



**A4AI** ALLIANCE FOR  
AFFORDABLE INTERNET

# REALISING AFFORDABLE INTERNET IN BANGLADESH: A CASE STUDY



**JUNE 2016**

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## 1. DEVELOPING A DIGITAL BANGLADESH

In its 2008 election manifesto, Bangladesh's ruling party, the Awami League, proposed "Vision 2021" – a plan that outlines how Bangladesh will achieve middle-income status by 2021. Information and Communication Technologies (ICTs), underpinned by widespread access to Internet and broadband services, are central to Vision 2021 and the establishment of a "Digital Bangladesh."<sup>1</sup>

Since being elected to power in 2008, and re-elected in 2014, the Awami League-led government of Bangladesh has sought to develop the four pillars of Digital Bangladesh: (1) human resource development; (2) connecting citizens; (3) digital governance; and (4) the use of information technology in business. The importance of these four pillars for Bangladesh cannot be overstated. They will provide a platform for ensuring democracy, human rights, transparency, accountability, and justice, and for improving the delivery of government services through the use of technology and broadband access. Researchers<sup>23</sup> and policy-makers<sup>45</sup> endorse this view, highlighting widespread broadband access as critical if Bangladesh is to achieve its digital and socio-economic development goals.



Over the last seven and half years, government leadership in Bangladesh has been critical in establishing a Digital Bangladesh and for making progress toward ICT and broadband targets. This leadership will continue to be vital, as Bangladesh faces a number of challenges to increasing access to and use of affordable Internet. Most Bangladeshis do not use the Internet, despite relatively low prices for services. Making services more affordable for the majority of Bangladeshis will be important if the country is to achieve middle-income status by 2021, and the policy and regulatory reforms undertaken in recent years must be strengthened and built upon, in order for Bangladesh to see progress.

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<sup>1</sup> <http://a2i.pmo.gov.bd/digital-bangladesh> Last accessed 28 April 2016

<sup>2</sup> Samarajiva, R., 2013. Policy and regulatory actions that will help achieve Digital Bangladesh by 2021.

<sup>3</sup> GSMA (2011), Mobile's role in achieving Digital Bangladesh by 2021: creating successful spectrum policy.

<sup>4</sup> <http://www.plancomm.gov.bd/wp-content/uploads/2013/09/Perspective-Plan-of-Bangladesh.pdf> Last accessed 28 April 2016

<sup>5</sup> [http://www.plancomm.gov.bd/wp-content/uploads/2015/02/18\\_Achieving-Digital-Bangladesh-by-2021-and-Beyond.pdf](http://www.plancomm.gov.bd/wp-content/uploads/2015/02/18_Achieving-Digital-Bangladesh-by-2021-and-Beyond.pdf) Last accessed 28 April 2016

## 2. THE CURRENT STATUS OF INTERNET USE IN BANGLADESH

According to the GSMA, Bangladesh is one of the fastest growing markets in South Asia. The country was home to eight operators at the end of 2015, and the number of mobile connections in the country has grown 13 times since 2006, when mobile penetration was just 13%, equating to fewer than 10 million mobile connections. Today, Bangladesh's mobile penetration rate is high at 81% (131 million mobile connections out of a population of 162 million<sup>6</sup>), yet GSMA statistics suggest that each Bangladeshi owns an average of 1.49 SIM cards, bringing the unique mobile penetration rate down to just over 55%, or 90 million people.

Bangladesh		Mar-16
<b>Total Mobile Subscribers</b>		<b>130,881,000</b>
Total Unique Subscribers – Mobile		90,283,659
Total Unique Subscribers - Mobile Internet		47,190,393
Total Unique Subscribers - Mobile Internet > 2G		31,478,559
Total Unique Subscribers - Mobile Internet > 3G + 4G		15,711,834
SIMs per unique subscriber		1.49
<b>% Unique Subscribers</b>		
Mobile Internet		52.10%
Mobile Internet > 2G		34.87%
Mobile Internet > 3G + 4G		17.40%
Mobile Internet penetration > 3G+4G		9.67%

**Table 1: Subscriber base in Bangladesh** (GSMA statistics based on BTRC reporting)<sup>7</sup>

While the past decade has seen Bangladesh make great strides in mobile penetration, in terms of broadband access there is still much work to be done to establish a Digital Bangladesh that is both inclusive and impactful. The cost of broadband connectivity in

<sup>6</sup> <http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-march-2016> Last accessed 28 April 2016

<sup>7</sup> <https://gsmaintelligence.com/markets/240/data/?report=53f870d8045d1> Last accessed 28 April 2016

Bangladesh is relatively low – fixed broadband costs just over 5% of GNI per capita, and 500MB of mobile data is priced below the UN’s 5% affordability target, at 3.49% GNI per capita. Even so, less than 10% of Bangladesh’s 162 million people are broadband Internet users. Mobile Internet penetration, despite registering 100% growth between 2014 and 2015, stands at just 29.05%.<sup>8</sup> The number of 3G and 4G connections is even lower, with just 15,711,834 subscriptions, equivalent to 9.67% of Bangladesh’s total population. The limited number of Internet users represents a significant threat to Bangladesh’s digital aspirations. There is considerable scope for market growth, and an urgent and recognised need to connect the unconnected.

