

# Online content and applications drove over IDR89 trillion in economic value for consumers and telecom operators in Indonesia in 2015

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Online content and applications (or online services, sometimes known as OTT) are used regularly by over 50 million Indonesians, according to the ITU.<sup>1</sup> Through websites or apps, Indonesians benefit from the many messaging services, e-commerce platforms, educational opportunities and entertainment options that are making the internet increasingly part of daily life. Our research suggests that in 2015, Indonesian consumers valued these online services at IDR89 trillion (USD6.5 billion). Of this, IDR48 trillion were paid to telecom operators for internet access. In contrast, the digital advertising spend that sustains many online services was only worth around IDR13 trillion (USD1 billion) in 2015.<sup>2</sup>

Much of this value flows directly to Indonesian consumers, who benefit from free email and messaging, platforms to buy and sell goods, access to information, education and healthcare, often for free. We conducted a survey in late 2015 to establish how much additional value Indonesians say they get from online services, beyond the price they pay for data connectivity. This showed that the value that Indonesian consumers retained from their internet access was IDR41 trillion (USD3 billion).

Online services create value for others too, including for the telecom operators who sell internet access services to consumers. As people in Indonesia and around the world massively adopt more advanced services such as online video, they are likely to reduce their use of voice and SMS services. At the same time, however, they are willing to buy more and more data from telecom operators, in order to access these advanced online services.

These data packages generate an increasingly large proportion of operators' revenue and profit: since 2010, the telecom industry as a whole has seen both total revenues and profits grow every year. For the three largest operators,<sup>3</sup> overall EBITDA<sup>4</sup> margin was 47% of revenue, very healthy by international standards.<sup>5</sup> Cash flow from operations (after investments) were around IDR30 trillion (USD2.2 billion) every year from 2010 to 2015. Data revenue has been a key driver of growth and profits, increasing at the rate of 29% every year between 2010 and 2015, when it reached IDR48 trillion (USD3.5 billion).

Indonesians are more and more likely to want to go online and access world class internet services: there will be 125 million Indonesians online by 2020. Our consumer survey found that the usage of popular applications is very regular. For example, 90% of mobile users and 94% of fixed users access social networking sites or apps at least several times a week. Likewise, 78% of mobile users and 85% of fixed users browse the web at least several times a week. Many of the most-visited websites, including those provided by international providers,

<sup>1</sup> Source: ITU ICT indicators, 2015

<sup>2</sup> Source: eMarketer

<sup>3</sup> These are Telkom Group, Indosat Ooredoo, XL Axiata, with Hutchison 3G Indonesia (H3I) in fourth position

<sup>4</sup> Earnings before interest, tax, depreciation and amortisation, which is a measure of financial profitability before capital investments

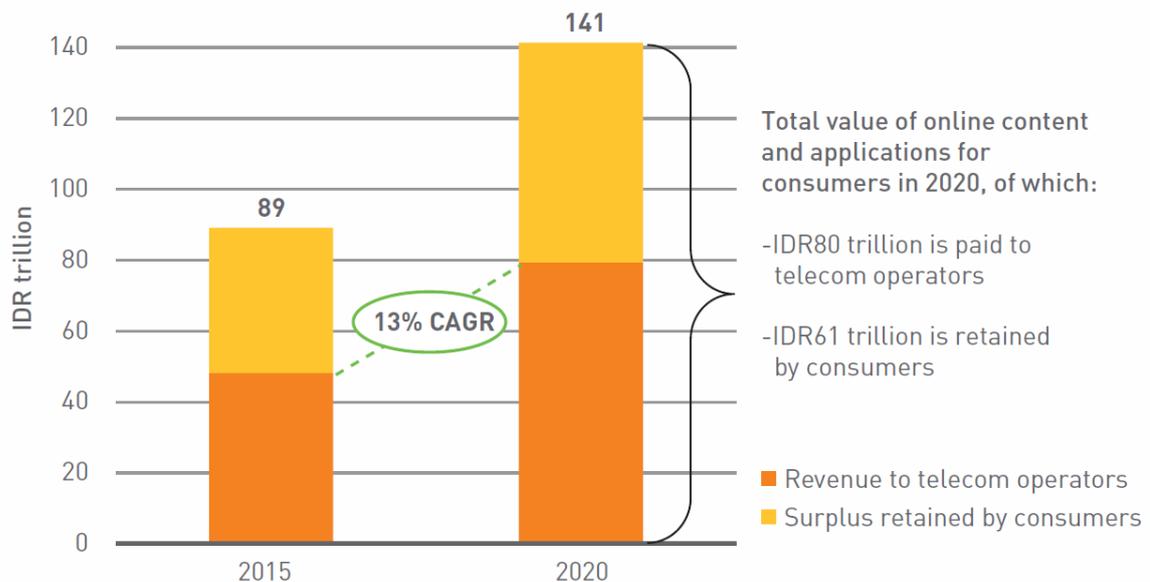
<sup>5</sup> Comparable to Malaysia and significantly higher than in many developed countries (e.g. 25-30% in the UK)

