GDI

**Global
Disinformation
Index**

Disinformation
Risk Assessment:
The Online News
Market in Indonesia

The Global Disinformation Index is a not-for-profit organisation that operates on the three principles of neutrality, independence and transparency. Our vision is a world free from disinformation and its harms. Our mission is to catalyse industry and government to defund disinformation. We provide disinformation risk ratings of the world's news media sites. For more information, visit www.disinformationindex.org.

Asia Research Centre, Universitas Indonesia (ARC UI) is an interdisciplinary research centre that aims to strengthen social resilience, be it global, regional, national, or local, through comparative analysis developed from collaborative research excellence. ARC UI has conducted several research projects in partnership with international donors, international and local universities, government, and civil society organisations since 2020. To name a few, the comparative analysis of the role of social sciences in responding to COVID-19 in Asia and the analysis of gender equality and social inclusion in higher education in ASEAN countries. One of our ongoing interdisciplinary research projects combines economic and geographic expertise to study the relationship between inequality and deforestation in Indonesia. ARC UI responds to the gig economy and political identity through several studies on precarious labour in Indonesia. In collaboration with the Global Disinformation Index, ARC UI led the in-country analysis of disinformation in the Indonesian media landscape. ARC UI communicates research findings and reports by sharing science communication via social media accounts (Instagram, Facebook, Twitter) and streaming public webinars through the YouTube channel.

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Executive summary

Since the news business has expanded to the online world, transformations in news production and distribution have exposed the industry to new disinformation risks.

News websites have financial incentives to spread disinformation in order to increase their online traffic and, ultimately, their advertising revenue. Meanwhile, the dissemination of disinformation has disruptive and impactful consequences. The disinformative narratives surrounding the COVID-19 pandemic are a recent — and deadly — example. By disrupting society's shared sense of accepted facts, these narratives undermine public health, safety and government responses.

To combat ad-funded disinformation, the Global Disinformation Index (GDI) deploys its assessment framework to rate news domains' risk of disinforming their readers. These independent, trusted and neutral ratings are used by advertisers, ad tech companies, and platforms to redirect their online ad spending, in line with their brand safety and disinformation risk mitigation strategies.

GDI defines disinformation as "adversarial narratives that create real world harm," and the GDI risk rating provides information about a range of indicators related to the risk that a given news website will disinform its readers by spreading these adversarial narratives. These indicators are grouped under the index's **Content** and **Operations pillars**, which respectively measure the quality and reliability of a site's content and its operational and editorial integrity.[1] A site's overall risk rating is based on that site's aggregated score across all the indicators, and ranges from zero (maximum risk level) to 100 (minimum risk level).

The GDI risk rating methodology is not an attempt to identify and label disinformation sites or trustworthy news sites. Rather, GDI's approach is based on the idea that a combined set of indicators can reflect a site's overall risk of carrying disinformation through an aggregated combination of direct and proxy indicators for disinformation. The direct measurement includes items which assess the prevalence of adversarial narratives or associated content characteristics within the article content, as defined by the GDI framework. The remaining indicators largely reflect measures of policy, ownership and funding transparency, as well as commitment to standard journalistic practices in article and content output. The ratings should be seen as offering initial insights into the Indonesian media market and its overall levels of disinformation risk, along with the strengths and challenges the sites face in mitigating disinformation risks.

The following report presents the findings pertaining to disinformation risks for the media market in Indonesia, based on a study of 38 news domains. These findings were the result of research led by GDI with the Asia Research Centre at Universitas Indonesia from March through June of 2022. Sites that were rated as minimum-risk were named and profiled in the report. All sites included in the report were informed of their individual scores and risk ratings to allow for engagement and feedback. However, given that disinformation risk is more important as a societal concern than as a ranking criterion between domains, the names of higher-risk sites were not disclosed herein.

The need for a trustworthy, independent rating of disinformation risk is pressing. This risk-rating framework for Indonesia provides crucial information to policy-makers, news websites and civil society, enabling key decision-makers to stem the tide of money that incentivises and sustains disinformation. Moreover, the results of this study will contribute to GDI's mission to disrupt the business model of disinformation, as they are being earmarked for sharing with ad tech industry stakeholders and other parties acting to defund disinformation.

Key findings: Indonesia

In reviewing the media landscape for Indonesia, GDI's assessment found that:

Of the 38 sites reviewed, more than 50% demonstrated a minimum or low level of disinformation risk.

- Eight sites had a minimum-risk rating.

- Eighteen sites had a low-risk rating.

- However, more than 80% of sites were prone to recycling news articles, as the majority of their publications were not recent coverage (i.e., older than 30 days). Such publications may lack context and could be used to misinform the public.

- Low- and minimum-risk sites scored well overall for publishing non-sensational content, but lacked a few of the operational checks and balances that are considered critical for running an independent and accountable newsroom.

- In general, Indonesia's domains scored fairly well on the **Content pillar** indicators, but performed poorly on the **Operations pillar** indicators. Even minimum-risk sites were lacking in some key operational policies and practices.

Most of the online news outlets in Indonesia suffer from weak operational and editorial policy transparency, which can increase disinformation risk.

- All 38 sites scored lower on the **Operations pillar** than they did on the **Content pillar**.

- Only nine domains received scores on the **Operations pillar** that were above 60 out of 100. Ten domains received scores below 40 on this pillar.

- Among the **Operations pillar** indicators, sites performed best on *Editorial principles and practices* and *Ownership*. Curiously, domains that did well on one of these indicators often did poorly in the other indicator.

- The *Attribution*, *Ensuring accuracy*, and *Funding* indicators each had average scores below 50. The absence of attribution or accuracy policies can lead to the publication of misleading, poorly sourced or false information.

- The domains showed the poorest performance on *Funding*, receiving an average score of 36.1 in this indicator due to not publicly disclosing their financial information, which can elevate the risk of conflicts of interest.

Only five Indonesian sites presented high levels of disinformation risk.