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<sup>8</sup> <https://www.gsmaintelligence.com/markets/240/data/?report=55250cf3e3185> Last accessed 28 April 2016

### 3. SETTING THE STAGE FOR GROWTH

Although efforts to create a Digital Bangladesh officially began in 2008, one could argue that Bangladesh's attempts to spark an ICT revolution started decades before with a series of policy, regulatory and technology developments that were groundbreaking. In 1971, one of the very first moves Bangladesh made after it gained independence from Pakistan was to establish Bangladesh's Telegraphs and Telecommunications Department (part of the Post and Telecommunications Ministry), responsible for managing the country's telecoms sector. In 1979, an ordinance created the Bangladesh Telegraph and Telephone Board (BTTB) and gave it powers to issue licenses for telecom and wireless services.<sup>9</sup> Bangladesh's mobile revolution began ten years later, in 1989, when the national government service provider, Bangladesh Rural Telecommunications Authority (BRTA), and a private operator, Sheba Telecom, were permitted to introduce telecom services to 200 upzillas (sub-district units) each,<sup>10</sup> six years before the start of commercial mobile services in India, and five years before the start of such services in Pakistan. Later that year, a cellular mobile company, Pacific Bangladesh Telephone Limited, and its competitor, Bangladesh Telecom obtained licenses to operationalise their services.

By 1997, less than a decade after the start of the commercial services in the country, Bangladesh had six operators offering mobile services – Telecom Malaysia, Grameen Phone, Pacific Bangladesh Telecom Limited, Bangladesh Telecom, Sheba Telecom and the BRTA.

Effective competition between operators plays an instrumental part in expanding mobile service offerings, access, and usage; inadequate competition can have the opposite effect. Though there were already six operators in the country by 1997, the growth in penetration in Bangladesh remained slow. Indeed, mobile penetration stalled at less than 1% until 2003. What was needed was a policy and regulatory environment that encouraged competition between players in the market, rather than one that simply encouraged players to enter the market.

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<sup>9</sup> [http://bdlaws.minlaw.gov.bd/print\\_sections\\_all.php?id=587](http://bdlaws.minlaw.gov.bd/print_sections_all.php?id=587) Last accessed 28 April 2016

<sup>10</sup> There are 488 Upazilas in Bangladesh today

## A. THE NEED FOR POLICY DIRECTION

The fact that mobile penetration growth remained slow in the late 1990s – despite market competition – highlighted the need for targeted policy and regulatory measures to stimulate growth. The 1998 Telecom Policy (which wasn't enacted until 2001) and the Telecom Act of 2001 paved the way for the establishment of the country's independent ICT regulator – the Bangladesh Telecom Regulatory Commission (BTRC). The 1998 Policy and the 2001 Act promoted universal ICT access as critical to development and prioritised the delivery of modern, efficient, and cost-effective services in Bangladesh. They also recognised the need for a truly market-oriented regime that would encourage private sector operators to invest funds in the development and expansion of the mobile sector.

The wider 2002 national ICT policy recognised the importance of expanding ICT infrastructure and access to information for sustainable socio-economic development, describing a framework for Bangladesh to become a knowledge society by 2006.<sup>11</sup> The development of this policy encouraged Bangladesh's ICT sector to become more market-oriented – a shift that enabled important progress across the sector. Mobile penetration, for example grew from 0.78% in 2002 to 13% by 2006.

These policy measures were backed by implementation. In 2006, Bangladesh took a significant step toward achieving its “knowledge society” goal when it joined the Western Europe 4 (SeaMeWe-4) cable. The cable, which landed in Cox's Bazaar on the country's west coast, enabled greater and more cost effective international bandwidth capacity. However, the impact of this new cable was limited, due, in part, to the nature of the way the international gateway was run.

Bangladesh's partnership in this project was facilitated through the Bangladesh Submarine Cable Company Limited (BSCCL), which is responsible for providing all related services.<sup>12</sup> The fact that BSCCL remained a public limited company under the Ministry of Posts and Telecommunications, with exclusive rights to the landing station limited the benefits competition would have on services and the wholesale cost of bandwidth. All fibre-optic services in the country relied upon the country's connection

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<sup>11</sup> <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan040895.pdf> Last accessed 28 April 2016

<sup>12</sup> <http://www.bscl.com.bd/> Last accessed 28 April 2016

to the cable, which was susceptible to outages as a result of damaged or otherwise non-operational cables.

In light of the challenges with Western Europe 4 (SeaMeWe-4), Bangladesh has joined the consortium for SEA-ME-WE5. A connection to this cable will provide 100Gbps (gigabit per second) technology – ten times faster than the current system.<sup>13</sup> Construction of the SEA-ME-We 5 cable started in September 2014 and is expected to become operational in November 2016. The hope is that Bangladesh will see the benefits of competition for international bandwidth, as well as faster, cheaper retail services in the near future. Of course, the success of SEA-ME-We 5 and its impact on competition, affordability and access, will depend on how the new cable is managed. The hope is that lessons from the management of SeaMeWe-4 will be learnt and it will be truly liberalised and run on open access principles.

## B. THE NEED FOR MORE ADVANCED POLICY & REGULATORY MEASURES

Despite the sectoral developments that followed passage of the 1998 and 2002 policies, the development of the ICT sector has remained limited – by 2008, mobile penetration stood at 30% and the rate of Internet usage at 2.5%. While these rates represented significant growth, more extensive growth has been barred by the sector’s limited capacity to respond to overwhelming and pent-up demands for services, the high cost of access at the wholesale and retail levels, and outdated infrastructure technologies. Further policy and regulatory responses were needed to address these structural problems. In 2008, the newly formed National ICT Policy Review Committee developed the “National ICT Policy 2009,” which stated:

*In a knowledge-based society, ‘knowledge’ or ‘information’ is regarded as the most productive resource. Needless to say, there is some distance to go before that level of development in ICTs is achieved. In view of this, the ICT stakeholders felt the need to revise the current ICT Policy in line with the national goals, objectives and capabilities.<sup>14</sup>*

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<sup>13</sup> <http://www.bbc.co.uk/news/technology-18366007> Last accessed 28 April 2016

<sup>14</sup> <http://a2i.pmo.gov.bd/ict-policy-2009> Last accessed 23 September 2015



To cover the “distance left to go” and to align the policy with the national goals and priorities, the new policy sought to remove the remaining barriers to access, including the lack of infrastructure and low levels of affordability. Far more detailed than its 2002 predecessor, and with explicit short-, medium-, and long-term goals, the 2009 Policy outlined ten focus areas and their related objectives. These ten focus areas further spelled out over 300 action points, thirteen of which related to universal access. These included plans to: develop a fund for universal access by 2011; introduce 3G services by 2011; introduce a simplified licensing regime with technology neutral unified licenses by 2011; follow international best practices in spectrum allocation and trading by 2014; create Broadband Wireless Access Network (through WiMax and/or other modern technologies) throughout the country by 2014; achieve 30% broadband use by 2014 or before; and reach 90% tele-density by 2019. Some of these targets, although missed, are still pursued by the government.

