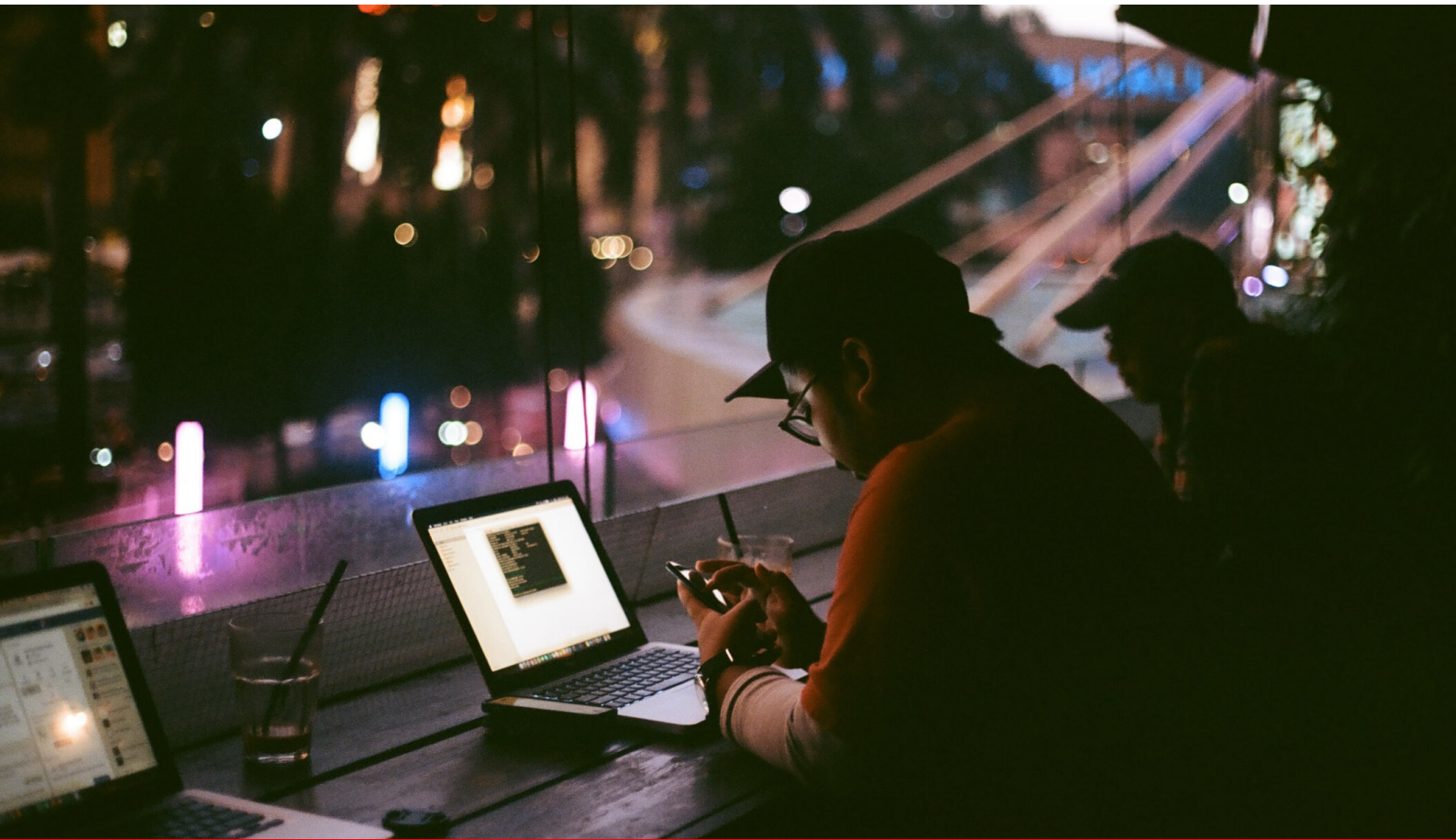


DECEMBER 2019



MEDIA INFLUENCE MATRIX: INDONESIA

Technology, Public Sphere and Journalism

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About CMDS

The Center for Media, Data and Society (CMDS) is a research center for the study of media, communication, and information policy and its impact on society and practice. Founded in 2004 as the Center for Media and Communication Studies, CMDS is part of Central European University's (CEU) School of Public Policy and serves as a focal point for an international network of acclaimed scholars, research institutions and activists.

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With its more than 400 million cellular subscriptions, Indonesia is one of the largest mobile markets of the world, the result of a decade of spectacular rise of communication technologies.

The country has today a mobile penetration of 165% as many Indonesians, tempted with ever cheaper deals, use more than one mobile card. Between 2010 and 2017, the number of internet users in Indonesia increased more than threefold to some 85 million. In contrast, old technologies are a thing of the past. Less than 4% of people in Indonesia use a landline today.

But in spite of this rapid spread of technologies, there is still massive potential for growth in the country's communication technology area. Only 32% of the population used the internet in 2017. Moreover, disparities are widening. Internet users live in only 57% of Indonesia's households as Indonesia's geography (a country of 17,000 islands spread across the Pacific) is an obstacle to connectivity. Java, Bali and parts of Sumatra enjoy good internet connection, but many isolated islands suffer. Moreover, in spite of the overall high mobile penetration, only some 60% of Indonesia's households have access to a mobile phone. Add to that a generally low internet speed and you have an extremely unequal society with pockets of people enjoying better access and others, poorly connected, struggling with isolation.

As elsewhere, technological development in Indonesia is much influenced by the country's economic health. Although Indonesia's economy has constantly grown in the past decade and poverty headcount dived to a low-record level in recent years, Indonesians can only afford technologies at the cheapest end of the market. As a result, Android dominates the operating system market. Apple comes second with only 4% of that market. Android-powered mobile phones are also dominant, accounting for 90% of the market, with Asian brands having a big share of it: the Korean-owned Samsung and China's Xiaomi jointly control nearly half of the mobile gadget market.

Indonesia is also a big embracer of social media. Facebook is leading with 68% of the social media market followed by YouTube with 14%. The popularity of social media has prompted several major players to build a local presence in Indonesia. Facebook, whose Indonesian market of 130 million is the fourth largest in the world, Google, whose search engine beats all its competitors by leaps and bounds, and Twitter, whose Indonesian market is said to generate a fifth of the company's revenue in Asia, all operate local offices in Jakarta.