- These sites struggled on the **Operations pillar**, with an average pillar score of 26.6 and average scores below 50 on five of the pillar's six indicators (i.e., *Attribution*, *Comment policies*, *Editorial principles and practices*, *Ensuring accuracy*, and *Funding*).

- High-risk sites disproportionately failed to include byline information in their articles, receiving an average score of 48.8 on this indicator.

- However, none of the sites in the study received a maximum-risk rating.

The Indonesian media market:
Key features and scope

Indonesia's media landscape is heavily anchored in the experience and history of democracy and freedom of speech prior to the New Order regime.

The fall of President Suharto's reign in 1998 ended 32 years of authoritarian government, which to a great extent has paved the way to Indonesia's democracy we know today. This had a significant impact on the architecture of the media landscape. The New Order regime exerted strict control over media institutions and limited media ownership. Under Suharto's authoritarian power, news outlets were required to apply for a Press Publishing Business Licence (Surat Izin Usaha Penerbitan Pers — SIUPP). The state also had the power to ban media outlets for opposing or criticising the government.[2] In this era, only two kinds of broadcast media were allowed to operate: government-run channels (RRI/TVRI) and small private corporations. The media landscape's governance during the New Order reflects the state's media policy as the government's means of controlling society, and thus limiting democracy and freedom of speech.

Following the end of the New Order regime, the Indonesian government has shifted towards an era of reform. Media reform began with the 1999 Press Law, with its attendant code of ethics and the creation of an independent Indonesian Press Council (Dewan Pers).[3] The Reform regime under President B.J. Habibie enabled the Indonesian Press Council to enhance the growth and quality of the country's media landscape (particularly the national press) and protected the freedom of the press. One of the promising outcomes of these reforms was the emergence of Chinese-language press and media in Indonesia, which were banned during Suharto's regime. They provide local Chinese-language daily newspapers for Chinese communities in Indonesia.[4]

Within this distinctly new and reformed media landscape, Indonesia currently has an abundance of media companies supplying information for audiences across the archipelago (Table 1). However, there is a much smaller number of nationwide outlets (Table 2).

Table 1. Indonesian media companies by type

Type of media company	Number of companies
Press companies	1684
Print companies	444
Radio stations	16
Television channels	367
Websites	969

Source: Global Disinformation Index

Table 2. National Indonesian media companies by type

Type of media company	Number of companies
National print newspapers	14
National print magazines	53
National print tabloids	5
National news television channels	23

Source: Global Disinformation Index

The reformation agenda has increased private media ownership, with media conglomeration centred around a small number of business tycoons in Jakarta. The Indonesian media landscape is dominated by eight conglomerates: MNC Tbk, EMTEK, Visi Media Asia, Trans Corpora, Media Group, Kompas Gramedia, Jawa Pos Group, and LIPPO Group. Of these eight media conglomerates, three — MNC Tbk, EMTEK, and Visi Media Asia — control 75% of the coverage area, audience share and advertising revenue.[5] MNC Tbk controls about 35% of the market, followed by EMTEK (22.8%) and Visi Media Asia (17.3%).

Media consumption and prevalence trend research clearly and consistently show that online media outlets in Indonesia greatly outnumber other media outlets as the main source of information for Indonesians.[6] As of January 2022, there were 204.7 million internet users in Indonesia, including 191.4 million social media users. Indonesia's internet penetration rate stood at 73.7% of the total population at the start of 2022. Additionally, there were 370.1 million cellular mobile connections in Indonesia at the start of 2022. Advances in online media outlets have rapidly enabled information consumption as well as production and dissemination.

Disinformation can spread rapidly over social media in Indonesia. Starting in 2012, Indonesia experienced significant spreading of disinformation.[7] During the Jakarta gubernatorial election, elements of disinformation along religious lines heated the political landscape. Rising Islamic conservatism is a worrying trend for Indonesia, as it encourages religious partisanship, which is strongly associated with belief in various types of misinformation. Religious partisanship has thus become the notable disinformation element at play in Indonesia. Starting in 2016, the Indonesian government implemented a number of initiatives to govern disinformation as well as to deter online media outlets responsible for producing provocative fake news.

Disinformation risk ratings

This study looks specifically at a sample of 38 news websites in Bahasa Indonesia.

Market overview

The sample was defined based on the sites' reach (using each site's Alexa rankings, Facebook followers, and Twitter followers), relevance and the ability to gather complete data for the site.

Table 3. Media sites assessed in Indonesia (in alphabetical order)

News outlet	Domain	News outlet	Domain
Antara	www.antaranews.com	Kontan	www.kontan.co.id
Berita Satu	www.beritasatu.com	Kumparan	www.kumparan.com
Beritajatim	beritajatim.com	Liputan 6	www.liputan6.com
Bintang	www.tabloidbintang.com	Media Indonesia	www.mediaindonesia.com
Bisnis	www.bisnis.com	Merdeka.com	www.merdeka.com
Bola.com	www.bola.com	Nova	nova.grid.id
Brilio.net	www.brilio.net	Okezone	www.okezone.com
China Radio International	indonesian.cri.cn	Pikiran Rakyat	www.pikiran-rakyat.com
CNBC Indonesia	www.cnbcindonesia.com	Radio Bharata Online	www.bharataradio738.com
CNN Indonesia	www.cnnindonesia.com	Republika	www.republika.co.id
Detik	www.detik.com	Russia Beyond	id.rbth.com
IDN Times	www.idntimes.com	Sindo News	www.sindonews.com
Indozone	www.indozone.id	Solopos	www.solopos.com
iNews	www.inews.id	Suara.com	www.suara.com
Jawa Pos	www.jawapos.com	Tempo	www.tempo.co
JPNN	www.jpnn.com	Tirto	www.tirto.id
Katadata	www.katadata.co.id	Tribunnews	www.tribunnews.com
Kompas TV	www.kompas.tv	tvOne	www.tvonenews.com
Kompas.com	www.kompas.com	Viva	www.viva.co.id

