of taxes on established services

Phased reduction of mobile specific taxes on usage or mobile operators' profits offers governments the opportunity to benefit from the economic contribution from mobile whilst limiting short-term fiscal costs.

Facilitate the development of emerging services through supportive taxation

The growth of mobile data and other innovative applications opens up the possibility for the sector to increase its economic value through a whole new generation of products and services ranging from health care services to education and finance.

Reduce complexity and uncertainty of mobile taxation

Taxation on mobile operators has increased over the years in Jordan. Any unpredicted tax change that occurs after investment in spectrum licence is made may negatively impact a mobile operator's business plan. The risk of future tax rises is priced into investment decisions and can therefore be expected to reduce both FDI and domestic investment in the medium-term.

61. GSMA/Deloitte, studies on digital inclusion and mobile taxation in Ghana, Tanzania, Pakistan; GSMA/Deloitte, Mobile taxes and Fees – A Toolkit of Principles and Evidence, 2014.
62. IMF, Tax policy for developing countries, 2001.

The additional economic growth arising from tax rebalancing could create more revenue for the government in the medium term.

Appendix A: Methodology

A.1 Estimation of the economic impact of a tax change

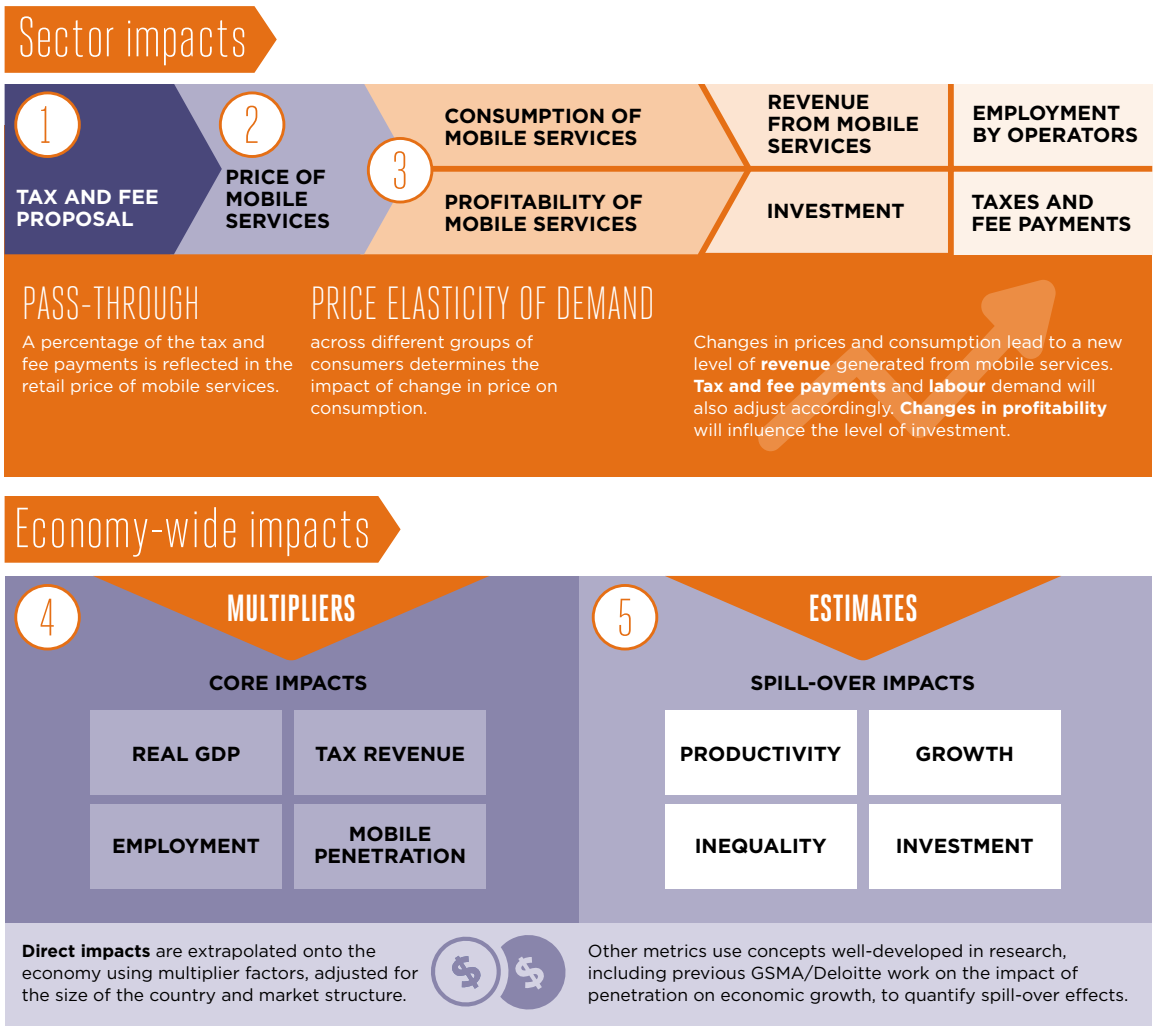
In order to conduct the tax scenario analysis, a macroeconomic model was created to describe the mobile sector and the macro-economy of Jordan. This model is able to forecast the impacts of more than 25 sector-specific and macroeconomic variables up to 2020, which can be driven either by removing or changing current taxes and fees or by the introduction of a new tax or fee.