The rise of social media played a major role in transforming Indonesia's media and journalism. As the largest distribution channel of news content, social media made most of the country's media outlets and journalists dependent on their audiences. But at the same time, social media platforms, particularly Facebook, became the largest platform for a spate of misinformation websites that have proliferated in Indonesia in recent years. In February 2018, Indonesia had 43,803 online news media. However, most of them are not credible sources of information. The social media culture, which rewards clicks over quality, has also led to a marked decline in the quality of news content.

All these trends have prompted the government to take a stance. An Artificial Intelligence (AI) machine known as Cyber Drone 9 has been deployed by the authorities to monitor, check, suspend and block what it deems to be "negative content" online, including fake news. That was made possible by a regulation adopted in 2014 by the Ministry of Communication and Informatics, which introduced rules on internet content moderation aimed at wiping out "negative content" online.

That is becoming controversial as authorities are increasingly using the fake news problem to police the internet space with the full participation and support of technology giants. At the request of the government, social media such as Facebook and Twitter are on the hunt

for fake news on their portals, diligently removing pages and accounts suspected of spreading false information. Internet service providers are also involved, blocking, at the government's request, websites that do not comply with regulations.

Another regulatory measure, a temporary provision introduced in 2016 by the communications ministry, has been used since then to block apps and other internet services. Tik Tok, an Android app run by China's ByteDance, Tumblr, a microblogging site of the U.S.-owned Verizon Media, Bigo Live, a

live streaming technology owned by Singapore's BIGO Technology were all blocked for failing to "filter pornography content," authorities claimed.

All these developments only show that the internet space will continue to shrink, affecting news media distribution and, in the end, citizens. Threatened by higher tax inspections and the possibility to have their platforms blocked, technology giants are unlikely to confront authorities. Indonesia is a key Asian market, which none of them can't afford to lose.

TECHNOLOGY OVERVIEW

The number of fixed-line connections in Indonesia has been plummeting in recent years. Fixed-line penetration in the country has never been staggeringly high, but it lost over 29 million subscribers between 2010 and 2017, leaving only 4% of Indonesians with a landline in their homes.

The number of mobile telephony subscriptions, on the other hand, has more than doubled in the same period, from 200 million to over 400 million subscriptions. According to data from the local statistical office in Indonesia, based on household surveys, almost 60% of Indonesians use a mobile today. But measured by individuals, the mobile penetration rate in Indonesia was 165% in 2017, according to data from the International Telecommunication Union (ITU). Such a high rate is explained by the fact that, in their attempt to find the cheapest data deals, many Indonesians use multiple Subscriber Identification Module (SIM) cards at once. Many Indonesians use at least two SIM cards, one for regular calls and text messaging and another for internet.

Indonesia calling

Overview of telephone penetration 2010-2017

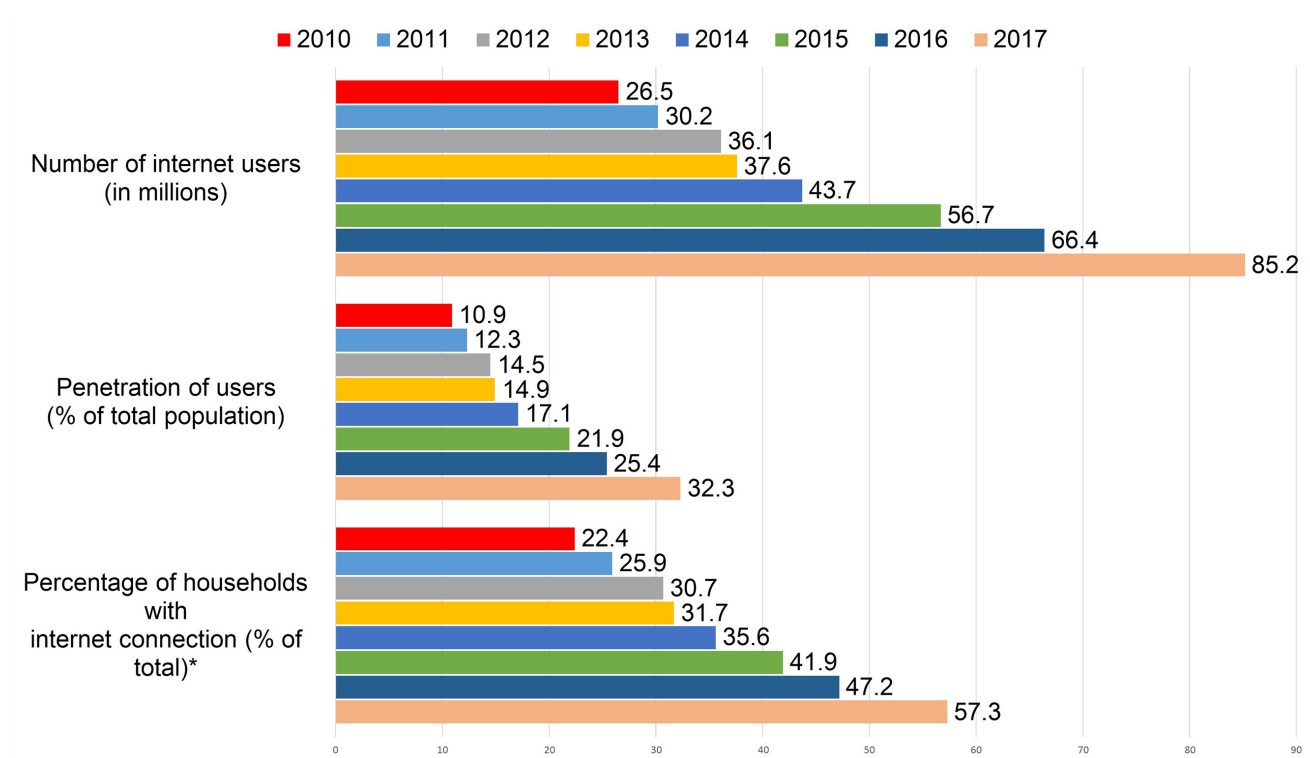
Indicator	2010	2011	2012	2013	2014	2015	2016	2017
Fixed-line telephony (total no of subscriptions, '000)	40,931	38,617	37,982	30,722	26,224	10,378	10,752	11,053
Fixed-line telephony (per 100 inhabitants, %)	16.9	15.7	15.3	12.2	10.3	4	4.1	4.2
Mobile telephony (total no of subscriptions, '000)	211,290	249,805	281,963	313,226	325,582	338,948	385,573	435,193
Mobile telephony (per 100 inhabitants, %)	87.1	101.7	113.3	124.3	127.6	131.3	147.7	164.9
Mobile telephony (per 100 inhabitants, %)	38.1	39.2	47.9	50.9	51.5	56.9	58.3	59.6

Source: International Telecommunication Union (ITU), Statistik Telekomunikasi Indonesia 2017, Statistics Indonesia (Badan Pusat Statistik)

Just like mobile telephony, internet has experienced massive growth in the last decade. The number of internet users tripled between 2007 and 2019 to 85 million. However, this number is still lagging behind the number of mobile telephone users: only 32% of the Indonesians use the internet and these users live in 57% of the country's households. One of the main reasons why almost half of the households are still not connected to the internet is geography-related: Indonesia is an archipelago spread out over 17,000 islands. While Java, Bali and parts of Sumatra have relatively good internet connection, the infrastructure is not as present on a lot of other, more isolated islands.