To supplement the 2009 ICT Policy – and in recognition of the importance of broadband access to achieving the Policy’s goals – the Bangladesh government developed the 2009 Broadband Plan, which envisions a “people-centred, development-oriented society where everyone...[can] access, utilize, and share information and knowledge easily and efficiently.”<sup>15</sup> The Plan lacks the detailed implementation plans and budgets usually found in national broadband plans that are in line with good practice. However, it is explicit about the need to “ensure affordable, highly advanced and secured broadband”, and it outlines a number of steps for Bangladesh to achieve this goal, briefly reiterating actions detailed in the 2009 ICT policy.

Specifically, the 2009 Broadband Plan spells out the government’s intention to facilitate a technology neutral approach, explore fiscal incentives for broadband deployment, follow ITU recommendations with respect to licensed and unlicensed spectrum, and raise awareness about the benefits of broadband to increase demand for broadband services among Bangladeshis. The government has also begun implementing an infrastructure policy that has further incentivised infrastructure sharing.

With the understanding that affordable access is a pre-requisite for a Digital Bangladesh, the government has also taken specific measures to tackle the multi-faceted challenge of affordability by targeting wholesale and retail costs. Some of the actions have proved controversial because, despite public pronouncements about

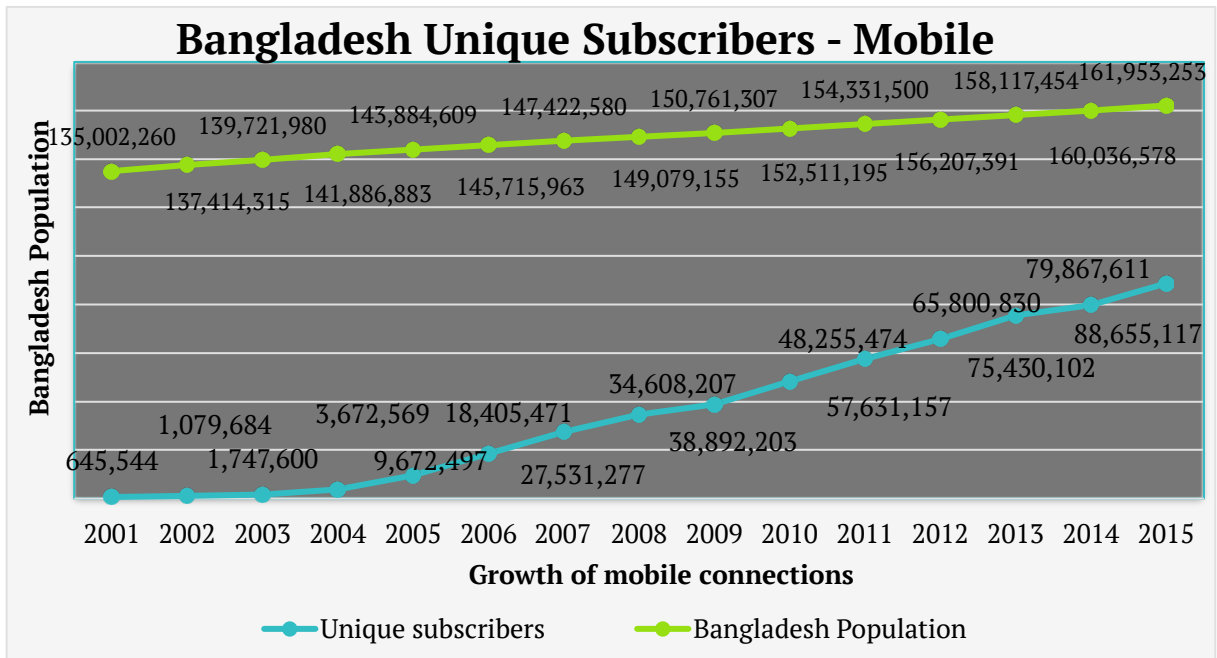
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<sup>15</sup> [http://www.btrc.gov.bd/sites/default/files/national\\_broadband\\_policy\\_2009\\_0.pdf](http://www.btrc.gov.bd/sites/default/files/national_broadband_policy_2009_0.pdf) (Page 20) Last accessed 28 April 2016

