GDI

Global Disinformation Index

Media Market Risk Ratings: Nigeria

www.disinformationindex.org

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The Global Disinformation Index is a UK-based not-for-profit that operates on the three principles of neutrality, independence and transparency. Our vision is a world in which we can trust what we see in the media. Our mission is to restore trust in the media by providing real-time automated risk ratings of the world's media sites through a Global Disinformation Index (GDI). The GDI is non-political. Our Advisory Panel consists of international experts in disinformation, indices and technology. For more information, visit www.disinformationindex.org

Paradigm Initiative works to connect underserved young Africans with digital opportunities, and ensures protection of their rights. Across our regional offices in Cameroon, Kenya, Nigeria, Senegal, Zambia, Zimbabwe and beyond, we work to connect under-served African youth with improved livelihoods through our digital inclusion and digital rights programmes. For more information, visit https://paradigmhq.org/about-us/

GDI Global Disinformation Index

PARADIGM INITIATIVE

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Preface

Since the invention of the web, how we live our lives online—and off— has changed in countless ways. This includes how news is funded, produced, consumed and shared.

With these shifts in the news industry have come risks. Disinformation is one of them. Disinformation has been used as a tool to weaponise mass influence and disseminate propaganda. During the COVID-19 pandemic, disinformation has created an infodemic undermining public health, safety and government responses. No country or media market is immune from these threats.

To combat disinformation, we need to find ways to disrupt the system and its funding. This is where the Global Disinformation Index (GDI) has set its focus.

At the GDI, we believe that an independent, trusted and neutral risk rating of news sites' disinformation risks is needed. These risk ratings can be used by advertisers and ad tech companies to ensure that where they direct their online ad spends is aligned with their own brand safety and risk mitigation strategies for disinformation.

The GDI's research offers a trusted and neutral assessment of a news domain's risk of disinforming. By looking at content, operational and context indicators, the GDI provides a domain-level rating about a news site's risk of disinforming an online user.

The following report presents the results of applying the GDI risk rating methodology to some of the frequently visited media sites in Nigeria. In total we assessed 34 sites. The country was chosen because of its size, its cultural and linguistic diversity, and the overall risks of disinformation and misinformation that have been observed in the past. The assessment and report were done in partnership with Paradigm Initiative (PIN), which is based in Nigeria and works across Africa.

Table 1. Media sites assessed in Nigeria (in alphabetical order)

News outlet	Domain
9jaflaver	https://9jaflaver.com
ABTC	https://ab-tc.com
AllNews	https://allnews.ng
Arise News	https://www.arise.tv
Channels Television	https://www.channelstv.com
Daily Nigerian	https://dailynigerian.com
Daily Post	https://dailypost.ng
Daily Trust	https://dailytrust.com
Gistreel	https://www.gistreel.com
Independent	https://www.independent.ng
Ladun Liadi's Blog	https://www.ladunliadinews.com
Legit	https://www.legit.ng
Liberty TV/Radio	https://hausa.libertytvradio.com
Linda Ikeji's Blog	https://www.lindaikejisblog.com
Naijaloaded	https://www.naijaloaded.com.ng
Naijanews	https://www.naijanews.com
Nairametrics	https://nairametrics.com
NAN News	https://www.nannews.ng
Nigerian Tribune	https://tribuneonlineng.com
NTA	https://www.nta.ng
PM News	https://www.pmnewsnigeria.com
Premium Times	https://www.premiumtimesng.com
Pulse Nigeria	https://www.pulse.ng
Sahara Reporters	http://saharareporters.com
The Guardian	https://guardian.ng
The Nation	https://thenationonlineng.net
The Punch	https://punchng.com
The Cable	https://thecable.ng
This Day	https://www.thisdaylive.com
Today	https://www.today.ng
TVC News	https://www.tvcnews.tv
Vanguard	https://www.vanguardngr.com
VOA Hausa	https://www.voahausa.com/
Yabaleftonline	https://www.yabaleftonline.ng