Indonesia's internet universe

Internet penetration and usage, 2010-2017



Source: CMDS based on data from World Bank, ITU, Indonesian Internet Service Providers Association, Statistics Indonesia

Just slightly more than 2% of Indonesians have a fixed-line broadband connection. This is due to poor or inexistent infrastructure and lack of investment because of the country's geographical conditions coupled with the low profitability in this sector. Because of the difficulty to connect, many people in Indonesia use internet on their mobile phones or through a fixed-line telephone connection. Indonesian internet speed is relatively low. According to the website Speedtest.net, Indonesia ranks 118th globally when it comes to internet speed, lagging far behind other countries.

Browsing speed

Broadband connections in Indonesia, 2010-2017

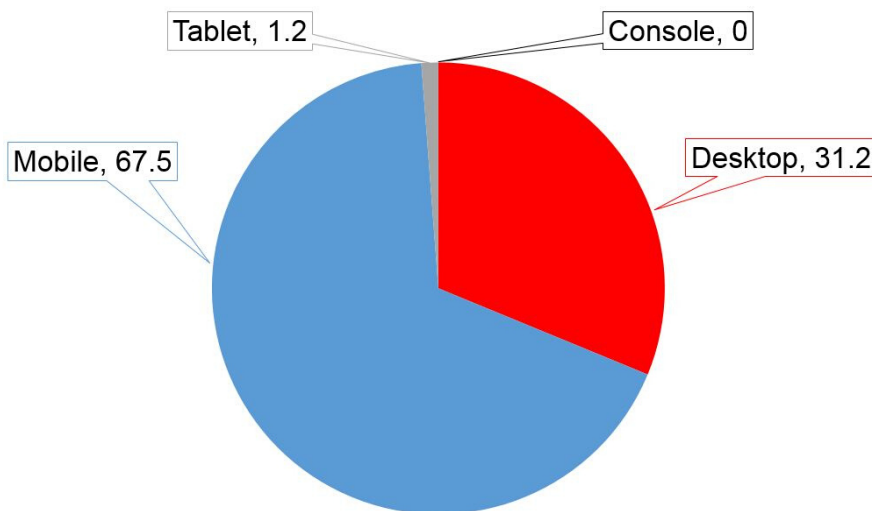
	2010	2011	2012	2013	2014	2015	2016	2017
Fixed broadband (total no of subscriptions, '000)	2,280	2,736	2,983	3,251	3,400	3,983	5,227	6,215
Fixed broadband subscriptions per 100 inhabitants (%)	0.9	1.1	1.2	1.3	1.3	1.3	2	2.3

Source: CMDS based on data from World Bank, ITU, Statistics Indonesia

Most Indonesians use their phones to access the internet because of the greater accessibility of mobile internet as well as the affordability of mobile phone. Tablets and consoles are not popular for accessing the internet in Indonesia.

The platform battle

Market share of computer platforms (%), 2018



Source: StatCounter

Android is dominant in the operating system market in Indonesia. An astounding 91% of the phones use Android as their operating system. Apple takes a second place with just 4.3% of the market. The reason why Android dominates is cost-related: phones with an Android operating system are usually cheaper than others.

The OS game

Operating System market share in Indonesia, %, 2018

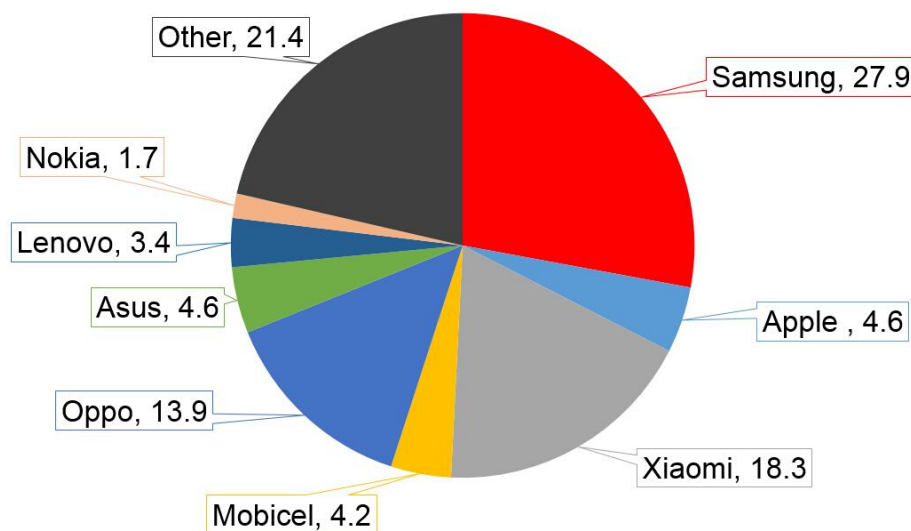
OS	Windows	Android	iOS	OS X	Linux
All platforms	27.8	60.8	3.2	2.5	0.3
Desktop	84	-	-	7.5	0.9
Mobile	0.2	91.1	4.3	-	0.1
Tablet	0.03	77.1	22.1	-	0.1

Note: Figures are calculated on the basis of page views from January 2018 to December 2018;
Source: StatCounter

Android-powered mobile phone companies dominate the cellular phone market in Indonesia with a market share of more than 90%. Asian brands have a big share of the mobile market in Indonesia: the Korean company Samsung has the biggest market followed by the Chinese Xiaomi. Together, they control nearly half of the mobile gadget market.

The gadgets

Mobile vendor market share (%) in Indonesia, 2017-2018



Note: Figures are calculated on the basis of page views from January 2018 to December 2018, on mobile only (without tablet)
Source: StatCounter

Google Chrome has the largest share of the browser market on all platforms, dominating particularly the desktop segment. For mobile browsers the next biggest player is the Chinese-developed UC Browser since several Android-powered mobile phone companies have the UC Browser pre-installed as part of the starter package.