are available in Bahasa Indonesia (75% of the top 20 websites). Many popular websites are now provided by Indonesian companies (35% of the 40 most-visited websites).

Looking to the future, online content and services are expected to provide more benefit to Indonesian consumers and telcos every year. Globally, internet users are moving away from traditional communication services (such as SMS) and towards enriched and advanced communication tools, such as WeChat, Whatsapp or the ever-popular BBM. This has benefits across the telecoms ecosystem; it is good for Indonesians, who can communicate more, and it is good for telecom operators, who will see increased revenues from data.

By 2020, we estimate that the total economic value generated to consumers and telcos from online services will exceed IDR140 trillion (over USD10 billion). This is a conservative estimate, as it does not include the huge productivity gains and the social benefits that could from more Indonesians being able to access online services.

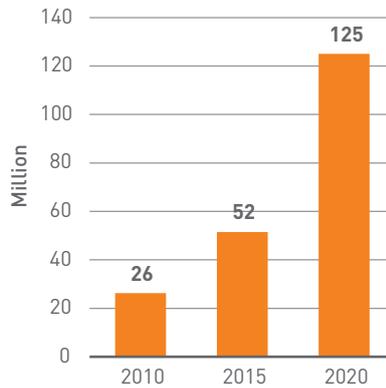
## ONLINE CONTENT AND APPLICATIONS DROVE OVER IDR89 TRILLION IN ECONOMIC VALUE FOR CONSUMERS AND TELECOM OPERATORS IN INDONESIA IN 2015



# HOW ONLINE CONTENT AND SERVICES CREATE VALUE

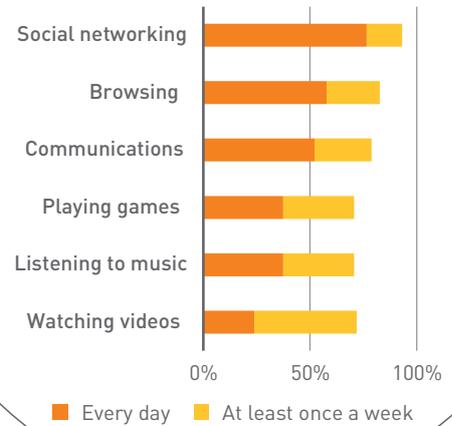
More Indonesians go online every year

**1** 125 million Indonesians will be online in 2020, up from 50 million in 2015

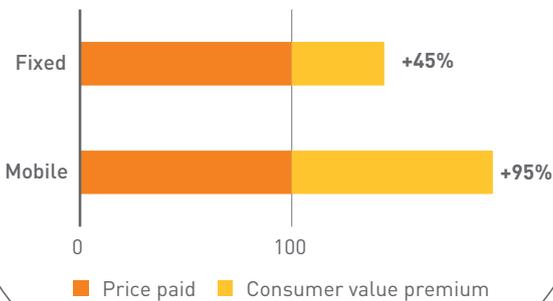


Indonesians go online in order to access content and applications

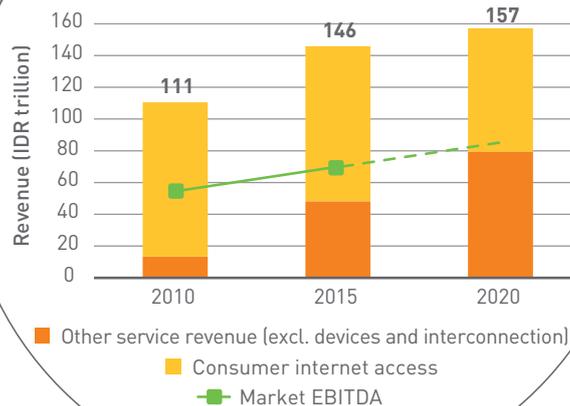
**2** People connect to the internet to use applications and consume content