Introduction

The harms of disinformation[1] are proliferating around the globe—threatening our elections, our health, and our shared sense of accepted facts.
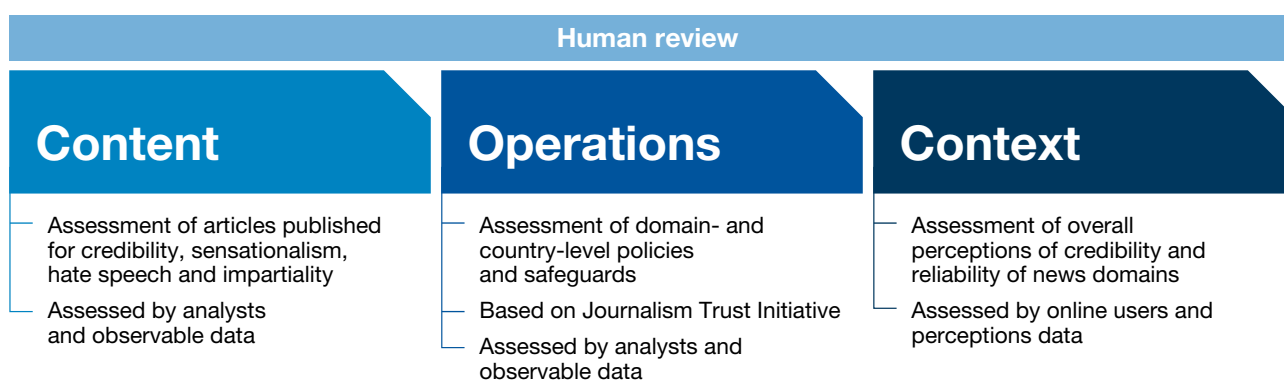
The infodemic laid bare by COVID-19 conspiracy theories clearly shows that disinformation costs peoples' lives. Websites masquerading as news outlets are driving and profiting financially from the situation.

The goal of the Global Disinformation Index (GDI) is to cut off the revenue streams that incentivise and sustain the spread of disinformation. Using both artificial and human intelligence, the GDI has created an assessment framework to rate the disinformation risk of news domains.[2]

The GDI risk rating provides advertisers, ad tech companies and platforms with greater information about a range of disinformation flags related to a site's **content** (i.e. reliability of content), **operations** (i.e. operational and editorial integrity) and **context** (i.e. perceptions of brand trust; see Figure 1). The findings in this report are based on the three pillars that were manually reviewed: **Content**, **Operations**, and **Context**.[3]

A site's disinformation risk level is based on that site's aggregated score across all of the reviewed pillars and indicators. A site's overall score ranges from zero (maximum risk level) to 100 (minimum risk level). Each indicator that is included in the framework is scored from zero to 100. The output of the index is therefore the site's overall disinformation risk level, rather than the truthfulness or journalistic quality of the site.

Figure 1. Overview of the GDI disinformation risk assessment

Human review

Content
- Assessment of articles published for credibility, sensationalism, hate speech and impartiality
- Assessed by analysts and observable data

Operations
- Assessment of domain- and country-level policies and safeguards
- Based on Journalism Trust Initiative
- Assessed by analysts and observable data

Context
- Assessment of overall perceptions of credibility and reliability of news domains
- Assessed by online users and perceptions data

The following report presents findings pertaining to disinformation risks for the media market in Nigeria, which are based on a study of 34 news domains.[4] The data provide an initial snapshot of the overall strengths and challenges that these sites face to mitigate disinformation risks.[5]

These findings are based on a research project executed jointly by GDI and the Paradigm Initiative between January and April 2021. The market analysis is based on nearly 20 disinformation flags that were assessed for Nigeria by the Paradigm Initiative and by an independent perceptions survey.[6]

This report presents the average scores for the market sample. Sites that are rated as minimum-risk sites and/ or score above a 90 on any of the three pillars are named and profiled in the report.[7]

The GDI risk rating methodology is not an attempt to identify truth and falsehoods. It does not label any site as a disinformation site—or, inversely, as a trusted news site. Rather, our approach is based on the idea that a range of signals, taken together, can indicate a site's risk of carrying disinformation.

The scores should be seen as offering initial insights into the Nigerian media market and its overall levels of disinformation risk. The results are open to debate and refinement with stakeholders from news sites, advertisers and the ad tech industry. (The appendix of this report outlines the assessment framework).[8] We look forward to this engagement.