The browser game

Browser market share in Indonesia, %, 2018

Browser	Chrome	Firefox	UC Browser	Safari	IE	Opera	Samsung Internet	Edge	Android
All platforms	55.9	6.5	17.1	4.2	0.4	7.6	3.3	0.4	3.6
Desktop	64.5	19.7	6.3	4.9	1.3	1.9	n/app	1.1	n/app
Mobile	52.1	0.3	21.9	3.9	n/app	10.3	5	0.02	5.2
Tablet	38.7	0.9	10.4	18.9	0.03	8.9	n/app	n/app	20.4

Note: Figures are calculated on the basis of page views from January 2018 to December 2018
n/app: not applicable
Source: StatCounter

Google has a quasi-monopoly on the search engine market in Indonesia. Other search engines, Bing and Yahoo!, are only used by less than 2% of the people.

The hide-and-peek online

Search engine market share (%), 2018

Search engine	Google	Bing	Yahoo!
All platforms	97.9	0.5	1.3
Desktop	95.8	1.1	2.9
Mobile	98.5	0.3	0.7
Tablet	98.1	0.4	1.1

Note: Figures are calculated on the basis of page views from January 2018 to December 2018
Source: StatCounter

The social media market in Indonesia is very similar to worldwide averages. Facebook is the most popular platform with 68% of the social media market under control, followed by YouTube with 14%. In contrast to the world averages, in Indonesia Pinterest is less, Instagram is more popular. Recent data show that Twitter is quickly regaining popularity; it quadrupled its market share in the first three months of 2019, probably boosted by the April elections in Indonesia.

Socializing online

Social media market share (%), mobile only 2018 (Indonesia)

	Facebook	YouTube	Pinterest	Twitter	Instagram
All platforms	67.6	13.9	4.5	6.7	6.5
Desktop	50.2	25.1	7.7	12.4	0.7
Mobile	69.6	12.4	4	6.1	7.4
Tablet	61.7	20.1	9.2	6.9	0.4

Note: figures are calculated on the basis of page views from January 2018 to December 2018; Source: StatCounter

ROLE OF TECHNOLOGY IN MEDIA AND JOURNALISM

Overview and Profiles of Key Players

Company Profiles

Internet and mobile

The communication technology market in Indonesia is dominated by foreign providers, companies such as Facebook, Twitter and Google. Local regulators often refer to them as Over-the-top (or OTT) services.[1]

The big players in internet and mobile

Key players in the Indonesia internet and mobile market, breakdown by services

Company	Email service	Messaging and VoIP	Mobile ecosystems	Search	Social network & blog	Video & photo
Apple		✓	✓	✓		
Facebook		✓			✓	✓
Google	✓		✓	✓	✓	✓
Microsoft			✓	✓		
Netindo						
Samsung			✓			
Twitter		✓			✓	✓

Source: CMDS based on company data

Facebook

Indonesia is the fourth largest Facebook nation in the world with some 130 million users. In 2014, Facebook opened a temporary office in Jakarta, Indonesia's capital. Three years later, the company created a permanent office in the city. In March 2017, Facebook obtained a permanent business license for its operation in Indonesia from the Investment Coordination Board (*Badan*



[1] See "Surat Edaran Menteri Komunikasi dan Informatika Republik Indonesia Nomor 3 Tahun 2016 tentang Penyediaan Layanan Aplikasi dan /atau Konten melalui Internet (Over the Top)" (Circular Letter of Communication and Informatics Minister of Republic Indonesia Number 3 Year 2016 on application and/or content on Internet service providers (Over the Top)) for more details about regulation of these services.

Koordinasi Penanaman Modal, BKMP).[2] But as this license is given for management consultancy, many local experts question its validity as Facebook's main source of revenue in Indonesia is clearly advertising, not consulting services. Eventually, Facebook's representatives in Indonesia and the government of Indonesia agreed on the right license for Facebook's operations in Indonesia, one that allows local authorities to properly tax the company as an advertising business. Facebook has not disclosed to date any financial data for the Indonesian market.

Google

Google has a subsidiary in Indonesia, PT. Google Indonesia, that has been operating as an affiliate of Google Asia Pacific Pte Ltd (GAP) since 2012. Most of the staff working in the local office of Google Indonesia are locals. During the last quarter of 2015 and the first quarter of 2016 Google Indonesia was investigated by Indonesian Tax Office, which suspected that the company was paying less tax than it was supposed to.[3] In June 2017, after months of disputes between the company and the Indonesian finance ministry, the two parties reached an agreement on the amount of tax that Google had to pay for the 2016 fiscal year. Even so, the amount of tax due in previous years was left unclear.[4] Google Indonesia agreed with requests of the Indonesian government to take down several third-party applications available in the Google Play Store, mainly those that displayed Lesbian, Gay, Bisexual and Transgender (LGBT)-related content.



Twitter

Twitter opened an office in Indonesia, in the capital city of Jakarta, on 5 March 2015. Indonesia is one of Twitter's largest markets. By opening a local office, Twitter expects to further increase its business in Indonesia, better localize content and strengthen its relation with local journalists. Twitter is not disclosing financial information about its operation in Indonesia. According to industry insiders consulted by CMDS, some five years ago, Twitter's revenues generated in Indonesia accounted for some 20% of its total revenues in Asia. More precisely, Twitter in 2013 generated roughly US\$ 120m in Indonesia.



[2] Nadine Freischlad, "Facebook finally opens permanent office in Jakarta, the world's most active city on Instagram," *Techinasia*, 15 August 2017, available online at <https://www.techinasia.com/facebook-new-jakarta-office> (accessed on 20 April 2019).

[3] Dinda Audriene Muthmainah, "Google Akhirnya Bayar Pajak Sesuai Aturan Indonesia" (Google finally paid its tax accordingly to Indonesian law), *CNN Indonesia*, 30 November 2017, available online at <https://www.cnnindonesia.com/ekonomi/20171130155839-532-259271/google-akhirnya-bayar-pajak-sesuai-aturan-indonesia> (accessed on 25 April 2019).

[4] Hidayat Setiaji & Eveline Danubrata, "Indonesia has reached tax deal with Google for 2016, finance minister says," *Reuters*, 13 June 2017, available online at <https://www.reuters.com/article/us-indonesia-google/indonesia-has-reached-tax-deal-with-google-for-2016-finance-minister-says-idUSKBN1940EM> (accessed on 25 April 2019).