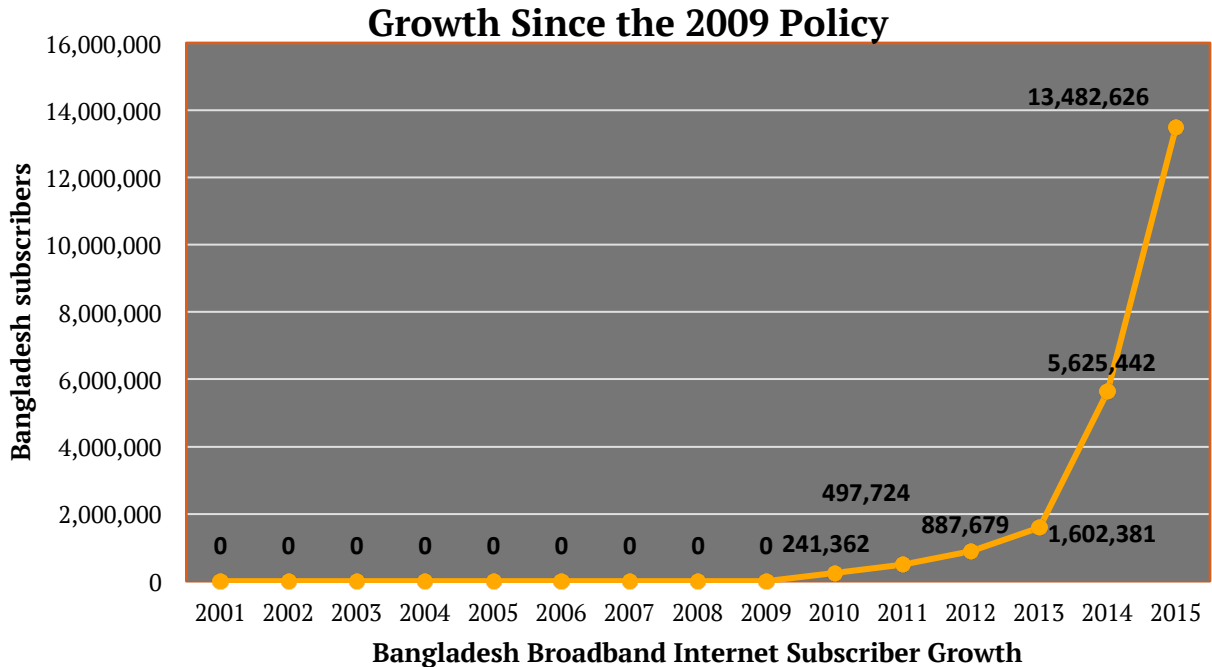
wishing to facilitate the market, many efforts have appeared to be more “interventionist” in nature. Such moves range from a review of Internet IP and bandwidth prices by BTRC in order to set an affordable price for all broadband services, to the establishment of a ceiling in order to encourage service providers to use local and national peering services. In the face of criticism, the government and its supporters will argue that much of BTRC tariff regulation has been cost-based. For example, with the support of ITU, BTRC is using cost models to determine interconnection and tariffs. Moreover, rather than stifling the market, they would argue the measures taken have actually enhanced competition, making it more fair and more transparent.

## 4. THE IMPACT OF BANGLADESH'S POLICY CHANGE

Since the launch of the 2009 policy, the number of Internet users in Bangladesh has increased more than threefold, from 3.10% to 9.98%, and the speed of growth has climbed from 0% in 2010, to 30% in 2013, and 47% in 2014. The policy has also been instrumental in seeing a phenomenal growth in mobile subscriptions, from nearly 34 million unique subscribers to 87 million at the end of 2015.



**Graph 1: Mobile subscriber base in Bangladesh (2001-2015)**

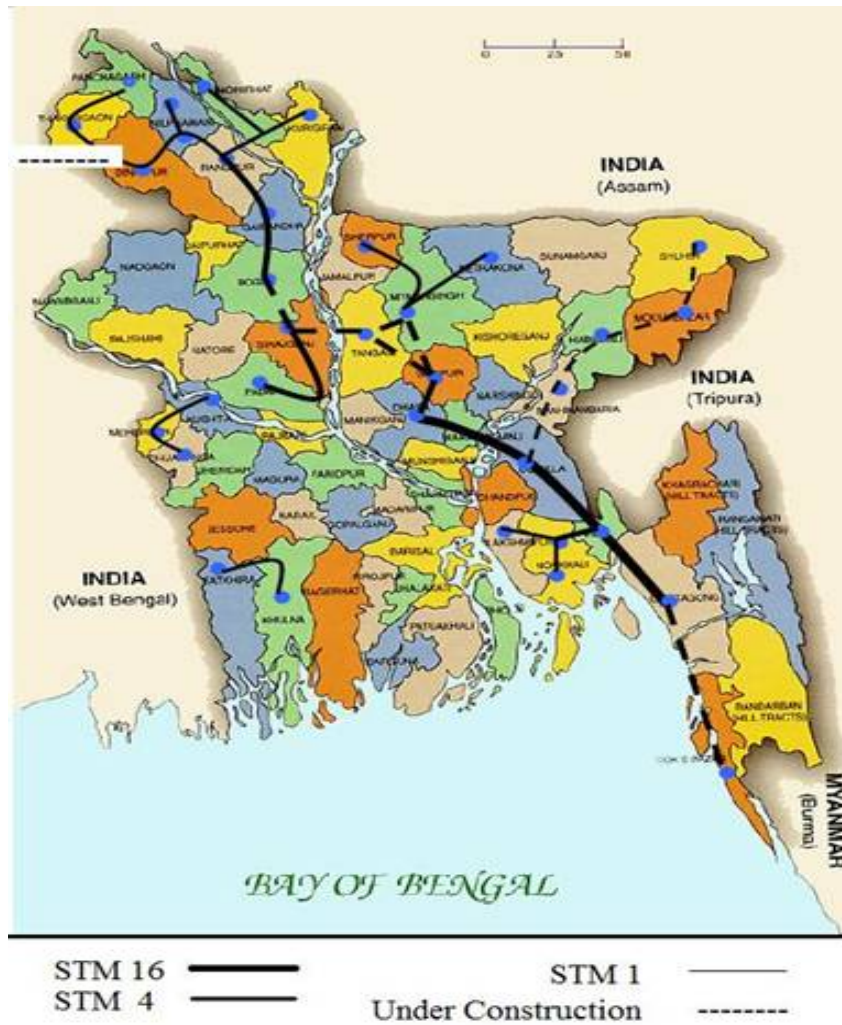


**Graph 2: Broadband subscriber base in Bangladesh (2001-2015)**

In September 2013, the government licensed five operators to provide 3G services; today, eight operators provide services in all district centres of the country, and mobile broadband penetration has increased by 56 times to 81%. More than 90% of the country is now covered by a mobile signal and, according to the Government of Bangladesh, population coverage stands at 99%. The development of fibre optic infrastructure has progressed swiftly – by May 2014, Bangladesh had 14,776km of fibre optic cables cutting across the nation.<sup>16</sup>