Key findings: Nigeria

In reviewing the media landscape for Nigeria, our assessment found that:

More than four-fifths of the sites in the sample assessed had a medium risk rating.

- In total, 28 of the 34 sites in the sample showed a moderate level of disinformation risk. This result was driven largely by low scores on sites' existing operational and editorial checks and balances (the Operations pillar). Across the board, these operational risks compromised site performance on the disinformation risk assessment.

- As a result, only one domain received a low disinformation risk rating. No domains in the sample were assessed to present a minimum disinformation risk.[9]

Most sites in the Nigerian sample provide neutral and unbiased content.

- Within the site sample, the assessment showed relatively good performance on content-related indicators for accuracy and neutrality (the Content pillar).

- On average, websites associated with legacy TV or print performed on a par with websites that provide only digital content.

- The domains which performed well on content indicators related to neutral and non-sensational coverage were the same ones perceived by informed online readers as not using clickbait (the Context pillar).

Five domains were classified with a high disinformation-risk rating.

- These scores can be attributed to poor performance on operational and editorial transparency, as well as on content-related indicators associated with trusted and unbiased journalism.

Nigerian domains in the sample have ample room to improve their operational transparency and accountability as a means of reducing their exposure to disinformation risks.

- More than half of the reviewed sites have no operational policies to ensure accuracy, and present minimal information regarding ownership and/or sources of funding and revenue.

- With an average score of 22 out of 100 points, Nigerian domains are in a position to significantly improve the transparency, and thus accountability, about their operational and editorial checks and balances.

Figure 2. Disinformation risk ratings by site
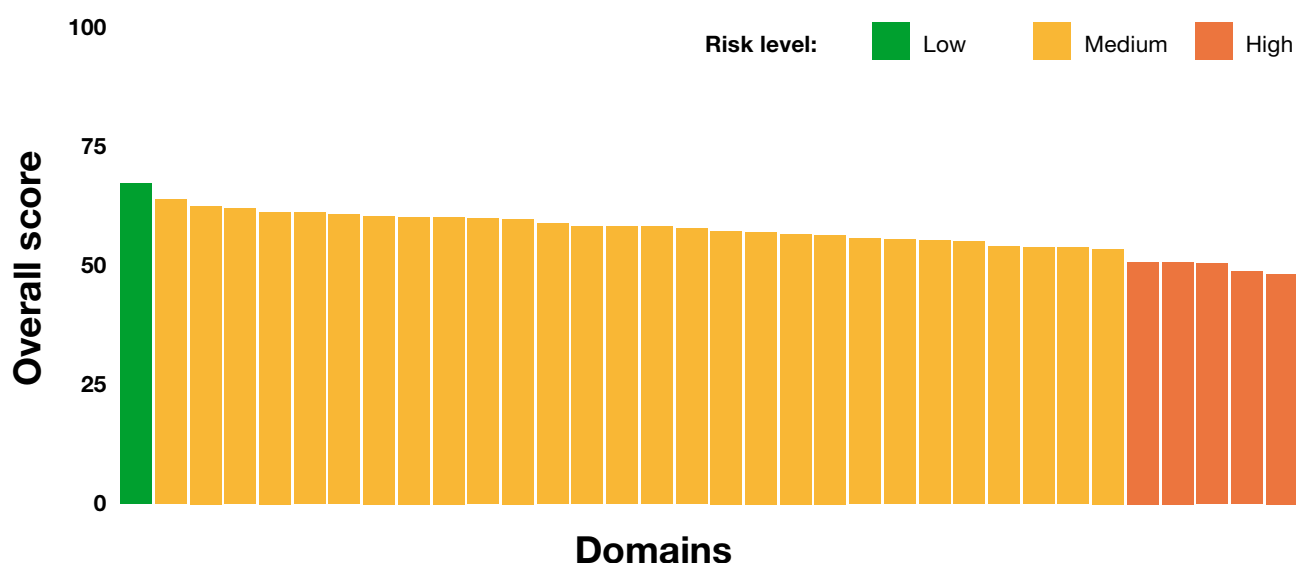
The Nigerian media market:
Key features and scope

The Nigerian media market is dynamic and reflects the country's standing as the largest economy in Africa.[10]

More than 100 newspapers are published across the country on a daily or weekly basis, allowing for multiple news sources in the country's media system.[11]

However, the media sector is under stress. Journalists covering sensitive topics (i.e. politics, corruption, terrorism, etc.) can find themselves in significant danger due to their profession. The Nigerian media market is ranked 120 out of the 180 countries assessed by Reporters Without Borders, and is considered a dangerous country for media to operate in.[12] The adoption in 2015 of laws regarding cyber-crime[13] has enabled the prosecution of both journalists and independent bloggers in the country.[14] Shortly before we started this study, two of the domains included in our sample were fined for covering the #endsars mass protests in November 2020.[15] In June 2021, the government moved to block Twitter in the country.