Telecommunications

PT Telekomunikasi Indonesia (Telkom) is the country's largest provider of cable telephony and cable internet services in Indonesia. The company's history goes back to the 19th century, during the Dutch colonial government when it operated as a post and telegraph services company. In 1961, the Indonesian government took over the company and changed it into a state-owned holding. Telkom has 11 million fixed-line subscribers, including 1,453 corporate subscribers, 300,416 small and medium-size enterprise subscribers, and 944 government offices. In spite of the decline in the number of its subscribers, Telkom has been experiencing growth both in revenue and net income in recent years.

In Indonesia there are five major cellular telecommunications companies: PT. Telekomunikasi Seluler (Telkomsel), PT. XL Axiara Tbk, PT. Indosat Tbk, PT. Hutchison 3 Indonesia Tbk, and PT. Smartfren Telecom Tbk. Telkomsel was the first and sole state-owned enterprise operating in the mobile communication sector. The company has the largest communication network across Indonesia. In most of the rural and remote areas of the country, Telkomsel is the sole or best possible option. In 2017, the total combined revenue generated by four of the five largest telcos (PT. Hutchison not included as its financial data are not public) reached IDR 150,712bn (€9.38bn). Telkomsel was dominant, accounting for nearly 62% of the total revenue. All four telcos that publish their financial results experienced growth in revenues between 2014 and 2017, with the exception of PT. XL Axiata whose revenues dipped for two years in a row (2015-2016).

As the Indonesian population is concentrated in Java island, which is home to 65% of the country's internet users, the market for internet services is also consolidated in this island. The internet penetration rate as a percentage of Indonesia's households topped 57% in 2017. Kalimantan island had the highest penetration rate (72.2%) followed by Java with 57.7%. In 2017, the internet penetration in urban areas was 72.4%. In contrast, in rural areas, it hovered around 48%.^[5]

In the last few years, the revenue generated by telcos from data and digital services began to surpass the income from voice, a clear sign of the fast development of Indonesia's internet market. Currently, Indonesia has the lowest price of data compared to other countries in the region.^[6] This is believed to be the result of a tariff war among telcos. At some point in time, a total of twelve telecommunication providers were competing in Indonesia. High competition prompted many of them to constantly lower their tariffs.^[7] In the meantime, companies that failed to increase their market share and revenues either merged or were acquired by bigger competitors. For example, XL (PT. XL Axiata Tbk) acquired Axis (Axis Telecom Indonesia) in 2014.

[5] "Hasil Survei Penetrasi dan Perilaku Pengguna Internet Indonesia 2017" (Result of survey on Indonesian internet penetration and users' behavior), Indonesian Internet Service Provider Association (Asosiasi Penyelenggara Jasa Internet Indonesia, APJII), 2017, available online at <https://apjii.or.id/content/read/39/342/Hasil-Survei-Penetrasi-dan-Perilaku-Pengguna-Internet-Indonesia-2017> (accessed on 1 May 2019).

[6] Telecommunications, DBS, 15 November 2018, available online at https://www.dbs.com/aics/templatedata/article/industry/data/en/GR/042016/telecommunications_indonesia.xml (accessed on 1 May 2019).

[7] Nugroho, Y., Putri, D. A., & Laksmi, S. (2013). Mapping the Landscape of the Media Industry in Contemporary Indonesia, available online at <http://cipg.or.id/wp-content/uploads/2015/06/MEDIA-2-Media-Industry-2012.pdf> (accessed on 1 May 2019).

The telecom giants

Sales revenues of key telecommunication operators and internet service providers in Indonesia, 2014-2017

Company	Ownership	Country of ownership (majority)	Sales revenue (IDR bn)					Net profit (IDR bn)				
			2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
PT. Telekomunikasi Indonesia (Persero) Tbk (Telkom)	Government of Indonesia (52.09%); public (49.91%)	Indonesia	89,696	102,470	116,333	128,256	n/a	n/a	n/a	32,701	29,172	n/a
PT. Telekomunikasi Seluler (Telkomsel)	PT Telekomunikasi Indonesia Tbk (65%); Singapore Telecom Mobile Pte Ltd (35%)	Indonesia	66,252	76,055	86,752	93,217	89,310	19,391	22,368	28,195	30,395	25,510
PT. XL Axiata Tbk	Axiata Investments (Indonesia) SDN.BHD (66.4%); public (33.6%)*	Indonesia	23,569	22,960	21,412	22,901	22,940	-830	8	396	403	-3,300
PT. Indosat Tbk (Indosat Ooredoo)	Ooredoo Asia Pte. Ltd (65%); Government of Indonesia (14.29%); public (20.71%)	Qatar	24,085	26,768	29,184	29,926	23130	-1,878	-1,163	1,275	1.301	-2,400
PT. Hutchison 3 Indonesia (3/Tri)	Hutchison Asia Telecom Group	Hong Kong	n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a	
PT. Smartfren Telecom Tbk (Smartfren)	PT. Bali Media Telekomunikasi (31.1%); PT Wahana Inti Nusantara (29.7%); PT. Global Nusa Data (27.4%); public (11.8%)	Indonesia	2,954	3,025	3,637	4,668	5,490	-1.38	-1.565	-1.97	-3.02	-3,550

*some of the owners include Etisalat International (4.18%), Morgan Stanley (2.69%), Brandes Investment Partners (2.28%), Sun Life Financial Group (2.07%), Prudential Group (1.39%), The Banguard Group, Inc (1.26%), BlackRock Inc (1.15%) and others with less than 1%
n/a: not available

Source: CMDS based on data from company annual reports

Technology Companies & Government

Indonesia does not yet have laws to govern social media, but in recent years it has introduced a slew of regulations that affect technology companies, particularly social media and internet service providers.

In 2014, the Ministry of Communication and Informatics adopted the regulation No 19 that puts forward rules on moderation of internet content deemed to be “negative.” Due to this regulation, the ministry now has the right to block websites found to publish “negative” content. The ministry has established four panels to monitor content that would fall under that category.

They cover the following topics:

- terrorism and ethnicity, religion, race, community-sensitive issues;
- illegal investments, fraud, gambling;
- food and drugs;
- property rights.

The Indonesian government has the right to request social media service providers to take down content deemed to be “negative” such as pornography. The ministry has to submit to social media evidence and arguments supporting their request. In January 2018, the Ministry of Communication and Informatics began to use an automatic content-detecting machine to identify “negative” content online. Before that, the government used people to monitor online content and was open to complaints from the public to spot such content. The newly introduced machine detects “negative” content by picking certain keywords that it was taught to recognize. All content that contains such keywords will become inaccessible and readers will be informed about that through a notification.

Websites or service providers that are proven to breach the regulation are added by the ministry to TRUST Positif, a filtering application that has been operational since 2010. The ministry will also ask all internet providers to block the incriminated website within 72 hours. Providers that fail to comply risk losing their operating license.