Increased competition and innovation in Bangladesh’s retail sector is also evident in the wholesale sector. The government granted six operators international terrestrial cable licenses in order to stimulate competition for international connectivity and mitigate the risk of interrupted services. These international terrestrial cable operators connect Bangladesh with the globe through an Indian cable landing station. The government has been successful in introducing competition in the bandwidth pricing amongst the six operators.

<sup>16</sup> [http://www.btrc.gov.bd/old/index.php?option=com\\_content&view=article&id=126&Itemid=501](http://www.btrc.gov.bd/old/index.php?option=com_content&view=article&id=126&Itemid=501) Last accessed 28 April 2016



**Figure 1: Status of Fibre Optic Cable in Bangladesh**

The government of Bangladesh has also taken measures to create competition in international gateways, with 37 licenses issued between 2011 and 2012. Partly as a result of these measures, the price for international bandwidth fell 20% between 2011 and 2012, from Tk10,000 (US\$127) to Tk8,000 (US\$102) per Mbps. The hope is that prices will fall even further over the coming years – and they will need to if Bangladesh is to meet its Digital Bangladesh ICT objectives. Indeed it is clear that, even with the recent developments in infrastructure and access, affordability in Bangladesh continues to be a major challenge.

## 5. THE REMAINING BARRIERS TO ACCESS

Despite Bangladesh’s relatively low Internet prices, much work remains to make affordable access for all citizens a reality. The current level of Internet usage remains alarmingly low – India’s broadband penetration rate of 25% is below the regional average of 32%, yet it is still over twice that found in Bangladesh (9.67%).

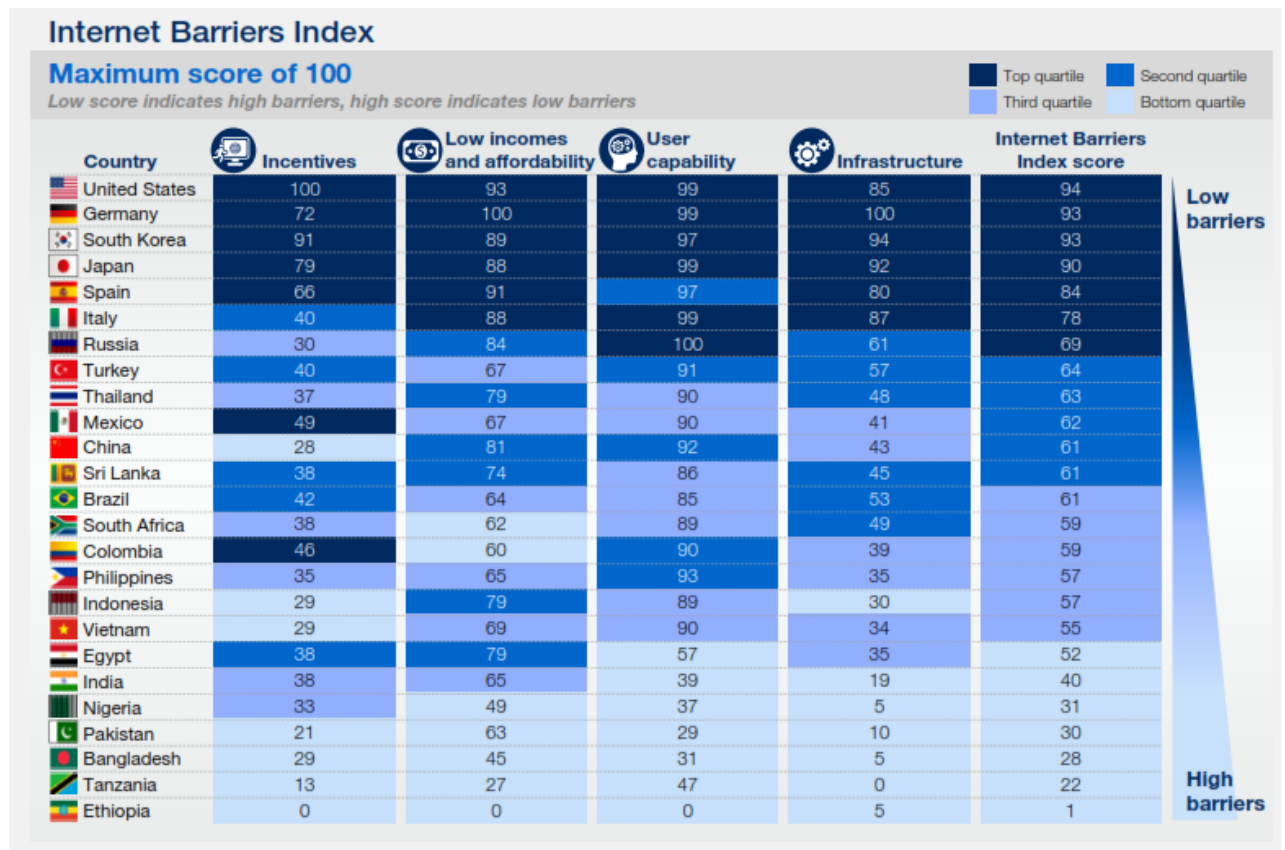
A4AI’s own analysis further highlights the affordability challenge in Bangladesh. A4AI’s 2015-16 Affordability Drivers Index – which looks at the affordability environment across 51 developing countries by assessing infrastructure and access drivers – ranked Bangladesh 33rd; only Nepal ranked lower among Asian countries.<sup>17</sup> While Bangladesh scores relatively high on communication infrastructure, its low access score reflects the low level of access in the country, which continues despite low data prices.