Firstly, a base case scenario is developed for the mobile sector and economy, where taxes and fees remain at their current level throughout the period 2015-2020. Then, a simulation of alternative policy scenarios quantifies the economic impact of reformed mobile sector taxation. It is assumed that the tax policy is implemented in 2015 and the model estimates the effects up to 2020. The impacts of each policy are estimated independently and their interaction is not considered.

MODELLING THE MACROECONOMIC IMPACT OF CHANGES TO MOBILE TAXATION IN JORDAN

As illustrated in Figure 22, the following steps are involved in the modelling process:

Schematics for modelling the economic impacts of mobile taxation changes



Source: Deloitte analysis

Figure 22

- The tax or fee change affects the price of mobile services. This depends on the extent to which the tax reduction is passed on to consumers, modelled by a pass-through rate which determines the percentage of the tax and fee payments that is reflected in the retail price of mobile services. All assumptions in the model are described in more detail in the section below.

- Changes to the price of mobile services affect their consumption. In order to estimate this, assumptions are made on the price elasticity of demand[63], which measures how much demand for mobile services will change in response to a price change.

- Changes in prices and consumption alter the amount of revenue generated from mobile services. Increased demand generates additional employment opportunities in the sector, while increased mobile operator revenues enable additional capital expenditure on the development of network infrastructure.

- These sector impacts lead to economy-wide impacts, which are estimated through assumptions that describe the impact of the mobile sector on the wider Jordanian economy. These effects include the impact on GDP, calculated through a multiplier that links mobile and 3G penetration rates to economic growth, and the effect on employment, calculated through a multiplier which estimates the number of jobs created across the economy for every job created within the telecom sector. The proliferation of mobile services is captured by an increase in productivity, quantified through the change in Total Factor Productivity (TFP).

- Thanks to additional GDP growth from reformed taxation on mobile, the potential short-term loss of tax revenues from the mobile industry can be offset by tax revenues from more broad-based consumer and mobile operator taxes.

The inputs for the model are provided by mobile operators in Jordan, the GSMA and publicly available statistics from the World Bank and the IMF. The outputs are derived based on estimates of the elasticity of demand for mobile services from a number of developing markets, while the impacts of mobile and broadband penetration on GDP have been derived from econometric studies of similar developing markets.

A.2 Key assumptions behind the model

The assumptions underlying the model have been researched from a review of academic literature and previous studies in this area. These are discussed in more detail below.

Pass-through rates

Taxes and fees paid by mobile operators and consumers may be completely or partly passed-through to the end-consumer prices. The level of pass-through of taxes and fees to final prices will depend on market power and the price elasticity of demand, among other factors. For this analysis, an average pass-through rate of 75% has been assumed for taxes that fall directly on retail prices. For the Revenue Share fee a 50% pass-through was used to reflect the fact that mobile operators can pass on their savings to customers. These assumptions were based on conversations with mobile operators and Deloitte analysis of telecoms markets worldwide.

63. An elasticity describes the quantitative impact of a variable on another variable; the usual notation is that a 1% increase in a variable will lead to an x% change in another variable.

Price elasticity of demand

A change in the price of mobile services leads to a change in the consumption of these services, both in terms of ownership and usage. Consumption changes depend on the price elasticity of demand, that is, the responsiveness of consumers to price changes. The assumptions regarding elasticity of demand are based on a review of studies conducted in a number of developing markets on the elasticity rates observed in recent. The elasticity of demand for mobile subscriptions is assumed to be -0.65[64]. For those that own mobile devices, demand for mobile services is more elastic: the elasticity of demand for mobile services is assumed to be -0.75, based on a number of studies within the field[65].