The heads of three other institutions, namely the Indonesian Police, State Intelligence Agency (BIN) and National Agency for Combating Terrorism (BNPT) also have the legal right to request internet service providers to block websites deemed to promote terrorism and radicalism without the need of an assessment by the monitoring panels.[8]

While preparing more formal regulation of social media, in 2016 the Ministry of Communication and Informatics adopted the Circular Letter no 3 to temporarily regulate OTT companies with operations in Indonesia. Services such as app-based internet services (SMS, telephony, video call, chats, financial and commercial transactions, storing and collection of data, gaming, social networks) and internet-based content services (writing, voice, visual, animation, music, video, movies, gaming or a combination of one and/or the other) are covered by the circular letter.

[8] Savenet Voice, “Peningkatan Pelanggaran hak-hak digital jurnalis dan media di Indonesia” (Increasing violation of digital journalist and media rights in Indonesia), 09 January 2019, available online at <http://id.safenetvoice.org/2019/01/peningkatan-pelanggaran-hak-hak-digital-jurnalis-dan-media-di-indonesia/> (accessed on 25 April 2019).

OTT services are classified into two categories: onshore and offshore OTT service providers. Onshore OTT services are required to have a “permanent establishment” (Bentuk Usaha Tetap, BUT) in the form of an office in Indonesia and are subject to Indonesian tax laws and regulations. The temporary regulations also oblige OTT service providers to protect personal data, filter content and comply with censorship requirements enshrined in Indonesian laws and regulations.

In recent years, several OTT service providers have been blocked by the government for failing to comply with content-filtering rules. They include Tik Tok, an Android app run by China’s ByteDance, Tumblr, a microblogging site run by U.S.-owned Verizon Media, Bigo Live, a live streaming technology from Singapore’s BIGO Technology. Some of them such as the video sharing website Vimeo and the social news aggregation network Reddit are still blocked in Indonesia as they allegedly do not comply with the law. Many lawyers and scholars in Indonesia have criticized the government for repeatedly blocking websites. Many local artists, particularly indie film producers, have slammed the government for blocking Vimeo, which is one of the platforms allowing artists to disseminate their work.

The government cited failure to “filter pornography content” as the main reason for its decision to block all these OTT service providers. In the case of Telegram, a cloud-based instant messaging platform (also blocked in Indonesia), incorporated in London and owned by two Russian entrepreneurs, the government said that the potential for terrorism proselytism and the lack of access to data (as Telegram is encrypted) were the main reasons for blocking the platform.

The interpretation of “pornography” according to Pornography Law is unclear. Sometimes the government and OTT service providers have different opinions about what constitutes pornography and the measures that need to apply.[9]

Generally though, OTTs follow the government’s order to prevent retaliation. In January 2018, for example, at the request of the Ministry of Communication and Informatics, Google removed 73 Lesbian-Gay-Bisexual-Transgender (LGBT)-related applications from its Play Store.[10] Other social media networks did the same. In 2017, Facebook Indonesia received a request from the government to block what they deemed as “obscene” graphic interchange format (GIF) images from its WhatsApp Messenger, which is widely used in Indonesia. Facebook complied with the request by eliminating the “problematic” GIFs from its services in Indonesia.

Finally, Facebook came under critical scrutiny in Indonesia for its project Internet.org that has been providing free access to its own platform and 14 other websites since 2015. ICT Watch, an NGO in Indonesia joined dozens other NGOs worldwide in signing a letter sent to Facebook’s CEO Mark Zuckerberg, in which they criticized the project for breaching net neutrality principles and posing threats to freedom of expression, privacy and user security, and for preventing consumers from understanding the true price of internet access.[11]

[9] Ed Davies & Cindy Silviana, “New Indonesia web system blocks more than 70,000 ‘negative’ sites,” 19 February 2018, available online at <https://www.reuters.com/article/us-indonesia-communications/new-indonesia-web-system-blocks-more-than-70000-negative-sites-idUSKCNIG30KA> (accessed on 1 May 2019).

[10] Ed Davies & Cindy Silviana, “New Indonesia web system blocks...”, cit.

[11] “Open Letter to Mark Zuckerberg Regarding Internet. org, Net Neutrality, Privacy, and Security,” 18MillionRising.org, 18 May 2015, available online at <https://www.facebook.com/notes/access-now/open-letter-to-mark-zuckerberg-regarding-internetorg-net-neutrality-privacy-and-/935857379791271/> (accessed on 1 May 2019).

Technology Companies & Journalism

The growing access to online resources and the rapid advancement of information and communication technologies have transformed the media landscape in Indonesia. The online pages of media outlets began to expand in the country in the mid-1990s when it was still led by an authoritarian government. At the time, media companies just replicated their print newspaper or magazine editions on the internet. The first were *Republika* and *Tempo Magazine* on Tempointeraktif.com in 1995.[12] After the end of the Soeharto era and the rise of democracy in Indonesia, almost all media in the country launched operations online.

In February 2018, Indonesia had 43,803 online news media; however most of them were not credible sources of information.[13] The quality of news provided by online media has become a concern for a long time. Because internet media prioritize speed over accuracy and other journalistic principles, the quality of the news has gone down dramatically in the country. In 2014, only 211 online media passed the registration requirement. A year later, that number was down to 168.[14]

The Rise of Misinformation

The connection between news media and social media is very strong when it comes to distribution of news in Indonesia. Online media are highly dependent on social media such as Facebook, Twitter and also Instagram to promote the stories they produce. To attract readers, media have to comply with the new rules established by social networks, sensationalizing their content by choosing shocking headlines, which are often misleading.

Internet also made it possible for citizen journalism in Indonesia to grow. Almost all online media now host blogs where the public can write about anything they are concerned about or interested in without any limitations. This being said, internet access is not equally distributed throughout the entire territory of Indonesia. Some areas have strong connectivity while others, mostly rural or remote areas, have slow internet access or no access at all. This disparity has contributed to further widening the digital divide in Indonesia.

Social media have also become the ground for the rapid expansion of disinformation in Indonesia. A survey run by Mastel, a local group of stakeholders, including businesses and professional associations, showed that one in three Indonesians receive fake news on a daily basis. Nearly 15% of the 1,116 respondents in Mastel's survey received more than one hoax[15] a day.[16] Because of the

[12] Nugroho, Y., Putri, D. A., & Laksmi, S. (2013). Mapping, cit.