Rank	Country	Communication Infrastructure	Access	Overall Composite Score
1	Colombia	60.85	69.45	65.32
3	Malaysia	56.69	69.57	63.28
13	Thailand	44.13	60.72	52.39
22	China	41.82	47.99	44.74
24	Viet Nam	32.33	56.74	44.37
25	Pakistan	44.97	43.60	44.37
27	Myanmar	53.67	31.88	42.57
28	Philippines	37.07	47.83	42.24
29	Indonesia	39.09	45.70	42.19
31	India	42.88	37.85	40.12
33	Bangladesh	45.04	33.73	39.13
42	Nepal	24.47	35.33	29.48
51	Yemen	1.81	0.0	0.0

**Table 2. A4AI 2015-16 Affordability Drivers Index, Asian Country Rankings**

<sup>17</sup>A4AI 2015-16 Affordability Report. <http://a4ai.org/affordability-report/report/2015>

A recent McKinsey & Company assessment of barriers to Internet adoption ranked Bangladesh 23<sup>rd</sup> out of 25 countries.<sup>18</sup> Limited levels of infrastructure, low user capability, and few incentives to use the Internet helped to drive Bangladesh’s poor score. The study outlines five major challenges to affordability in Bangladesh: (1) low income; (2) lack of consumer purchasing power; (3) costs associated with device ownership; (4) cost of data plans; and (5) consumer taxes and access fees. The challenges posed by low income and consumer purchasing power are long-standing, multifaceted, and notoriously difficult to resolve.



**Table 3: Internet Barriers Index Rankings** (McKinsey & Company)

The challenges around the high cost of devices and data plans, and consumer taxes have more potential to be tackled through policy and regulatory reform, especially taxation measures, which have the power to reduce these costs quickly.

<sup>18</sup> McKinsey & Company (2014). Offline and falling behind: barriers to internet adoption.

## A. DEVICE COSTS

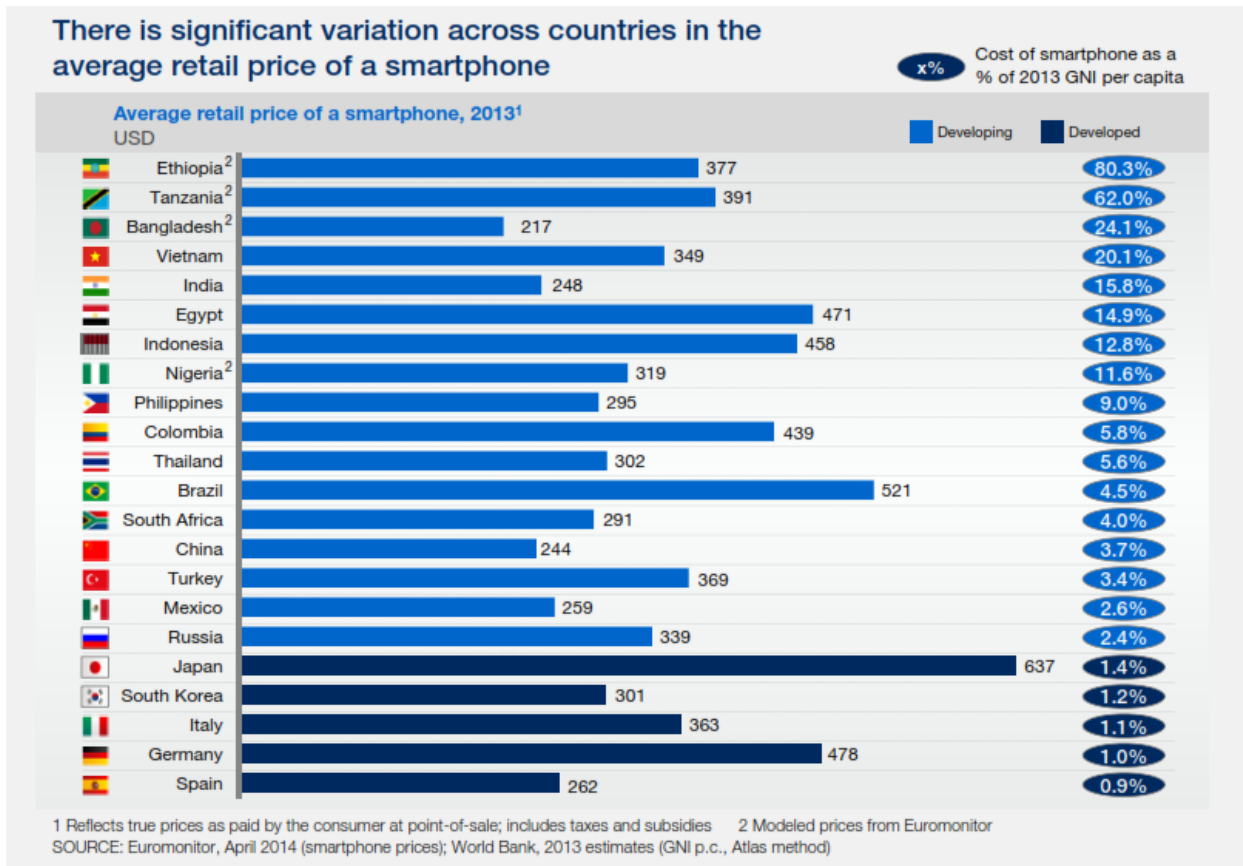
The cost of a smartphone in Bangladesh at the end of 2013 was 24.1% of GNI per capita. In addition to the cost of the device, there are ongoing costs associated with ownership, such as maintenance and charging; these costs can be especially prohibitive in rural and other areas that lack a reliable electric supply and skilled manpower to repair devices. These high costs – in a country in which the vast majority of people live in poverty – have led to low levels of smartphone penetration and stunted growth in broadband connectivity. Currently, there is a 25% tax on the import of devices and a 60% tax on accessories. In June 2014, the government proposed to levy an additional Value Added Tax (VAT) of 15% on the import of handsets<sup>19</sup> – a policy that would have negatively affected demand for devices and would have impaired Bangladesh’s efforts to achieve middle-income status. Recognising this impediment, the state minister has appealed to the finance ministry for a review.<sup>20</sup>