Employment multiplier

The employment multiplier is used to estimate the impact of a change in employment in the sector on total employment in the economy. The magnitude depends on the economic features of the sector, such as the degree of interconnection across the supply chain. The employment multiplier is assumed to be 6.21[66]. That is, for every additional job created within the mobile sector, an additional 6.21 jobs are generated in the wider Jordanian economy.

Market penetration Impact

There is substantial evidence in the literature on the impact of mobile penetration on GDP growth. Analysis conducted by the GSMA on the impact of mobile and 3G penetration on GDP growth estimated that a 1% increase in market penetration leads to an increase in GDP growth of 0.14 percentage points[67]. In terms of the impact of internet penetration, it is assumed that a 1% increase in internet penetration increases the GDP growth rate by 0.077 percentage points[68]. This model does not consider switching between 2G and 3G services and so these impacts are treated separately[69].

Total Factor Productivity Impact

The impact on TFP is calculated based on the change in GDP, employment and investment. TFP is a measure of economic productivity that accounts for changes in output over and above those expected as a result of increased employment and investment. It is defined as follows:

$$TFP = \frac{GDP}{Capital^{a} Labour^{\beta}}$$ where it is assumed that a = 0.3 and β=0.7[70]

64. Chabossou et al, 2009; UK Competition Commission, 2003.
65. See, for example: Gruber and Kontroupis, 2010, Mobile telecommunications and the impact on economic development; Wheatley, J. J., 1998, Price elasticities for telecommunication services with reference to developing countries; GSMA, 2005, Tax and the digital divide: How new approaches to mobile taxation can connect the unconnected. London: GSMA
66. This figure was based on a number of studies conducted in developing and developed countries; see, for example, Moretti, 2010; O2 for ONS, 2002; Ovum, 2010; Zain, Ericsson, 2009; Kaliba et al, 2006.
67. This is based on a study of 40 economies over the period 1996-2011; for full details of the methodology, see http://www.gsma.com/publicpolicy/wp-content/uploads/2012/11/gsma-deloitte-impact-mobile-telephony-economic-growth.pdf
68. Qiang, C. Z. W., Rossotto, C.M., 2009, Economic Impacts of Broadband, in Information and Communications for Development 2009: Extending Reach and Increasing Impact, World Bank, Washington D.C., 35-50.
69. That is, given that it is not known whether a new 3G subscriber may previously have been a mobile user, this is treated as an increase in internet penetration only, not as an increase in mobile and internet penetration.
70. Bassanini A and Scarpetta S, 2001, "The Driving Forces of Economic Growth: Panel Data Evidence for the OECD countries".

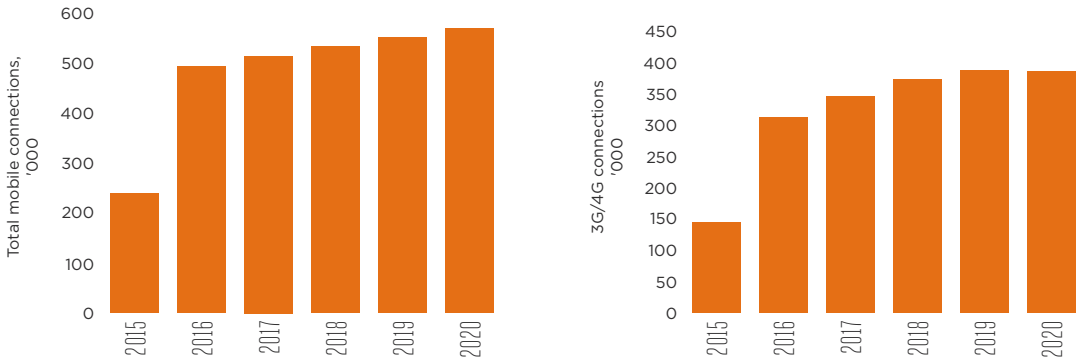
A.3 Scenario simulation results

This report uses a macroeconomic model in order to assess the impacts of a change in taxation policy on the mobile sector and the wider economy. Three scenarios were addressed and each compared against the base case scenario, where there is no change in tax policy. The overall findings of each scenario are described in more detail in the sections below, on the assumption that the change in tax policy is implemented in 2015.