Moreover, as elsewhere, the print and broadcast media markets in Nigeria have witnessed a decline over the past few years, as a majority of outlets have either entirely transitioned to online coverage or begun providing both print and online coverage.

This shift to online news reflects the country's increasing connectivity. Internet penetration in Nigeria rose from 42 percent in 2019 to over half of the country by 2021.[16] A majority of those with internet access in Nigeria come from richer socioeconomic and urban households, such that shared phone internet access is substantially more common in rural regions. Reports from 2021 show that more than 90 percent of internet users in Nigeria go online using mobile devices.[17]

Along with increases in the country's internet penetration, the online ad market in Nigeria has also grown and is projected to see continued high levels of growth. It is estimated that by 2023, the online ad market will reach US$133 million, up from US$73 million in 2018.[18] While desktop devices are currently the major driver of online ad revenue in Nigeria, ads targeting mobile internet users are projected to become the most profitable ad sector. Estimates suggest that mobile advertising will rise to US$73 million by 2023, more than doubling in the last five years (up from US$31 million in 2018).[19]

These trends toward internet access via mobile devices also have implications for the type and quality of news consumed by the Nigerian population. Nigeria has Africa's largest Facebook user base, with 27.5 million users out of a total of 131 million users on the continent. As elsewhere, Facebook's Free Basics programme, which offers mobile users free access to a limited number of websites including Facebook.com, has already begun shaping Nigeria's news-consumption patterns.[20] Facebook controls the two social media platforms currently most popular in Nigeria: WhatsApp and Facebook. The pros and cons of such programmes, and their potential implications for news-consumption diets, public-opinion formation and data privacy for internet users in Nigeria and elsewhere have been discussed extensively.[21,22]

This reliance on Facebook and WhatsApp relates to the current landscape of disinformation threats in Nigeria. Discourse about the threats of disinformation in Nigeria has increased considerably since the 2016 U.S. election. By 2017, a study of public perceptions about exposure to disinformation and media trust showed that almost half of Nigerians found that they frequently encountered news that is inaccurate or entirely made-up.[23] Often, this content comes in the form of social media posts and online news articles which have contributed to escalating ethnic tensions, including articles falsely characterising Nigeria as one of the most hostile countries for Christians. Disinformation campaigns have similarly exacerbated existing tensions between farmers and herdsmen in certain regions of the country. During the 2019 election, numerous incidents of WhatsApp groups circulating false information regarding President Trump's support for the electoral candidate Atiku Abubakar were reported.[24]

Disinformation risk ratings

The findings presented below were obtained from a sample of 34 domains which included English and Hausa language media in Nigeria.[25]

Market overview

The sample was defined based on the sites' reach,[26] relevance, and the ability to gather complete data for a site.

According to our findings, four out of five news domains in the Nigerian market sample are classified as medium-risk, with only one low-risk site and five high-risk sites (see Figure 3). Many of the risk factors in the Nigerian media market can be explained by the overall poor performance on the Operations pillar (see Figure 4). Our findings suggest a substantial lack of transparency and accountability mechanisms on the part of the news domains assessed, including editorial safeguards and public information regarding a domain's revenue and funding streams. Such policies are associated with strong universal journalistic standards as have been set by the Journalism Trust initiative (JTI).[27]