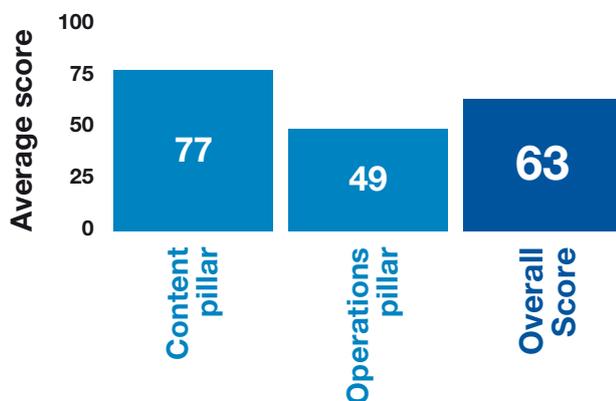*Source: Global Disinformation Index*

Figure 1. Disinformation risk ratings by site
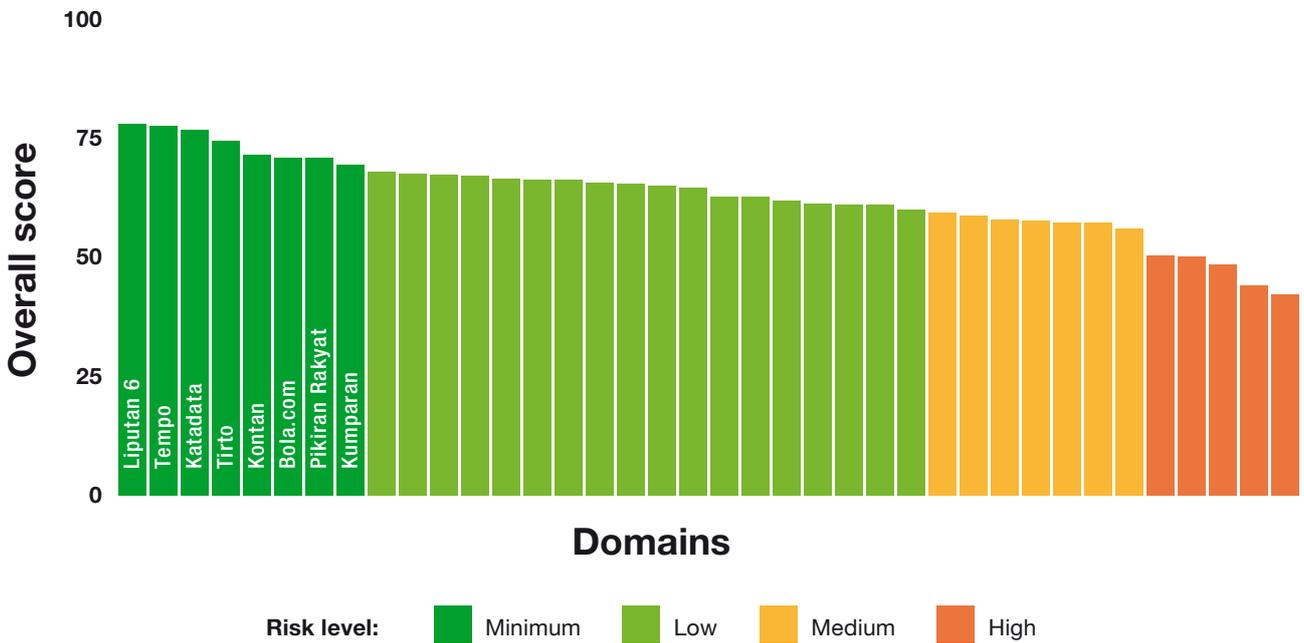
Source: Global Disinformation Index

The study found good average overall scores for the Indonesian media market (63 out of 100). With an overall **Content pillar** score of 77, Indonesian online journalism content displayed a more limited degree of disinformation risk. In particular, Indonesia's media domains very rarely unfairly targeted individuals (private or public) or entities using negative narrations. This finding is in line with the aggregate finding noted above — the disinformation risk seen in the content published by Indonesian outlets was limited, suggesting a trustworthy and reliable media environment. The majority of the sites showed low or minimum levels of disinformation risk. However, these positive findings should not be taken to suggest that Indonesia has successfully "solved" the question of disinformation, as five sites within the sample still showed high levels of disinformation risk. As in all countries surveyed by GDI, there was notable room for improvement in specific areas, which is discussed in greater detail in upcoming sections.

Figure 2. Overall market scores, by pillar

Source: Global Disinformation Index

Data from Indonesia show that the **Content pillar** scores were better overall than those on the **Operations pillar**. Domains achieved an average score of 77.2 on the **Content pillar**, suggesting that Indonesia's journalism practices were well in line with the pillar's indicators. In general, for more than three-fourths of the domains reviewed, the majority of the articles assessed were neutral and unbiased, carried bylines and headlines which matched the stories' contents and did not negatively target groups or individuals.

Eight sites were assessed with a minimum-risk rating. While these sites generally performed well on providing straight, reliable and unbiased content, a few provided insufficient information about attribution policies regarding elements like statistics, quotations, and external media, which have the potential of disinforming readers. In addition, some minimum-risk sites lacked key operational policies, including information on their *Funding* sources (the highest score among these sites is 78.6). Interestingly, not all domains that were assessed with high scores on the **Content pillar** scored well on the **Operations pillar**. The top-scoring domain on the **Content pillar** received one of the ten lowest scores for the **Operations pillar** due to shortfalls around policies associated with journalistic standards (such as editorial principles and practices to ensure accuracy).

The Reform era in 1999 implemented a national code of ethics for journalism (Kode Etik Wartawan), which shares the vantage point of the indicators of disinformation.