Scenario 1

Scenario 1 models the reduction of the Special Tax on mobile services from 24% to 12%. In particular, the reduced cost of usage following such reduction in the Special Tax could stimulate an additional 570,000 mobile connections in 2020, with a forecasted increase by 500 million minutes of use relative to the base case. This could raise total market penetration by 4.3% relative to the base case in 2020, extending access to mobile telephony across Jordan. The increased affordability has the potential to encourage consumers to take-up new services and additional 3G/4G connections could be up to 390,000 in 2020.

Potential additional impact on total mobile penetration (left) and mobile broadband penetration (right) in Scenario 1 relative to the base case

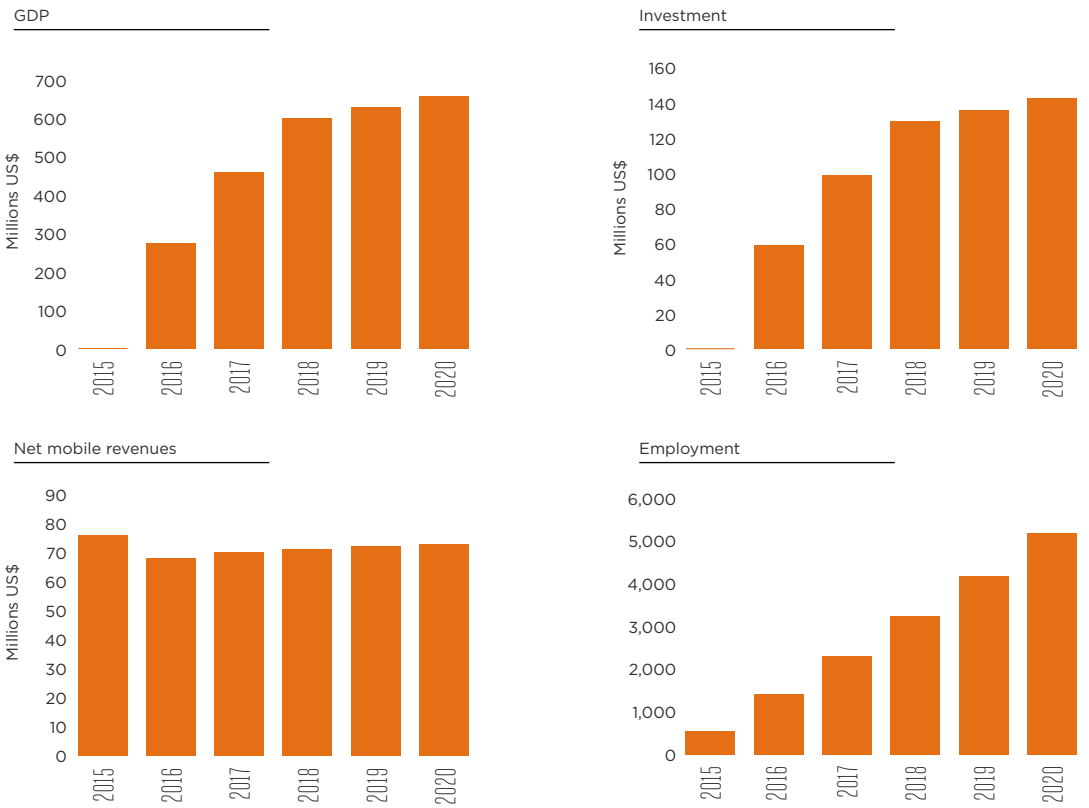


Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 23

The increase in connections could subsequently benefit both the mobile sector and wider economy. Increased usage could increase mobile operator revenues by US$70 million, enabling an additional US$60 million of capital expenditure, which could be used for expanding additional sites across Jordan, further increasing coverage of mobile broadband services. Increased economic activity and the development of technology and innovation as a result of the growth of the mobile sector could then be reflected in an additional US$660 million and US$140 million in GDP and investment respectively relative to the base case in 2020, whilst employment could also rise by over 5,000 relative to the base case.