**4** Consumers gain huge benefits from connecting to the internet



**3** Operators received IDR48 trillion in 2015, expected to grow to IDR80 trillion in 2020



This enables people to get extra value

To access the internet, Indonesian consumers pay telecom operators for data packages

## Introduction

With over 51 million people regularly online at the end of 2015 according to the ITU, 19% more than in 2014, Indonesia's internet is booming. By 2020, the ITU expects that 125 million Indonesians will be online. As take-up increases, existing internet users upgrade their devices and services to be able to use ever more advanced services. This dynamic benefits both consumers and industry players.

Consumers in Indonesia put a high value on access to the internet, driven by the wide variety of online content and applications they can access today. The benefit that Indonesians get from these online services (sometimes referred to as 'over-the-top' or OTT services) is visible in how popular internet access already is and how fast take-up is increasing.

With ever more people connecting to the internet, the vast majority through a mobile phone, telecom operators have transformed and now derive much of their revenue from internet access and other data services: in 2015, service revenues for telecoms operators in Indonesia were IDR146 trillion (USD11 billion), of which IDR48 trillion (USD3.6 billion) were directly related to internet access.<sup>6</sup>

Online content and application providers have also benefited through higher usage of their content and services, although eMarketer estimated that the total digital advertising spend in 2015 was around IDR13 trillion (USD1 billion), less than one-tenth (8.5%) of the revenue of the four largest telecom operators.<sup>7</sup>

## Indonesia is experiencing strong growth in internet take-up and usage

As in all emerging markets in Asia-Pacific, the internet in Indonesia continues to grow rapidly. Growth in both take-up and usage of internet services has been strong, although there is still much work to do in order to achieve universal connectivity for all Indonesians.

Between 2010 and 2015, the internet in Indonesia has grown rapidly. A total of 51.5 million people were connected at the end of 2015 according to the ITU, representing a growth of 14% on average every year (shown in Figure 1). At the same time, usage has expanded rapidly as consumers have taken advantage of attractive content and services. Total mobile internet usage in Indonesia has grown by 110% annually in this period (Figure 2). The development of extensive 3G networks by telecom operators and the emergence of highly relevant, high quality content and applications that Indonesians want to use have both been critical to enabling this growth in usage.

Most observers expect this strong growth to continue into the future: the ITU projects that there will be 125 million internet users in Indonesia in 2020, a growth of 19% every year (Figure 1). Analysys Mason Research expects these users to consume a total of 672PB of data by 2020, a growth of 51% every year (Figure 2).

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<sup>6</sup> Revenue from internet access services for the three largest telecom providers totalled IDR45 trillion (Telkom: IDR32 trillion, Indosat: IDR7 trillion and XL Axiata: IDR6.2 trillion); Analysys Mason estimates were used to extrapolate this to the rest of the market

<sup>7</sup> Source: <http://www.emarketer.com/Article/Indonesia-Boasts-Highest-Digital-Mobile-Internet-Ad-Growth-World/1012341>

Figure 1: Internet users<sup>8</sup> in Indonesia [Source: ITU, 2015]