Figure 3. Overall market scores, by pillar
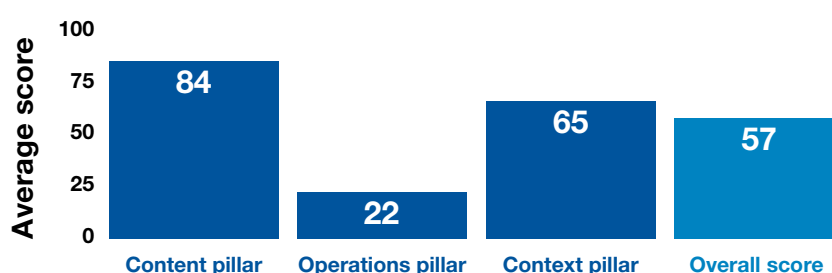

Only one site in the sample received a **low-risk** rating. This classification was achieved as a result of its high standard for neutral and unbiased content and generally positive user perceptions of brand trust in the site (the Context pillar). However, this domain still falls short on some of the key operational transparency and editorial safeguards assessed (Operations pillar).

Five sites received a **high-risk** rating. This is partly due to their tendency to publish more sensational and biased content, which also negatively targets groups and individuals. These domains also largely fail to meet universal standards for editorial and operational policies (see Figure 4).

Figure 4. Average pillar scores by risk rating level
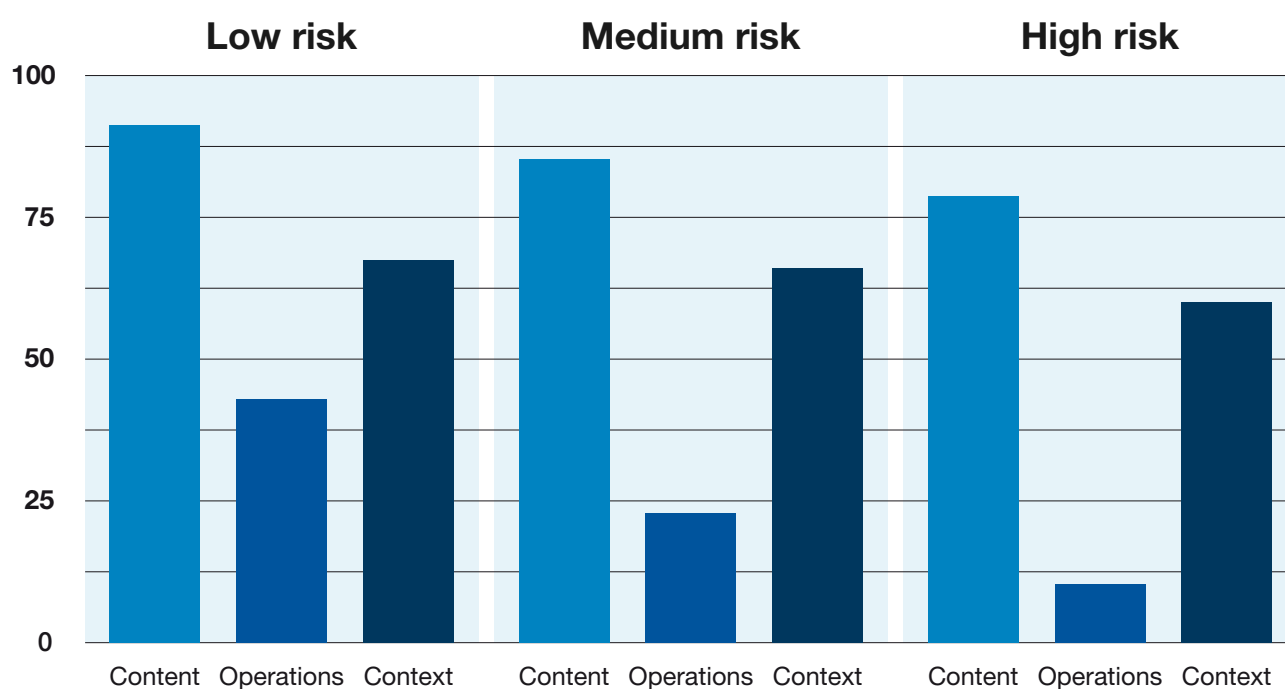
Across the entire Nigerian media sample, sites faced a consistent challenge in addressing their operational risks. Most had very limited editorial and operational transparency. Of the sites assessed, eight domains scored less than 15 out of 100 possible points on the Operations pillar. These domains obtained such low scores by failing to provide most of the information or policies included in the scoring framework. The absence of operational checks and balances presents risks such as content not being properly flagged, vested interests exerting influence on editorial decisions, and disinformation content (inadvertently or purposefully) being published and spread through stories labelled as news.