[13] Widiarsi Agustina, "Terungkap, Indoensia Punya Media Massa Terbanyak di Dunia" (Revealed, Indonesia has the highest number of mass media in the world), *Tempo*, 10 February 2018, available online at <https://nasional.tempo.co/read/1059285/terungkap-indonesia-punya-media-massa-terbanyak-di-dunia> (accessed on 1 May 2019).

[14] Faiz Nashrillah, "Dewan Pers: Ada 43 Ribu Media Online, Hanya 168 yang Profesional" (Dewan Pers: Among 43 online media [in Indonesia], only 168 were professional), *IDN Times*, 8 February 2018, available online at <https://www.idntimes.com/news/indonesia/faiz-nashrillah/dewan-pers-ada-43-ribu-media-online-hanya-168-yang-profesional-1/full> (accessed on 1 May 2019).

[15] In Indonesia, the term "hoax" is more popular than "fake news" to refer to any kind of misinformation, be that fabricated information or propaganda. For example, people used the term excessively during the 2017 gubernatorial election. (See more in Nurma Fitrianingrum, "Hoax Production on the Rise as Indonesian Election Nears," *CMDS Blog*, 14 March 2019, available online at <https://medium.com/center-for-media-data-and-society/hoax-production-on-the-rise-as-indonesian-election-nears-601cdf445a7d> (accessed on 1 August 2019).

[16] Mastel, "Hasil Survey Wabah Hoax Nasional" (Result of National Survey on Hoax Plague), 10 April 2019, available online at <https://mastel.id/hasil-survey-wabah-hoax-nasional-2019/> (accessed on 3 June 2019)

magnitude of the phenomenon, the government has launched several measures in recent years, including:

- apprehension of fake news production syndicates;
- launch of digital literacy initiatives;
- measures aimed at debunking fake news;
- creation of content filters for social media (in cooperation with Internet Service Providers, ISPs, and technology companies, particularly social media companies).

The government through the Ministry of Communication and Informatics is operating an Artificial Intelligence (AI) system known as Cyber Drone 9 to monitor, check, suspend and block what it deems to be “negative content” online, including fake news. The system consists of two layers, a first layer where the government identifies “negative content”, and a second layer that involves ISPs in blocking websites found to spread such content.

At the request of the government, social media including Facebook and Twitter monitor and remove fake news content from their portals. To date, Facebook is known to have removed 241 pages, 878 accounts, 645 groups, and 222 Instagram accounts that were all suspected of engaging in fake news distribution activities.[17]

According to some experts though, the measures introduced by the Indonesian Government to combat disinformation could turn to be problematic. There are voices calling for news media and NGOs to be more involved in fighting hoaxes. For example, fact-checking initiatives are considered to be a less invasive and, to some extent, more effective tool to combat misinformation. Initiatives aimed at fact-checking content have appeared in the country recently, but they need to grow and better coordinate. One of them is Mafindo or the Indonesian Anti-Defamation/Slander Community (Masyarakat Anti Fitnah Indonesia), which has been operating since 2016.[18]

Media Content Distribution

Facebook

With the changing landscape of media industry in Indonesia, the clickbait war for followers and readers has intensified. Among all media companies, Kompas.com (part of Kompas Gramedia Group) has the highest number of followers on Facebook, upwards of 10.8m. It is followed by Liputan6.com, with 8.5m followers. Liputan6.com is owned by the company Emtek, which also owns the television channel SCTV and the news portal Merdeka.com. Liputan6.com was originally part of SCTV, its mission then being to only republish news from the SCTV news program’s Liputan6.

Tribunnews.com is another major player with a similar number of followers as its closest rival, Liputan6.com. Tribunnews is also part of Kompas Gramedia Group, but its news output is different than Kompas’ content, which delivers high quality journalism practice. In contrast, Tribunnews is

[17] Nathaniel Gleicher, “Taking Down Coordinated Inauthentic Behavior in Indonesia”, Facebook Newsroom, 31 January 2019, available online at <https://newsroom.fb.com/news/2019/01/taking-down-coordinated-inauthentic-behavior-in-indonesia/> (accessed on 6 June 2019)

[18] Nurma Fitrianingrum, “Hoax Production...,” cit.

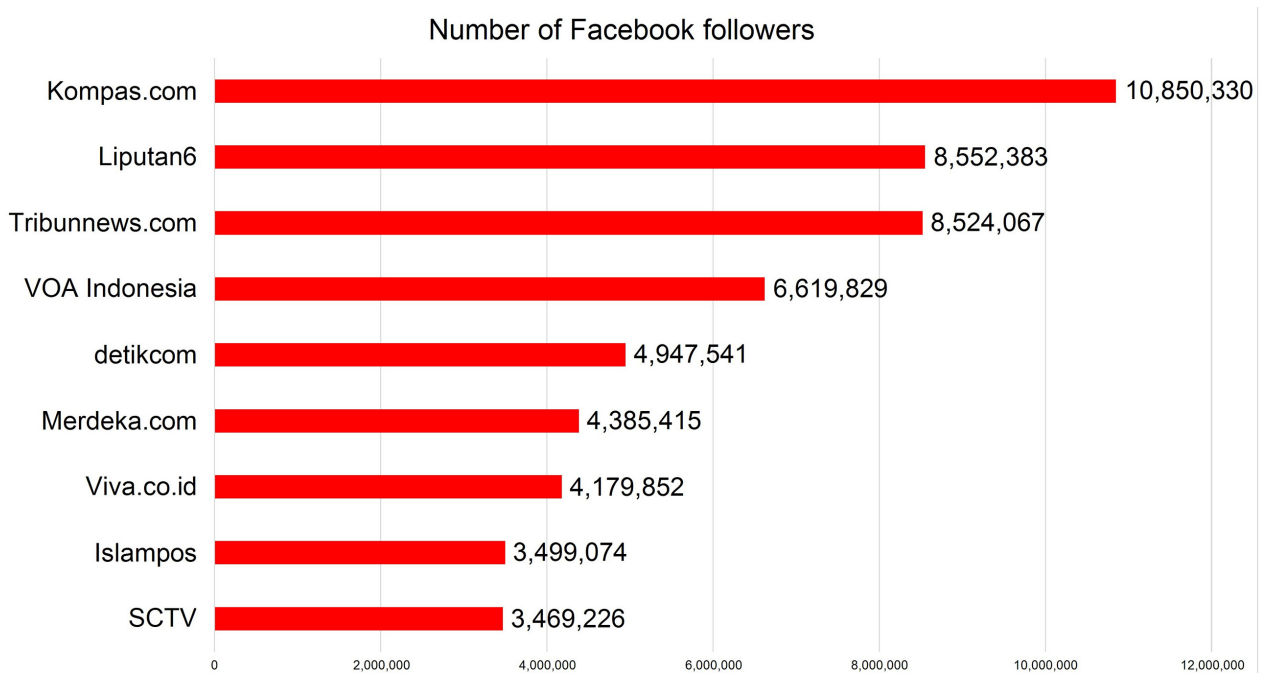
known more for its clickbait news, of far poorer quality.