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<sup>19</sup> <http://en.prothom-alo.com/bangladesh/news/48584/Budget-15%25-VAT-on-mobile-handset-import> Last accessed 28 April 2016

<sup>20</sup> <http://newagebd.net/224042/tarana-for-review-of-tax-vat-rates-on-mobile-handsets/> Last accessed 28 April 2016





**Table 4: Cost of a Smartphone** (McKinsey & Company)

Reducing taxes on smartphones could reduce the cost of devices and increase broadband penetration. When the government of Kenya removed the VAT on mobile handsets in 2009, demand for devices increased by 200%, and mobile penetration increased from 50% to 70%. Although the average retail price of a smartphone has come down considerably from its 2013 figure of US\$217, device costs in Bangladesh remain among the highest in the region.

## B. DATA COSTS

The ability (or inability) of users to pay for broadband access is another major barrier to adoption and use. In 2014, the cost of a 500MB mobile broadband connection in Bangladesh was 3.49% GNI per capita, a figure less than the UN target price of 5% or less of average income. However, given that 76.4% people in Bangladesh live on less than \$2 per day, the cost of broadband remains unaffordable for the majority of

Bangladeshis. Tackling the affordability challenge could also have a dramatic impact on persistent challenges to adoption, resulting in more incentives for the creation and use of local content, improved user capability through greater usage, and greater investment from the private sector seeking to expand their markets and meet Digital Bangladesh objectives.

Mobile data prices in Bangladesh are three times more than those of regional neighbours, including India, Pakistan and Sri Lanka. Stakeholders in Bangladesh have highlighted the pricing challenge. According to a report in the Dhaka Tribune<sup>21</sup> in June 2013, mobile operators in Bangladesh were charging around Tk275 to Tk345 (US\$3.50 to 4.40) for a 1GB per month Internet package. Compare this with Pakistan, where operators were charging US\$1.40 for the same monthly allotment, or India, where the cost was estimated at US\$2.12.

## C. INFRASTRUCTURE

Tackling the pricing challenge will require balancing the need to lower prices with the need to ensure operators get a return on investment sufficient to spur future investments. Bangladeshi operators already cite low average revenue per user (ARPU), which fell from \$30 in 1997 to \$2 in 2013, as a major challenge.<sup>22</sup> Operator revenues are necessary both to meet capital and operational expenses and to reinvest in infrastructure and services. Getting the balance right should enable operators to reinvest in the sector and tackle the infrastructure problem, which not only includes access, but also issues around quality of service and speed.

Infrastructure sharing is one way in which operators across the globe have been able to achieve this balance, reducing capital and operations expenditure, while extending the reach of their networks. According to a recent study<sup>23</sup>, a green-field fibre network can cost US\$20 million per 1000km of network. By sharing network rollout with two other operators, an operator can save two-thirds of this cost. Sharing passive infrastructure (e.g., powerlines, roads) with other sectors could save costs up to 80%, or US\$16 million

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<sup>21</sup><http://www.dhakatribune.com/money/2013/jun/23/mobile-internet-costlier-bangladesh-neighbouring-countries#sthash.D4b8fZHH.dpuf> Last Accessed 3 August 2015

<sup>22</sup> <https://gsmaintelligence.com/research/2013/07/bangladesh-asias-untapped-mobile-broadband-opportunity/394/> Last accessed 23 September 2015

<sup>23</sup> Unlocking broadband for all: broadband infrastructure sharing policies and strategies in emerging markets. [https://www.apc.org/en/system/files/APC%20-%20Unlocking%20broadband%20for%20all%20Full%20report\\_1.pdf](https://www.apc.org/en/system/files/APC%20-%20Unlocking%20broadband%20for%20all%20Full%20report_1.pdf) Last accessed 23 September 2015.

between three operators. Thus, the cost to each operator for the rollout of 100km of fibre would be reduced from US\$20 million to US\$1.3 million.

In 2011, the BRTC amended their 2008 guidelines<sup>24</sup> to create a more favourable environment for infrastructure sharing, but measures on this front have not gone far enough, and the average tenancy ratio in the country sits at a current level of 1.3.<sup>25</sup> Since 2011, however, infrastructure-sharing deals between Bangalink and both Grameenphone and Robi, as well as between Airtel and CityCell, have all taken place. Bangalink, Robi and Airtel have shared around 25% of new towers, and also forecast 20-25% growth in sites (tenancies plus new builds) in the next 12-18 months.

Like many developing countries, demand for sharing is growing and commercial deals between operators, as well as between operators and tower companies, are on the rise. While challenges, including population density in urban areas, population dispersal in rural areas, and the cost of real estate persist, such infrastructure sharing arrangements will be necessary. However, the government of Bangladesh could do even more to incentivise sharing, including assisting sharing companies to secure rights of way at more economically viable rates.

## D. SPECTRUM

Spectrum is said to be the single most important resource for mobile operators, and the purchase of spectrum licenses their most important investment. Understandably, getting this important investment right is critical for operators, as well as for countries who essentially lease their scarce national resources to operators, which should ultimately use it to better the country by providing widespread, high-quality services.