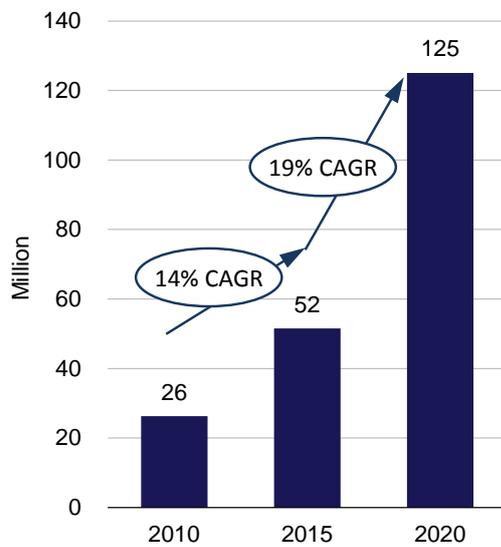
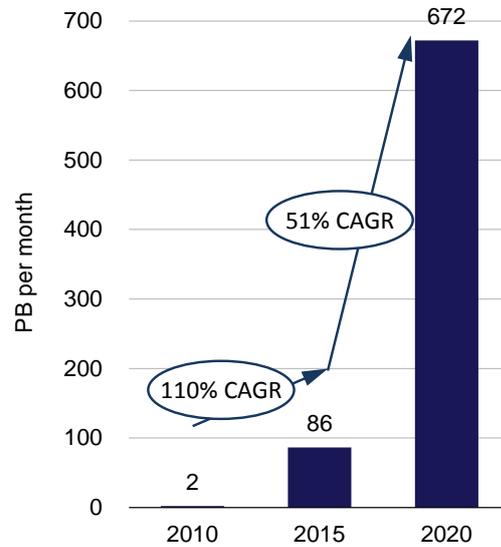


Figure 2: Mobile internet usage in Indonesia [Source: Analysys Mason Research, 2016]



## Consumers connect to the internet in order to use ever more advanced content and applications available online

People connect to the internet, through services that they buy from telecom operators, in order to access the content and applications that are available online. Furthermore, as people wish to use ever richer content, such as videos, online games and other innovative services, they upgrade their internet access from narrowband (e.g. through 2G) to broadband (3G, and now 4G), buying bigger bundles or even unlimited data packages. In doing so, Indonesian consumers are willing to spend more money on internet access services.

This is borne out strongly in a consumer survey of fixed and mobile internet users in Indonesia, which Analysys Mason commissioned in August 2015. We surveyed 357 fixed internet users, and 800 mobile internet users in urban and rural areas. We found that the usage of popular applications is very frequent (Figure 3 and Figure 4). For example, 90% of mobile users and 94% of fixed users access social networking sites or apps at least several times a week. Likewise, 78% of mobile users and 85% of fixed users browse the web, accessing websites developed by online content and application providers several times a week. Many more people watch videos on their mobile phones (75% do so at least weekly) than have a 3G connection (47.6% of mobile users in 2015), by using Wi-Fi, downloading files or side-loading from their friends, which shows huge demand for advanced services.

<sup>8</sup> This is defined by ITU as people who have used the internet in the last three months; figures are rounded, which may result in small inconsistencies between charts.

Figure 3: How often do you use your mobile internet connection for the following services, n=800 [Source: Analysys Mason, 2015]