Potential additional impact on macroeconomic indicators in Scenario 1 relative to the base case

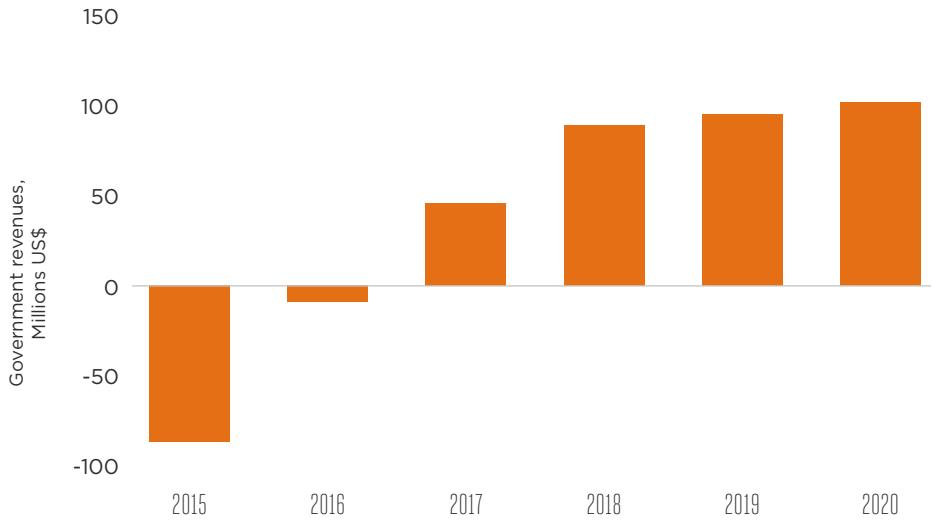


Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 24

As a consequence of wider economic growth, it is estimated that the government of Jordan could also benefit from increased tax revenues in 2020 relative to the base case. Although tax revenues could fall in the first years following the reduction in the Special Tax, the expansion of the tax base following wider economic growth could allow for tax neutrality in 2017 and an increase in tax revenues by over US$100 million relative to the base case in 2020.

Potential tax revenues in Scenario 1 relative to the base case



Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

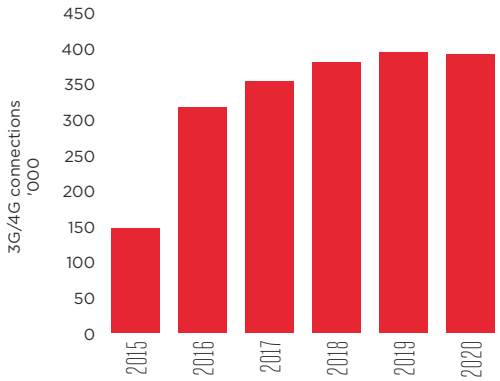
Figure 25

Scenario 2

Scenario 2 models the abolition of the Special Tax on mobile broadband. The Special Tax is currently not applied to mobile broadband stand-alone, which is also subject to a lower GST rate. Therefore, the analysis models the abolition of the Special Tax on mobile broadband bundles, keeping the GST rate unchanged on mobile broadband bundles (16%).

It is estimated that the reduction in the cost of mobile ownership could stimulate an additional 400,000 mobile broadband connections in 2020 relative to the base case. This represents a 6% increase in total mobile penetration relative to the base case. Furthermore, the reduced cost of mobile usage could generate an additional 300 million minutes in 2020 compared to the base case scenario.

Potential additional impact on mobile broadband penetration in Scenario 2 relative to the base case



Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 26

Positive spillovers across the economy as a consequence of this growth could stimulate an additional US$310 million in GDP and US$70 million worth of investment in 2020 relative to the base case. This could create employment opportunities for over 2,000 Jordanian, whilst this workforce could also be 0.40% more productive.

The increase in usage and take-up of new services could also benefit mobile operators in the form of an additional US$40 million in total sector revenues. This could allow mobile operators to increase capital expenditure on the development of network capacity by US$27 million relative to the base case in 2020, which could deliver additional mobile broadband sites across the region.