VOA Indonesia followed with 6.6m followers. It is the only non-Indonesian news media among the top 10 most followed on Facebook. It is run by Voice of America, a U.S.-government funded news operation.

Among the other top players on Facebook, Islampos has a specific agenda, solely broadcasting Islam-related news and programs, clearly targeting the country's Muslim community.

The fight for likes

Most liked Indonesian media pages on Facebook, May 2019



Source: Socialbakers

Google

YouTube has become more popular in Indonesia in the last few years as Indonesian media also use YouTube as a platform to reach more viewers. Among news media, Trans7 Official television channel has the largest subscriber base, somewhere close to 6.4m. Trans7's nearly 42,000 videos uploaded on YouTube are cuts of their own programs, but also full programs.

Cumicumi, on the other hand, leads with some 2.8bn views of its videos. The channel is part of Cumicumi.com, a video-based entertainment portal, which covers news and gossip content about Indonesian celebrities and public figures.

Television channels dominate the list of most watched Indonesian media on YouTube. Seven out of ten are on this ranking as following: Trans TV Official, MNCTV Official, Surya Citra Televisi (SCTV), Trans7 Official, Netmediatama, CNN Indonesia, RCTI Entertainment, and Kompas TV.

Video consumption

Most watched Indonesia media on YouTube, May 2019

Outlet	Number of subscribers	Total views of uploaded videos
Cumicumi	3,742,580	2,848,966,739
Trans TV Official	5,259,909	2,679,844,632
MNCTV Official	4,823,050	2,663,381,952
Surya Citra Televisi (SCTV)	4,970,903	2,438,701,731
Trans7 Official	6,372,472	2,348,273,392
Netmediatama	3,200,730	1,851,335,956
CNN Indonesia	2,633,655	1,202,477,827
Radio Mirchi	3,963,782	1,147,411,021
RCTI Entertainment	1,789,423	953,903,037
Kompas TV	1,472,716	847,583,485

Source: Socialbakers

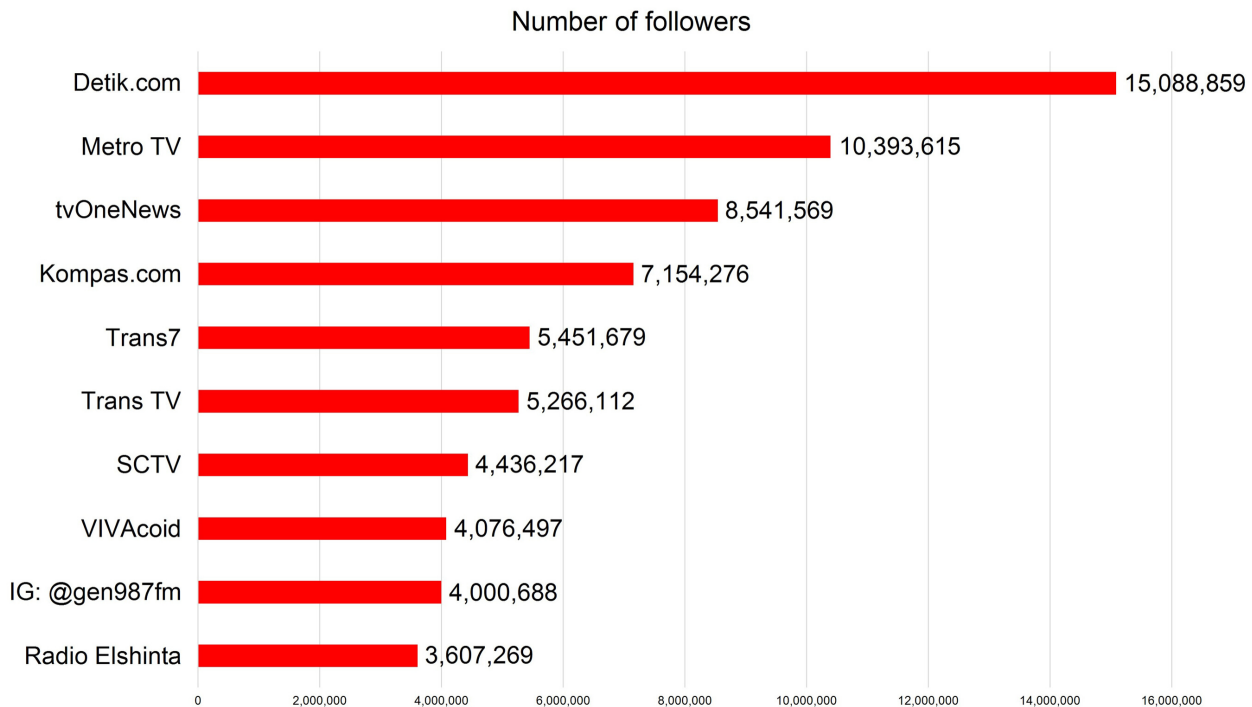
Twitter

In the Twitter sphere, Detik.com has the biggest base of followers, 15.1m and growing. Detik.com was founded in 1998 by four journalists working with DeTik, a former print media outlet. In June 2011, it was acquired by PT. Trans Corporation, which also owns the television channels Trans TV and Trans7. Detik.com is followed on Twitter by Metro TV, a news-based television channel founded in 2000, which has some 10.4m followers. Its content consists mostly of news snippets taken from its television broadcasts as well as promotional materials for its programs.

Among the ten most popular Indonesian media accounts on Twitter, five are television channels (Metro TV, TvOneNews, Trans7, TransTV, SCTV).

The loudest Tweets

Ranking of the most popular media on Twitter in Indonesia, May 2019



Source: Socialbakers

Financing

Technology companies, including local telcos and American-owned technology giants, have not invested to date in news media in Indonesia. One of the most important forms of commercial cooperation that involves technology companies, internet service providers and news media companies are zero-rating arrangements and deals such as Internet.org initiated by Facebook or a data subscription package from Indosat Ooredoo offering access to 15 websites including Facebook and several news media sites such as KapanLagi.com and Merdeka.com without using the user's data allowance. Such deals are increasingly being questioned technology companies are not fully transparent about how they choose the websites or applications included in zero-rated packages.



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