The 11 chapters of Indonesia's Kode Etik Wartawan are intended to prevent journalists from creating bias. However, Indonesia's online news domains have failed to keep up with the nature of news in the digital media era. This was reflected in the **Operations pillar** scores. With an average score of 48.7 on the **Operations pillar**, it is evident that online news domains in Indonesia were behind in implementing regulations to establish trust and reliability in the quality of the news. This was especially evident for the *Attribution* indicators — poor *Attribution* scores can increase the risk of acts of fabrication and are associated with a lack of transparency. This study illustrated an absence of policies and safeguards within the contexts of online news, at both the domain level and the company level. Nevertheless, Indonesia's domains performed well with respect to preventing emerging risks to journalistic integrity by enforcing editorial principles and practices, building trust through acts of ensuring accuracy, and avoiding conflict of interest by providing information on funding and ownership (see Figure 3).

Eighteen sites were assessed with a low-risk rating. While these sites generally performed well on providing reliable and unbiased content, they often lacked key operational policies associated with strong universal journalistic standards, such as fact-checking and correction policies, attribution policies and practices to ensure accuracy. This indicated that online journalism remains new territory for pre-digital news outlets, which needs to be explored and adapted — especially in terms of the **Operations pillar** (see Figure 3).

There are seven sites in Indonesia that were rated as medium-risk sites. However, in general, the medium-risk sites for this report performed well on providing content with a lower disinformation risk, achieving an average **Content pillar** score on par with the overall pillar average. However, as these sites performed poorly on the **Operations pillar**, they could make greater efforts to adopt and publish editorial best practices when producing the news.

The five remaining sites received a high-risk rating. They showed poor overall scores with respect to both the credibility of their content as well as the journalistic standards for editorial and operational policies.

Figure 3. Average pillar scores by risk rating level
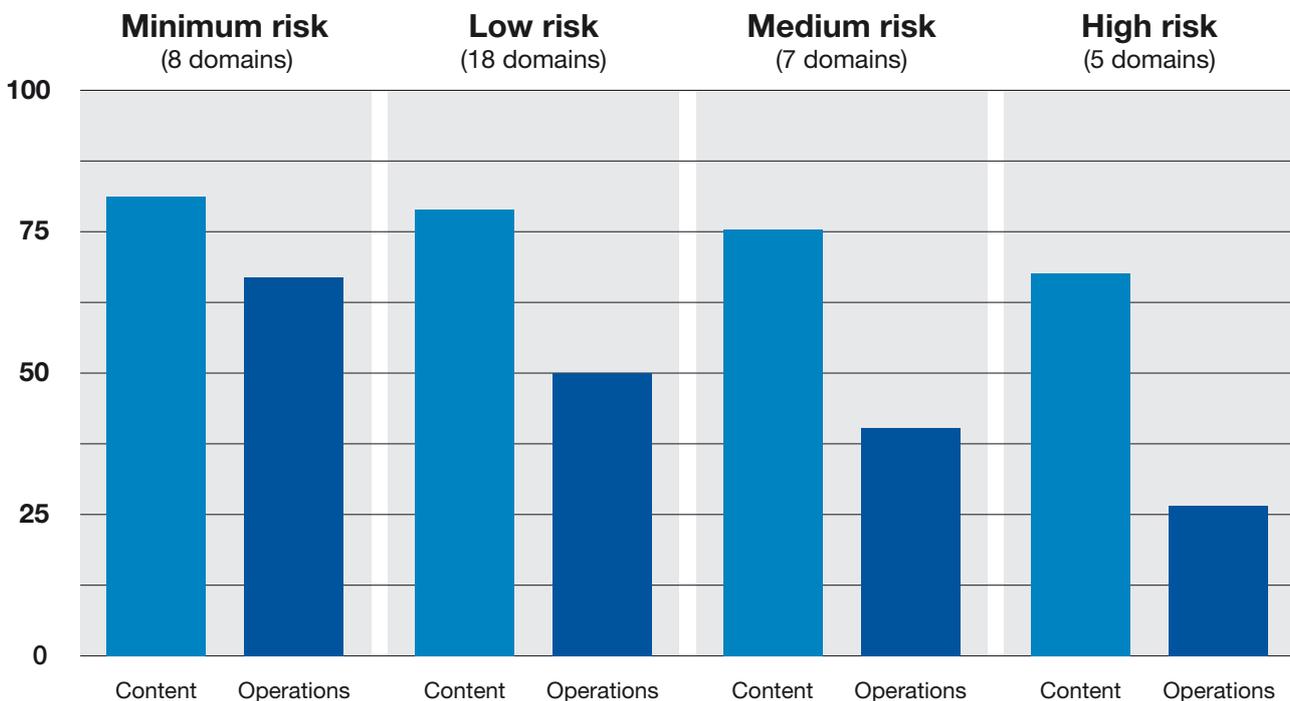
Source: Global Disinformation Index

Pillar overview

Content pillar

The **Content pillar** focuses on the reliability of the content provided on the site. Analysis for this pillar was based on an assessment of 20 anonymised articles for each domain. These articles were drawn from among the most frequently shared pieces of content during the data collection period and a sample of content pertaining to topics which present a disinformation risk, such as politics and health. The pillar used 9 indicators to measure each site content's performance on a scale from 0 (highest risk) to 100 (lowest risk).

The Indonesian media market performed relatively very well on this pillar, with sites' scores ranging from 62 to 84.7 and an average **Content pillar** score of 77.2 (see Figure 4). Almost all indicators in this pillar had an average score above 70 (*Recent coverage* was the one exception, with an average score of 37.6). *Negative targeting* was almost absent from Indonesia's online media landscape — only one domain generated a score below 90 for this indicator. This is a promising finding, considering that the disinformation problem has the potential to escalate conflicts based on religion or ideology. Moreover, six **Content pillar** indicators (*Headline accuracy*, *Visual presentation*, *Common coverage*, *Byline information*, *Article bias*, and *Sensational language*) yielded average scores from 76.6 to 85.4, suggesting that most stories produced by Indonesian news sites were neutral, fact-based and free of sensationalism.