Last year, questions were raised about the price BTRC set for new spectrum allocations. Moreover, there has been a difference in opinion between the regulator, BTRC, and the Prime Minister's Office (PMO) about the base price for blocks in the 1800 MHz and 2100MHz spectrum bands to be used for 3G services. Bangladeshi operators have not shown a great deal of interest in forthcoming spectrum. The lack of clarity over pricing and the auction process must have contributed to this, undermining confidence in the process and their ability to see necessary return on investment. Indeed, the auction of blocks in the 1800Mhz and 2100Mhz bands was deferred for the third time in May of

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<sup>24</sup> [http://www.btrc.gov.bd/sites/default/files/infrastructure\\_sharing\\_guidelines\\_0.pdf](http://www.btrc.gov.bd/sites/default/files/infrastructure_sharing_guidelines_0.pdf) Last accessed 23 September 2015.

<sup>25</sup> [www.towerexchange.com](http://www.towerexchange.com) Last accessed 23 September 2015

2015, further undermining confidence, and the price increased from \$22 million per MHz to \$30 million per MHz.

The sooner Bangladesh can resolve the issues and provide clarity to all stakeholders on the process, the better. Having said that, Bangladeshi operators have indicated that the acquisition of spectrum will remain a secondary issue while the SIM replacement tax issue that they face with the Bangladesh Revenue Board remains unresolved. Indeed, there seems little point in paying millions for spectrum to provide 3G services if the cost of SIM cards, which are now negligible in most countries, remains a serious barrier to usage for many Bangladeshis (see below for more details).

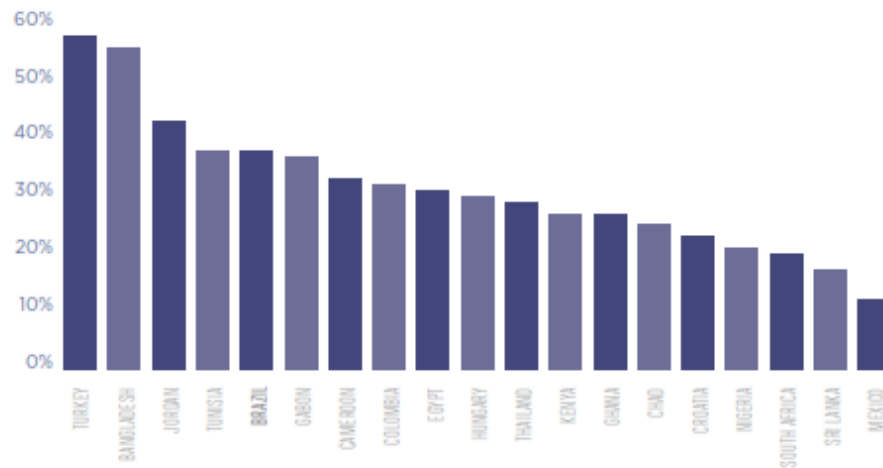
## E. TAXATION

It is imperative that fiscal policy is conducive to ICT goals; all too often government ICT policy focuses on universal access, while its fiscal policy increases the overall cost of access. Like a number of countries, the taxes imposed on the mobile sector – the engine of growth for Bangladesh’s ICT-related goals – are not conducive to increasing affordability and access. Bangladesh has one of the highest tax rates for mobile services in the world, with operators paying tax at 60% of revenue generated.<sup>26</sup> Moreover, some taxes have been subject to an 8% yearly increase since 2008. Today, this means over 70% of mobile service taxes are sector-specific taxes, higher than the estimated global average of about 40%.

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<sup>26</sup> [http://www.gsma.com/publicpolicy/wp-content/uploads/2014/02/Mobile-taxes-and-fees-A-toolkit-of-principles-and-evidence\\_fullreport-FINAL1.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2014/02/Mobile-taxes-and-fees-A-toolkit-of-principles-and-evidence_fullreport-FINAL1.pdf) Last accessed 23 September 2015.

## THE BURDEN ON MOBILE SERVICES AND AVERAGE TAX BURDEN ACROSS MARKETS<sup>17</sup>



(Source: Deloitte analysis)

**Graph 3: Tax Burden on Various Markets (Deloitte Analysis)**

The government of Bangladesh might also consider removing the tax on SIMs and SIM replacement cards. At present there is a US\$3.90 tax on SIM cards and a US\$1.30 tax on their replacements. While this may help raise some revenue for the government and the sector, it also impacts sector growth, foreign direct investment, and of course, the opportunities for Bangladesh’s citizens to use ICTs and broadband to improve their lives. This is extremely concerning when one realises that blanket, regressive taxes, like the SIM card tax, hit those people at the bottom of the pyramid the hardest. The digital Bangladesh vision of offering services to all citizens in an equitable manner is impeded by these practices. This must be tackled with a more conducive taxation policy that forgoes short-term revenue in favour of medium- to long-term sectorial development.

## 6. QUESTIONS FOR BANGLADESH:

- Will Bangladesh's future spectrum auctions be in line with international best practice?
- What impact will the SEA-ME-WE 5 cable have on wholesale and retail prices?
- With three service providers now available in all district capitals, will Bangladesh see the sharp increase in mobile broadband usage that it needs in order to achieve middle-income status by 2021?
- Will the terrestrial cable that the government of Bangladesh is implementing be managed using open access principles?
- Will Bangladesh reduce its taxes on services and handsets so that its tax regime is in line with its ambitions for ICT and broadband use?
- Will the SIM card replacement tax issue be resolved so that this barrier to entry is removed or decreased?
- How will Bangladesh stimulate local content production and demand?
- Can Bangladesh increase awareness about the benefits of the Internet?