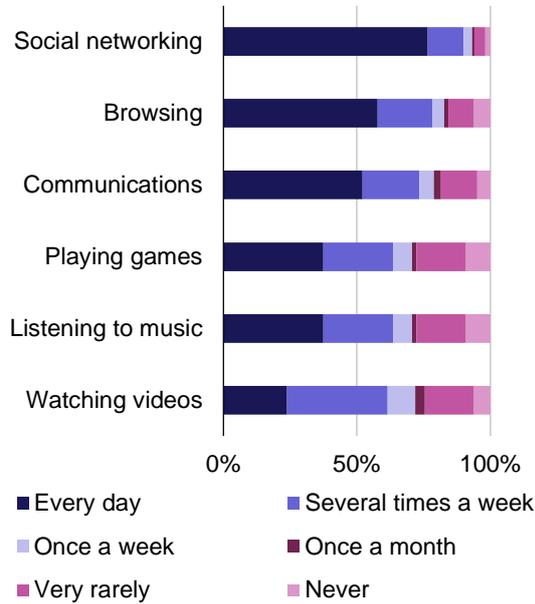
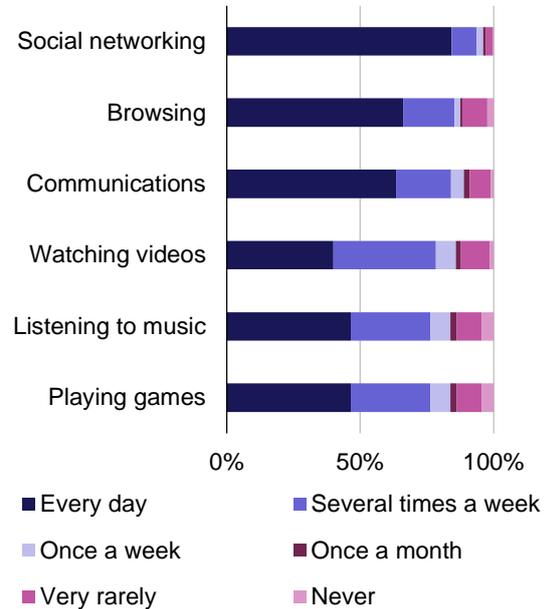
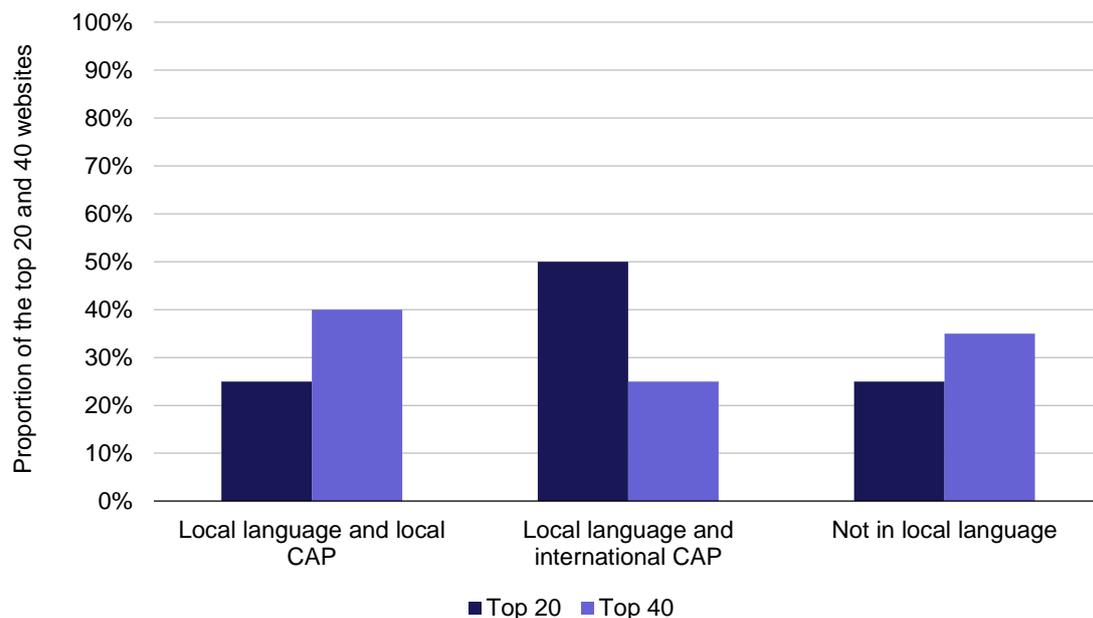


Figure 4: How often do you use your fixed internet connection for the following services, n=375 [Source: Analysys Mason, 2015]



Internet users in Indonesia access online content from a wide range of local and international sources. Many of the most-visited websites, including those provided by international online content and application providers, are available in Bahasa Indonesia (75% of the top 20 websites). Many popular websites are now provided by Indonesian companies (35% of the 40 most-visited websites).

Figure 5: Proportion of the top 20 and 40 websites in Indonesia by language and origin [Source: Analysys Mason analysis based on data from Alexa, 2016]



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*The value of online services, content and applications for consumers*

Indonesians are avid consumers of online services, with nearly all internet users making frequent use of social media, messaging services such as BBM or WhatsApp, and even watching videos on their phones, tablets and computers. These services create significant benefits for people who use them: they can communicate with friends and family easily and at little or no extra cost, they can access a wealth of information about their local areas, Indonesia as a whole, or the world at large, and they can purchase items that were previously not easily available where they live.