One salient concern from the **Content pillar** was *Recent coverage*, which generated the lowest average score of 37.6. Most stories did not cover events from the last 30 days since the stories' original publication date. This is worrisome, and there are two explanations: (1) news sites recycled old content — a potential risk if reporting the news out of context can lead to disinformation, and (2) news articles were published as short news with partial information (e.g., the date of the event was not included, incomplete background story). This short news format might have been related to economic motives as it could propel readers to continuously engage with follow-up news and fill space on the news site, thus attracting advertising revenue.

Figure 4. Average Content pillar scores by indicator
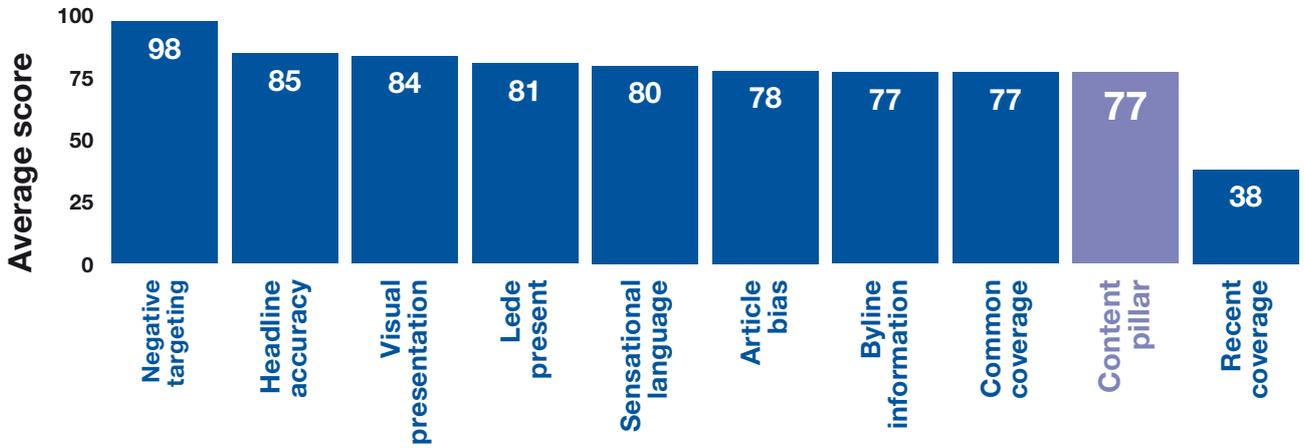
Source: Global Disinformation Index

Figure 5. Content pillar scores by site
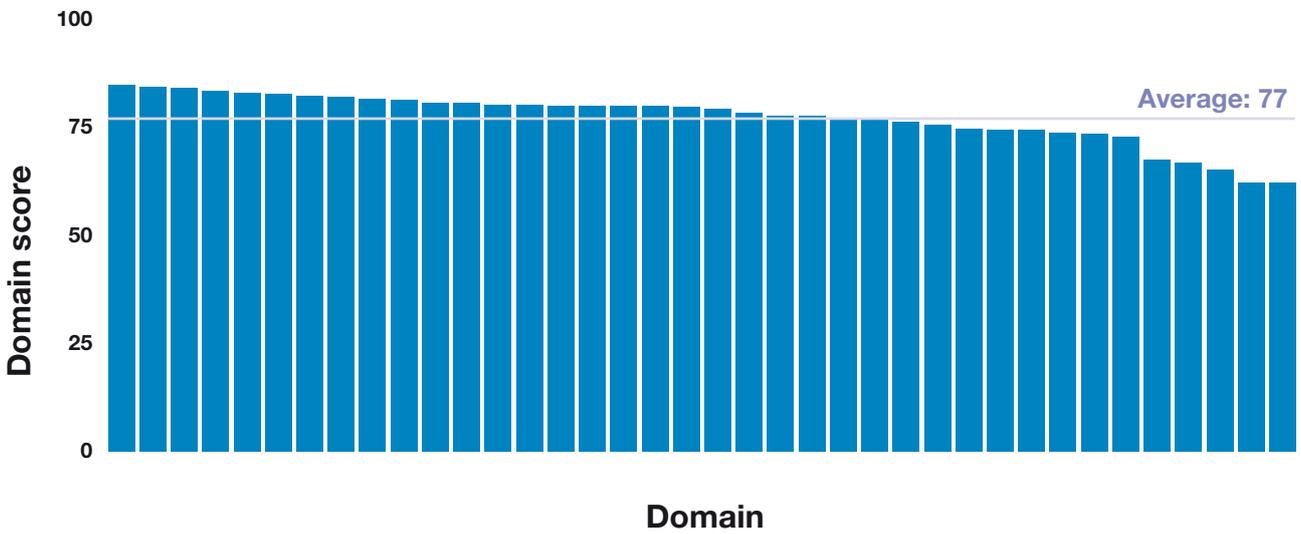
Source: Global Disinformation Index

Operations pillar

The **Operations pillar** assesses the operational and editorial integrity of a news site. All scores were based on a scale of zero (worst) to 100 (best), as scored by the country reviewers according to the information available on the site. The **Operations pillar** emphasises the operational and editorial integrity of a news site and measures six indicators: *Ownership*, *Funding*, *Ensuring accuracy*, *Editorial principles and practices*, *Comment policies*, and *Attribution*. However, it is important to note that this assessment focuses only on whether the relevant policies were in place and made transparent to the public. It is not able to measure how well those policies were implemented.

Compared to the **Content pillar**, sites' **Operations pillar** scores spanned a broader range of scores, from 11.1 to 73.5. This disparity reflected the absence of an adequate minimum standard of transparency that online media should exhibit to the public. It is also worth noting that the top performers group in the **Operations pillar** was dominated by sites from major media conglomerates. These companies have public transparency obligations since they are listed on the stock market. Therefore, information such as financial reports, detailed organisation structure, and ownership were relatively easy to find for these sites.

On average, the Indonesian media market scored lower on the **Operations pillar** than on the **Content pillar**, with an average pillar score of 48.7.