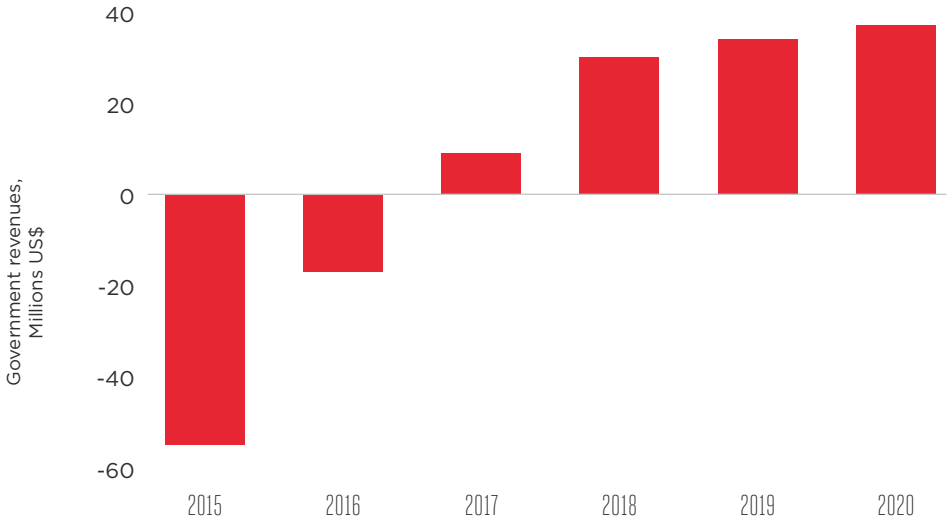
Potential additional impact on macroeconomic indicators in Scenario 2 relative to the base case

Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 27

Together with this macroeconomic improvement, the government of Jordan stands to benefit from increased tax revenues as a result of wider economic growth and the expansion of the tax base. It is estimated that the government could achieve revenue neutrality by 2017 with tax revenues of US$40 million in 2020.

Potential tax revenues in Scenario 2 relative to the base case



Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

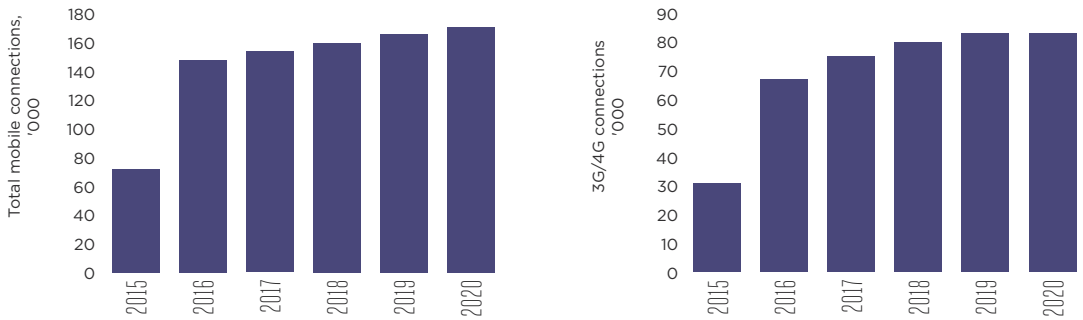
Figure 28

Scenario 3

The third scenario models the reduction of the Revenue Share fee from 10% to 5%. Through the savings achieved by mobile operators, this could increase investment and demand for mobile services, meanwhile decreasing barriers to affordability and thus further sustaining penetration and economic growth.

The tax reduction could decrease the cost of accessing mobile services, increasing total connections by 170,000 of which 80,000 could be mobile broadband enabled. It is estimated that this could represent an increase in total mobile penetration of 77,000 unique subscribers relative to the base case in 2020.

Potential additional impact on total mobile penetration (left) and mobile broadband penetration (right) in Scenario 3 relative to the base case