More and more people also use the internet to get access to educational content and health advice. IndonesiaX<sup>9</sup> offers online lectures and courses from a range of Indonesian and international universities, many of them accessible free of charge. Several applications are offering health advice or even remote access to a doctor.<sup>10</sup>

All these services are valuable to consumers, and are the reason why they connect to the internet in the first place. Some services require payment, but very many of them are free, sometimes financed by advertising but at no cost to consumers.

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## **Strong growth in internet access and usage is helping telecoms operators generate growing revenue and solid margins**

The strong growth in internet take up and usage has created opportunities for players across the value chain. Despite the shift away from legacy voice and SMS services, strong growth in demand for internet access has provided telcos with opportunities to make profitable new investments.

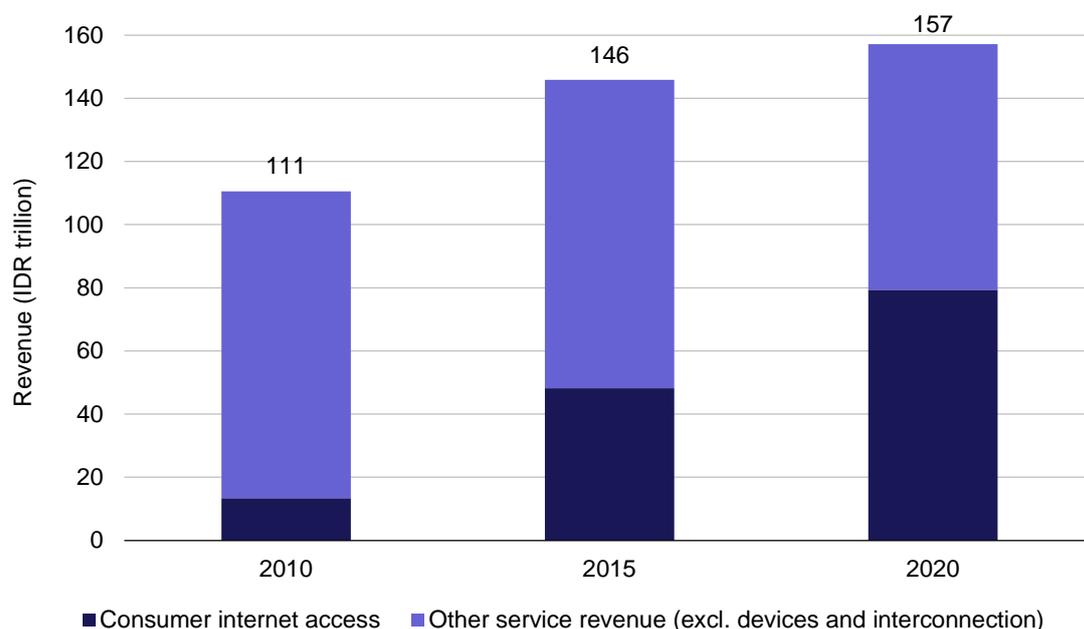
Total consumer revenue from internet access services (both fixed and mobile) has grown from IDR13 trillion in 2010 to IDR48 trillion in 2015, a growth of 29% annually (in comparison to a growth in users of 19% annually). We expect this growth to continue to 2020, with the market reaching IDR79 trillion, an annual growth of 10% from 2015 to 2020. This is shown in Figure 6.

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<sup>9</sup> <https://www.indonesiiax.co.id/>

<sup>10</sup> <http://blogs.wsj.com/indonesiarealtime/2015/01/20/need-a-doctor-appointment-theres-an-app-for-that/>

Figure 6: Breakdown of total service revenue in the market, excluding devices and interconnection [Source: operator reports, Analysys Mason estimates, 2016]



This growth in data revenues has required major investments in new fixed and mobile broadband technologies, now focusing on 4G mobile and fixed fibre networks. Online content and application providers themselves are increasingly investment in infrastructure and networks around the world to improve the experience of internet users.

These investments all support a profitable telecoms sector. Despite significant differences in financial results between operators, Indonesian telecoms operators as a whole have seen strong revenue growth from IDR100 trillion in 2010 to around IDR160 trillion in 2015.<sup>11</sup> EBITDA margin for the three largest Indonesian telcos<sup>12</sup> was around 47% in 2015 (from 37% to 50% depending on the operator), similar to Malaysia and much higher than in most developed markets (typically 25-30% for UK mobile operators for example).