Among the **Operations pillar** indicators, the sampled domains performed best on the *Editorial principles and practices* and *Ownership* indicators, as reflected by their average scores of 55.7 and 57.5, respectively. Even so, these scores suggested that Indonesian media outlets have significant opportunities for improvement, particularly by adding adequate information about their editorial policies on the sites. Indonesian news sites might also improve their scores by disclosing their organisational and ownership structure more transparently.

Indonesian media domains yielded lower scores on *Ensuring accuracy* (46.3), *Attribution* (43.1) and *Funding* (36.1). Most media outlets failed to show their fact-checking policies and attribution provisions to ensure that all information is sourced appropriately. Moreover, only 16 of the 38 media sites displayed user-generated comment moderation policies on their pages. Finally, the domains performed most poorly on the *Funding* indicator, with an average score of 36.1. This score reflected the absence of financial transparency from most Indonesian media outlets. Publicising information on editorial policy and codifying traditional journalism principles in daily newsroom activity would benefit both the media and the public. The vast majority of the domains had published only a template of cyber media guidelines from the Press Council, which failed to accommodate the agile character of the digital era, thus falling behind the fast-paced and ever-changing online news sphere. Transparency about business models and funding sources is also critical to building trust and credibility as a media outlet.

Figure 6. Average Operations pillar scores by indicator
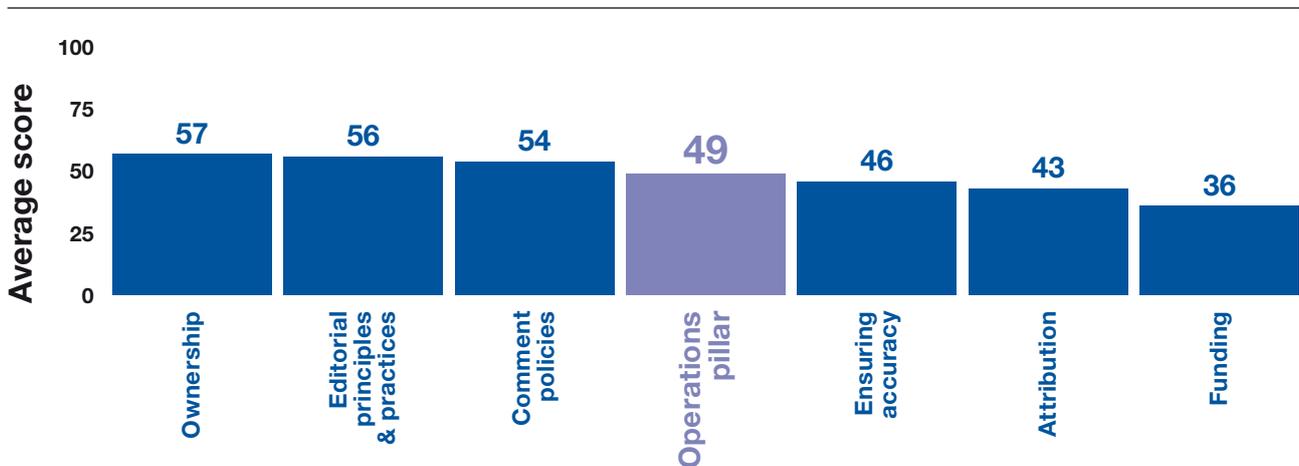
Source: Global Disinformation Index

Figure 7. Operations pillar scores by site
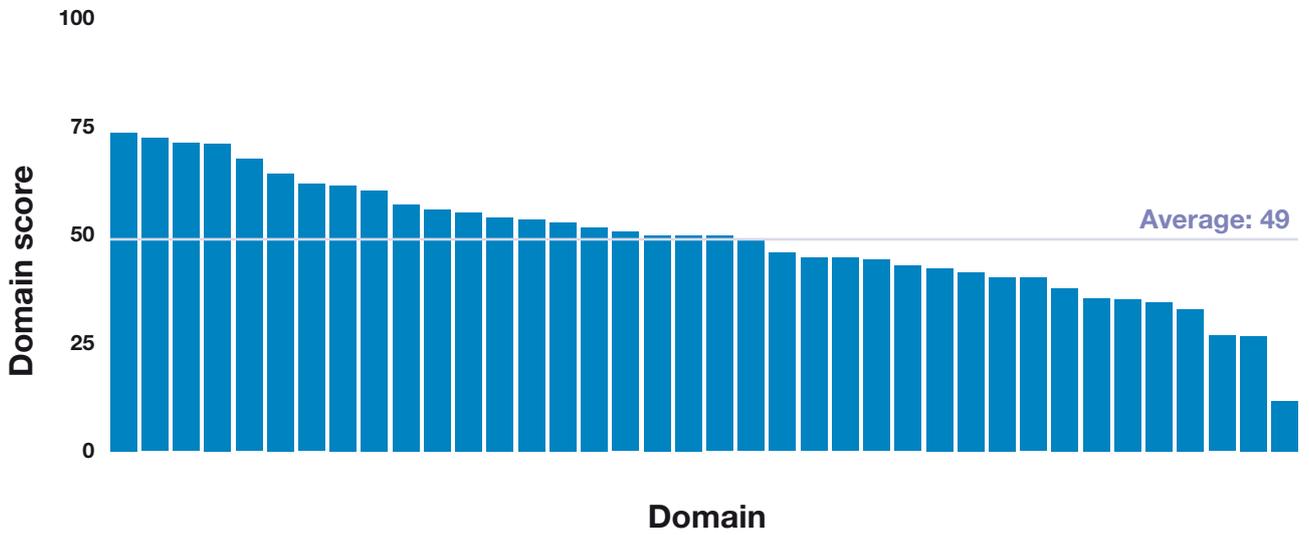
Source: Global Disinformation Index

Conclusion

In this Global Disinformation Index study on Indonesia's media market, 87% of the sampled domains were rated as presenting a minimum, low or medium risk of disinformation.