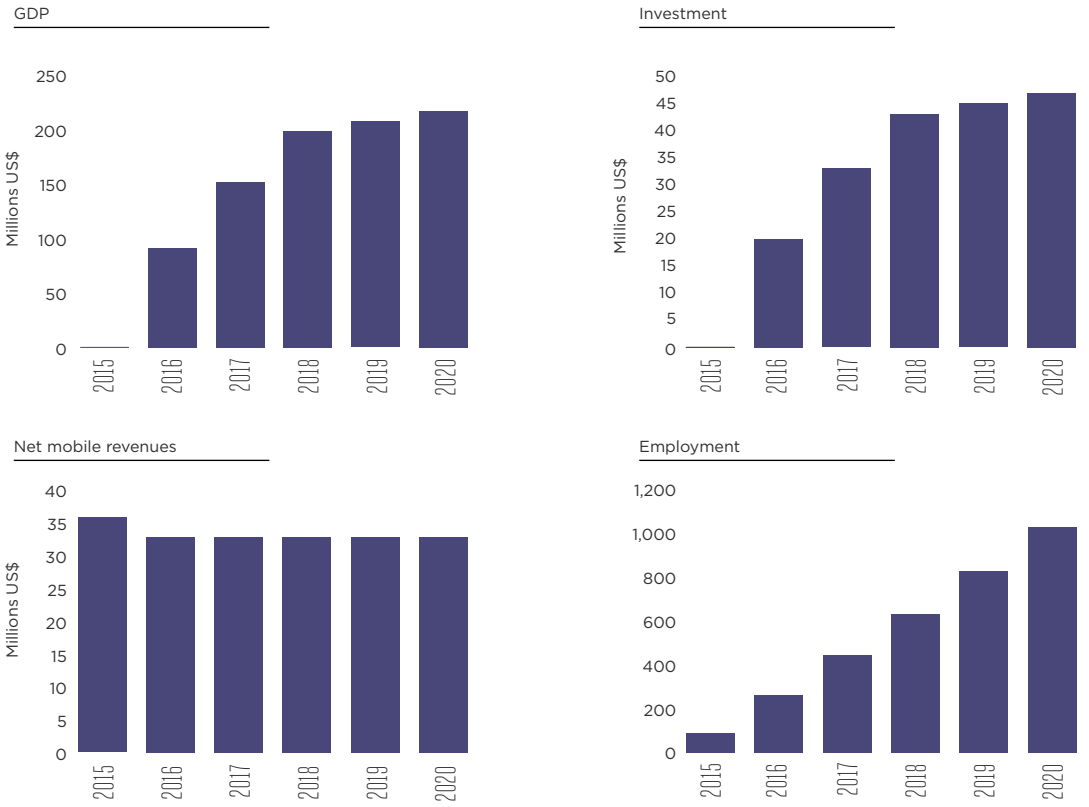


Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 29

The increase in usage of mobile services could increase net mobile operator revenues by almost US$30 million relative to the base case in 2020. The positive spillovers from the mobiles sector, particularly towards the development of technology and knowledge-based sectors in Jordan, have the potential to increase GDP and investment across Jordan by US$220 million and 50 million respectively, whilst also increasing employment by over 1,000 relative to the base case in 2020.

Potential impacts on macroeconomic indicators in Scenario 3 relative to the base case

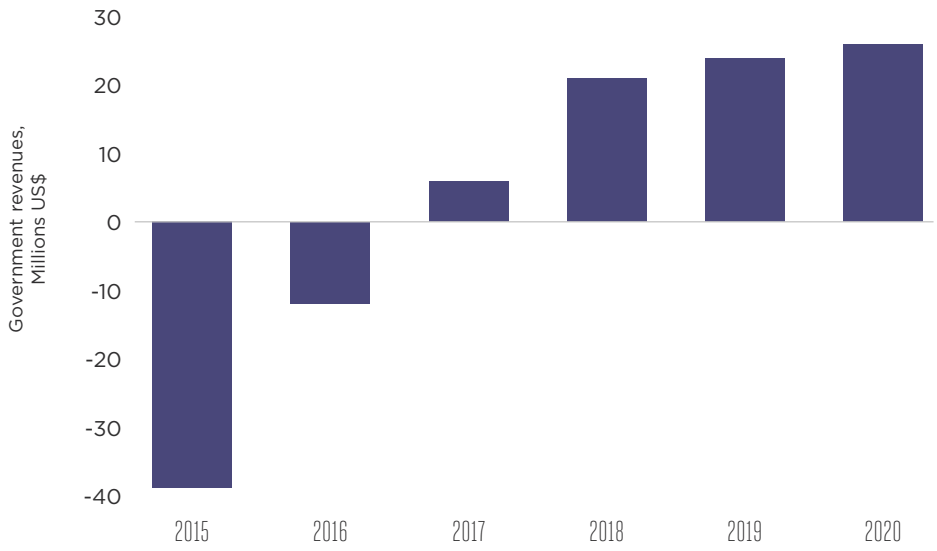


Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 30

The increase in growth of the mobile sector and wider economy, following the GCT reduction, could subsequently broaden the tax base and hence government tax revenues over time. It is estimated that by 2017 the government of Jordan could start gaining tax revenues following an initial loss of US$40 million in 2015. Indeed in 2020, the government could potentially gain almost US$30 million in tax revenues in 2020.

Potential tax revenues in Scenario 3 relative to the base case



Source: Deloitte analysis based on operator, GSMA, IMF and World Bank data

Figure 31

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