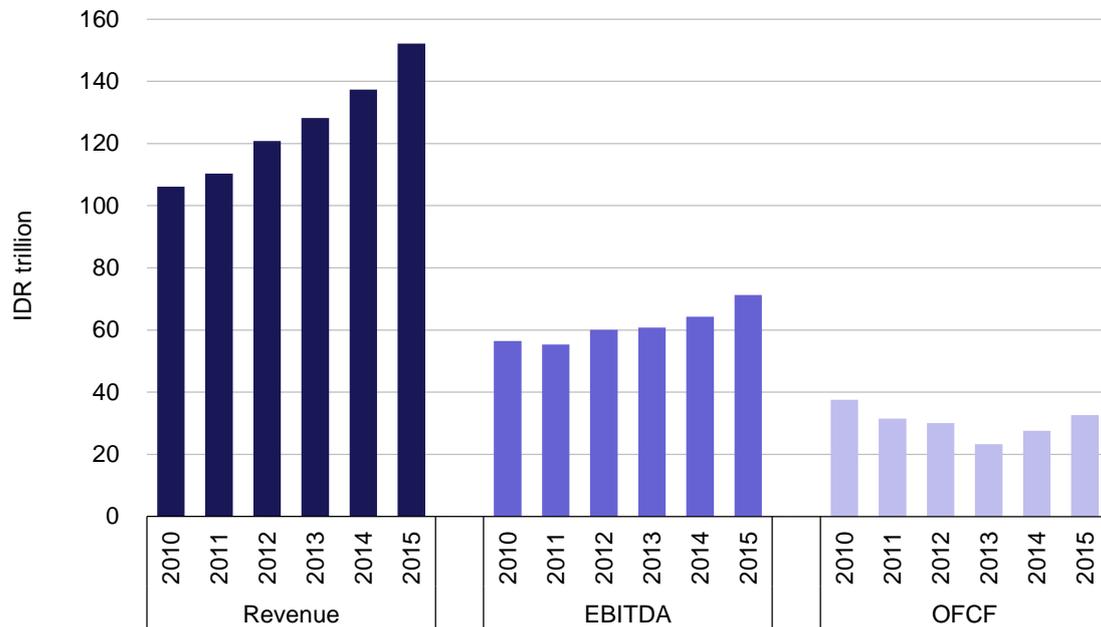
Despite high investments, free cash flows from operation<sup>13</sup> were consistently around IDR30 trillion from 2010 to 2015. The total amount was IDR33 trillion (USD2.5 billion) in 2015, a margin of over 20% (Figure 7), although this masks differences between Telkom Group (24% margin) and its two nearest competitors (8-10% margin).

<sup>11</sup> Total turnover for Telkom Group, Indosat Ooredoo, XL Axiata and H3I was IDR106 billion in 2010 and IDR157 billion in 2015, according to financial reports; H3I data is estimated based on consolidated results. This includes devices and interconnection, in addition to service revenue shown in Figure 6.

<sup>12</sup> The four largest telcos are Telkom Indonesia, Indosat, XL, and Hutchison

<sup>13</sup> Defined as EBITDA – CAPEX for the purpose of this note; it differs from operating profits, although in 2015 there was little difference in aggregate

Figure 7: Total revenue, EBITDA and free cash flows from operations (OFCF) for the three largest Indonesian telcos; these revenues include devices and interconnection [Source: company data, 2016]



## In addition to the IDR48 trillion consumers spend on internet access, online content and applications generate at least another IDR41 trillion in consumer surplus

Consumers derive considerable benefits from their use of the internet. Some of these benefits are passed on to telecom operators in the form of payment for access; others are passed on to companies that sell internet content and applications, such as iflix. Many of these benefits are retained by consumers however, in the form of a ‘surplus’ over and above their costs.