Only five sites received a score of high risk of disinformation. Two of the five domains that scored as high-risk are an international radio broadcasting company and a national radio broadcaster collaborating with an international radio broadcasting company. As international news agencies, these outlets are not well regulated under Indonesia's Press Law no. 40/1999.

Indonesian media sites performed strongly in terms of **Content pillar** scores and a number of indicator scores. However, the overall disinformation risk ratings of these domains were brought down by significant shortcomings in the **Operations pillar**, especially regarding lack of attribution, lack of funding transparency, and other operational and editorial policy (e.g., ensuring accuracy) shortfalls.

News sites could address these shortcomings by taking a number of actions, such as:

- Adopting and publishing journalistic and operational standards (like those set by the Journalism Trust Initiative) that provide transparent information about the site's overall policies.
- Supporting the establishment of national regulations which are attuned to the characteristics of new media outlets.
- Clearly publishing sources of funding and media outlet ownership information.
- Ensuring that all media properly attribute information and news, in alignment with journalistic best practices.

Appendix: Methodology

The Global Disinformation Index evaluates the level of disinformation risk of a country's online media market. The country's online media market is represented by a sample of 30 to 35 news domains that are selected on the basis of their Alexa rankings, their number of social media followers, and the expertise of local researchers. The resulting sample features major national news sites with high levels of online engagement, news sites that reflect the regional, linguistic and cultural composition of the country, and news sites that influence ideas among local decision-makers, groups or actors.

The index is composed of the **Content** and **Operations pillars**. The pillars are, in turn, composed of several indicators. The **Content pillar** includes indicators that assess elements and characteristics of each domain's content to capture its level of credibility, sensationalism, and impartiality. The remaining content indicators measure journalistic quality by assessing adherence to standard journalistic practices, such as including a lede at the beginning of articles. These indicators are used as proxies for disinformation risk. The **Operations pillar's** indicators evaluate the policies and rules that a specific domain establishes to ensure the reliability and quality of the news being published. These policies concern, for instance, conflicts of interest, accurate reporting and accountability. The presence of policies, funding and ownership information on a domain are used as a proxy measure for the disinformation risk of the domain being assessed.

Each of GDI's media market risk assessments are conducted in collaboration with a local team of media and disinformation experts who develop the media list for the market sample, contribute to the sampling frame for the content included in the **Content pillar** review, conduct the data collection for the **Content** and **Operations pillars**, vet and interpret the index results, and draft the market report.

Site selection

The market sample for the study is developed based on a mix of quantitative and qualitative criteria. GDI begins by creating a list of the 50 news websites with the greatest traffic in the media market. This list is provided to the country research team, along with data on the number of Facebook and Twitter followers for each site, to gauge relevance and reach. The local research team then reduces the list to 35 sites, ensuring that the sample provides adequate geographic, linguistic and political coverage to capture the major media discourses in the market. International news outlets are generally excluded, because their risk ratings are assessed in the market from which they originate.[8] News aggregators are also excluded, so that all included sites are assessed on their original content. The final media market sample reflects the complete set of between 30 to 35 sites for which complete data could be collected throughout the review process.

Global Disinformation Index Technical Advisory Group

GDI's risk assessment framework is developed with the advice and support of a technical advisory group (TAG), including:

- Ben Nimmo (Facebook)
- Camille François (Graphika)
- Miguel Martinez (co-founder and chief data scientist, Signal AI)
- Nic Newman (Reuters Institute of Journalism)
- Olaf Steenfadt (Reporters without Borders)
- Cristina Tardáguila (Lupa)
- Amy Mitchell (Pew Research)
- Scott Hale (Meedan and Credibility Coalition)
- Finn Heinrich (OSF), and
- Laura Zommer (Chequeado)

Data collection

The **Content** indicators are based on the review of a sample of 20 articles published by each domain. Ten of these articles are randomly selected among a domain's most frequently shared articles on Facebook within a two-week period. The remaining ten articles are randomly selected among a group of a domain's articles which cover topics that are likely to carry disinformation narratives. The topics, and the associated set of keywords used to identify them, are jointly developed by GDI and the in-country research team. Each country team contributes narrative topics and the keywords used to identify them in the local media discourse to GDI's global topic classifier list, developed by GDI's data science and intelligence teams. Country teams also manually verify the machine translation of the entire topic list in the relevant study languages.

The sampled articles are anonymised by stripping them of any information that allows the analysts to identify the publisher or the author of the articles. The anonymised content is reviewed by two country analysts who are trained on the GDI codebook. For each anonymised article, the country analysts answer a set of 13 questions designed to evaluate the elements and characteristics of the article and its headline, in terms of bias, sensationalism and negative targeting. The analysts subsequently review how the article is presented on the domain and the extent to which the domain provides information on the author's byline and timeline. While performing the **Content pillar** reviews, the analysts are required to provide a thorough explanation and gather evidence to support their decisions.

The **Operations pillar** is based on the information gathered during the manual assessment of each domain performed by the country analysts. The country analysts answer a set of 98 questions designed to evaluate each domain's ownership, management and funding structure, editorial independence, principles and guidelines, attribution policies, error correction and fact-checking policies, and rules and policies for the comments section. The analysts gather evidence to support their assessments as they perform each **Operations pillar** review.

Data analysis and indicator construction

The data gathered by the country analysts for the **Content pillar** are used to compute nine indicators. The **Content pillar** indicators included in the final risk rating are: *Headline accuracy*, *Byline information*, *Lede present*, *Common coverage*, *Recent coverage*, *Negative targeting*, *Article bias*, *Sensational language* and *Visual presentation*. For each indicator, values are normalised to a scale of 0 to 100. The domain-level score for each indicator in this pillar is the average score obtained across the twenty articles. The pillar score for each domain is the average of all the scores for all of the pillar's indicators, and ranges from 0 to 100.