Such operational breakdowns can ultimately affect informed online readers' brand trust in the sites (as measured by the Context pillar). Our findings from Nigeria confirm this relationship. Based on the survey answers from informed online readers, respondents felt that Nigerian news domains used clickbait headlines frequently and have poorly communicated corrections policies for errors.

Pillar overview

Content pillar

This pillar focuses on the reliability of the content provided on the site. Our analysis for the Content pillar is based on an assessment of ten anonymised articles for each domain. These articles are drawn from the most frequently shared pieces of content during the data collection period, and from a group of topic-based articles.[28] All article scores are based on a scale of zero (worst) to 100 (best), as assessed by the country reviewers.

Overall, the Nigerian media market showed low disinformation risks in terms of content, attesting to the quality of coverage in the market as a whole, despite extensive operational transparency failures by most domains. The articles reviewed suggest relatively unbiased, neutral, non-sensational and relevant reporting. The market average for the Content pillar was 84 out of 100 points.[29]

The high average score on the Content pillar can partly be attributed to the neutrality of the content (measured by the *article bias* indicator), as well as the limited use of sensational language and the negative targeting of groups and individuals. For instance, the average *article bias* indicator score for the entire sample was 97 out of 100 points.

However, most domains performed slightly worse on content practice indicators such as byline information and the existence of a story lead, as well as common and recent coverage of their stories. In the case of byline information, the findings show that Nigerian domains fail to consistently attribute articles to authors or newsrooms. The lack of transparent attribution can be a disinformation risk factor related to the fabrication or planting of stories. Nigerian domains also frequently deviate from the standard formats of journalistic writing by failing to provide an introductory lead to articles. This indicator acts as a flag to differentiate fact-based reporting from digital content that opines or editorialises without clearly establishing a set of facts and events for the reader.

Relatedly, there is a risk of disinformation that stems from content that is either not covered elsewhere, or not recent and newsworthy (as measured by the common coverage and recent coverage indicators). While a wide range of media topics can be a strength in a market as diverse as Nigeria's, the common coverage indicator helps to verify the validity of a story and reduce the risk that a single news outlet is presenting false information, failing to cover the major news of the day, or contributing to the construction of problematic news narratives by cherry-picking coverage. Moreover, while scores for the recent coverage of stories are relatively high, they still suggest that Nigerian domains occasionally recycle old content, which allows facts or events to be presented out of context.

The domains *The Punch* and *Daily Nigerian* had the best performance on the Content pillar indicators, both receiving a score of 95. The lowest-scoring domain received a score of 73, which can be attributed largely to its poor performance on the indicator assessing common coverage. Moreover, this domain frequently offered no visible attribution for its content (as measured by the *byline information* indicator).