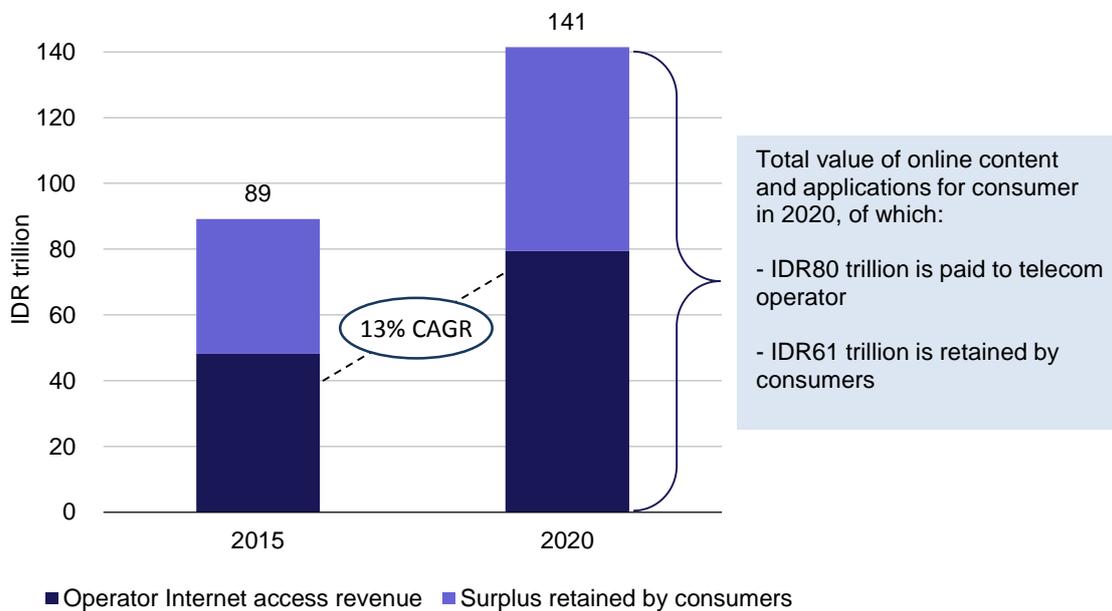
In 2015, as part of the consumer surveys commissioned by Analysys Mason, we asked consumers how much they value their internet service. We did this by asking consumers to tell us how much more they would pay for their current internet access before cancelling their service. This provided a lower-bound estimated of how much they value the internet as a whole (including both access and content / applications).<sup>14</sup> Overall, this suggests that consumers value the internet, and therefore all online content and applications, at over IDR89 trillion. Of this, telcos received IDR48 trillion and consumer surplus was IDR41 trillion.

Forecasts suggest that many more consumers will be online in 2020 (about 125 million from 51.5 million currently), and that they will spend about IDR80 trillion on internet access services, up from IDR48 trillion in 2015. Consumers who are currently connected to the internet will benefit from lower prices, whilst an additional 75 million people will be able to realise value from being connected. Overall, the value of online content and

<sup>14</sup> This methodology is likely to underestimate the value consumers place on internet services. Another method, which typically yields a higher result, is to ask respondents how much they would need to be paid to cancel their internet services. A study by the Boston Consulting Group in 2012 estimated that consumer surplus was nearly four times as high as prices, although this was in the context of a much smaller market (BCG, *The Internet Economy in the G20*, available at <https://www.bcg.com/documents/file100409.pdf>)

application for Indonesians will exceed IDR141 trillion,<sup>15</sup> of which 80 trillion will be paid to telecoms operators for internet access services and IDR61 trillion retained by consumers as a surplus.

Figure 8: Projected change in the value of online content and applications for consumers in 2020 [Source: Analysys Mason estimates, based on Analysys Mason Research forecasts and consumer survey, 2015-16]



## Conclusion

For more than 50 million Indonesians, the internet is already a huge source of economic and social value. In 2015, they paid IDR48 trillion to telecom operators in order to unlock at least IDR89 trillion in value. This is expected to grow to over IDR140 trillion in 2020, when 125 million Indonesians access the internet on a regular basis. These benefits are a direct consequence of people being able to consume content and access applications that they value highly and use frequently, many daily. Some of these applications are paid for, many are free. All provide ever-more Indonesians with opportunities to communicate, play, create, learn, teach and generally access information, with each other and with the rest of the world.

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<sup>15</sup> This is a conservative estimate that assumes very little surplus for newly connected Indonesians, and no increase in value (beyond benefiting from price reductions) for Indonesians who are already internet users in 2015.