For the **Operations pillar**, the answers of the country analysts are translated into a set of sub-indicators. The six indicators are calculated as the averages of these sub-indicator scores. The resulting **Operations pillar** indicators are: *Attribution*, *Comment policies*, *Editorial principles and practices*, *Ensuring accuracy*, *Funding*, and *Ownership*. For each indicator, values are normalised to a scale of 0 to 100. The domain score for the **Operations pillar** is the average score across indicators.

Table 4. Global Disinformation Index pillars and indicators

Pillar	Indicator	Sub-indicators	Unit of analysis	Definition	Rationale
Content	Headline accuracy	None	Article	Rating for how accurately the story's headline describes the content of the story	Indicative of clickbait
	Byline information			Rating for how much information is provided in the article's byline	Attribution of stories creates accountability for their veracity
	Lede present			Rating for whether the article begins with a fact-based lede	Indicative of fact-based reporting and high journalistic standards
	Common coverage			Rating for whether the same event has been covered by at least one other reliable local media outlet	Indicative of a true and significant event
	Recent coverage			Rating for whether the story covers a news event or development that occurred within 30 days prior to the article's publication date	Indicative of a newsworthy event, rather than one which has been taken out of context
	Negative targeting			Rating for whether the story negatively targets a specific individual or group	Indicative of hate speech, bias or an adversarial narrative
	Article bias			Rating for the degree of bias in the article	Indicative of neutral, fact-based reporting or well-rounded analysis
	Sensational language			Rating for the degree of sensationalism in the article	Indicative of neutral, fact-based reporting or well-rounded analysis
	Visual presentation			Rating for the degree of sensationalism in the visual presentation of the article	Indicative of neutral, fact-based reporting or well-rounded analysis
Operations	Attribution	None	Domain	Rating for the number of policies and practices identified on the site	Assesses policies regarding the attribution of stories, facts and media (either publicly or anonymously); indicative of policies that ensure accurate facts, authentic media and accountability for stories
	Comment policies	Policies		Rating for the number of policies identified on the site	Assesses policies to reduce disinformation in user-generated content
		Moderation		Rating for the mechanisms to enforce comment policies identified on the site	Assesses the mechanism to enforce policies to reduce disinformation in user-generated content
	Editorial principles and practices	Editorial independence		Rating for the number of policies identified on the site	Assesses the degree of editorial independence and the policies in place to mitigate conflicts of interest
		Adherence to narrative		Rating for the degree to which the site is likely to adhere to an ideological affiliation, based on its published editorial positions	Indicative of politicised or ideological editorial decision-making
		Content guidelines		Rating for the number of policies identified on the site	Assesses the policies in place to ensure that factual information is reported without bias
		News vs. analysis		Rating for the number of policies and practices identified on the site	Assesses the policies in place to ensure that readers can distinguish between news and opinion content
	Ensuring accuracy	Pre-publication fact-checking		Rating for the number of policies and practices identified on the site	Assesses policies to ensure that only accurate information is reported
		Post-publication corrections		Rating for the number of policies and practices identified on the site	Assesses policies to ensure that needed corrections are adequately and transparently disseminated
	Funding	Diversified incentive structure		Rating for the number of revenue sources identified on the site	Indicative of possible conflicts of interest stemming from over-reliance on one or few sources of revenue
		Accountability to readership		Rating based on whether reader subscriptions or donations are identified as a revenue source	Indicative of accountability for high-quality information over content that drives ad revenue
		Transparent funding		Rating based on the degree of transparency the site provides regarding its sources of funding	Indicative of the transparency that is required to monitor the incentives and conflicts of interest that can arise from opaque revenue sources
	Ownership	Owner-operator division		Rating based on the number of distinct executive or board-level financial and editorial decision-makers listed on the site	Indicative of a separation between financial and editorial decision-making, to avoid conflicts of interest
		Transparent ownership		Rating based on the degree of transparency the site provides regarding its ownership structure	Indicative of the transparency that is required to monitor the incentives and conflicts of interest that can arise from opaque ownership structures

Source: Global Disinformation Index

Risk ratings

The overall index score for each domain is the average of the pillar scores. The domains are then classified on the basis of a five-category risk scale based on the overall index score. The risk categories were defined based on the distribution of risk ratings from 180 sites across six media markets in September 2020.

This cross-country dataset was standardised to fit a normal distribution with a mean of 0 and a standard deviation of 1. The standardised scores and their distance from the mean were used to determine the bands for each risk level, given in Table 5. These bands are then used to categorise the risk levels for sites in each subsequent media market analysis.

Table 5. Disinformation risk levels

Risk level	Lower bound	Upper bound	Standard deviation
Minimum risk	69.12	100	> 1.5
Low risk	59.81	69.11	> 0.5 and ≤ 1.5
Medium risk	50.5	59.8	> -0.5 and ≤ 0.5
High risk	41.2	50.49	≥ -1.5 and ≤ -0.5
Maximum risk	0	41.19	< -1.5

Source: Global Disinformation Index

Endnotes

1   The GDI assessment framework is outlined in the annex of this report.

2   Nugroho, Y., Siregar, M. F., & Laksmi, S. (2012). *Mapping media policy in Indonesia*.

3   Steele, J. (2012). The making of the 1999 Indonesian press law. *Indonesia*, (94), 1-22.

4   Hoon, C. Y. (2009). "A hundred flowers bloom": the re-emergence of the Chinese press in post-Suharto Indonesia. In *Media and the Chinese Diaspora* (pp. 105-132). Routledge.

5   d'Haenens, L. (2022). Concentration of Media Ownership in Indonesia: A Setback for Viewpoint Diversity. *International Journal of Communication*, 16, 21.

6   See: https://datareportal.com/reports/digital-2022-indonesia.

7   Saraswati, M. S. (2021). The political campaign industry and the rise of disinformation in Indonesia. *From Grassroots Activism to Disinformation: Social Media in Southeast Asia. Singapore: ISEAS*, 43-62.

8   In select cases, international news outlets may be included in a study if the domestic market is small, the sites are considered highly relevant, the content on the site is specific to the market assessed, and GDI has not developed a risk rating for that site elsewhere.