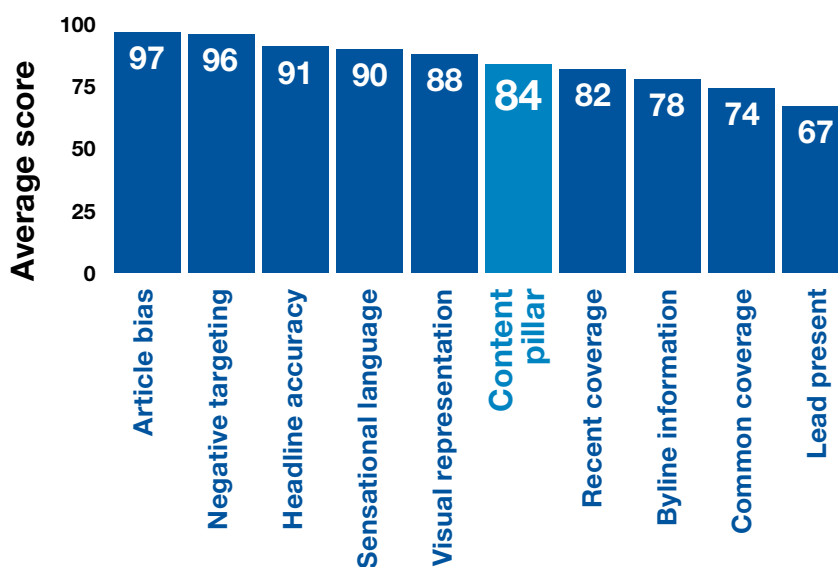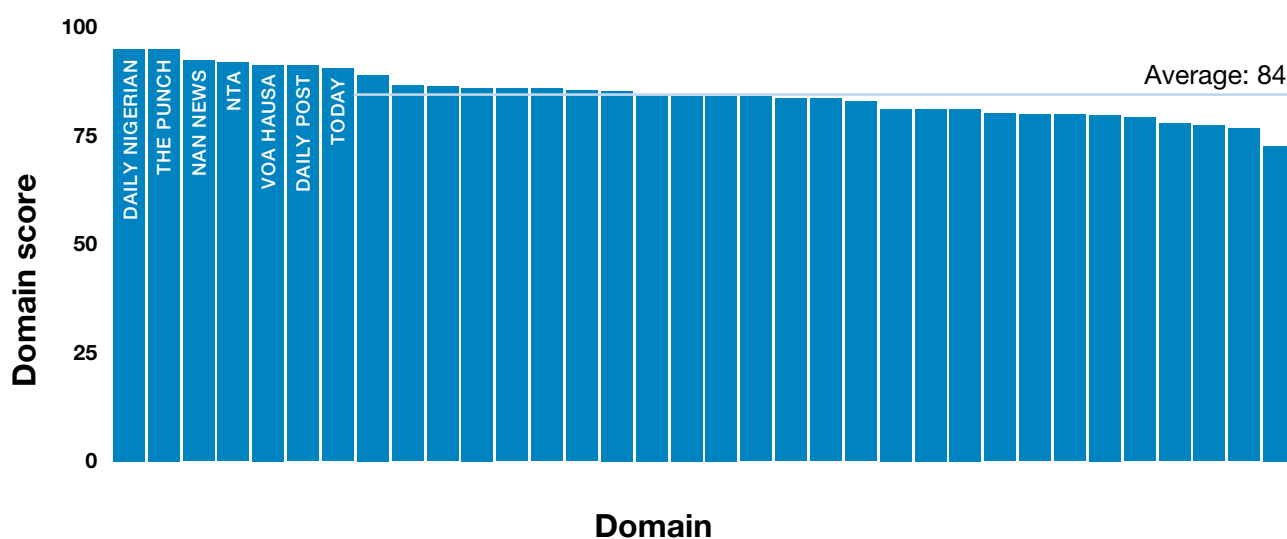**Figure 5.** Average Content pillar scores by indicator

Figure 6. Content pillar scores by site

Operations pillar

This pillar assesses the operational and editorial integrity of a news site. All scores are 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 indicators are the quickest wins to reduce disinformation risk ratings, as they represent policies that domains can immediately establish and make public.[30] The indicators for the Operations pillar have been developed based on the standards set by journalists as part of the Journalism Trust Initiative (JTI).[31]

Most domains in our sample performed very poorly on the entire range of indicators that measure their operational transparency and accountability. The average score on the operational indicators was 22 out of 100 possible points. The best-performing site scored 49,[32] while eight domains received a score of under 15 on the entire pillar.

Domains performed worst on indicators measuring transparency about ownership. Only ten of the sites assessed were partially transparent about their ownership, while few sites had public financial statements to transparently show their sources of funding. Almost no sites had any transparent information on how they uphold good journalistic practices, including pre-publication fact-checking and post-publication error corrections (as indicators of ensuring a site's accuracy). This lack of information can compromise readers' trust in a site, as increased transparency is necessary to ensure that readers are aware of any potential conflicts of interest (from ownership and funding) as well as making a site accountable for its news coverage.

Domains generally performed better on the indicator related to editorial guidelines and principles. This result suggests that some sites in the sample have at least partial transparency or explicit adherence to a standardised or customised set of editorial guidelines. Domains also performed slightly better on publishing policies about how content (including statistics and media) are accurately sourced (as related to the indicator for attribution).

Given operating risks for journalists and media sites in Nigeria, there may be reasons why domains are generally less transparent about their operational and editorial practices to prevent government critique or retaliation. However, domains' poor performance on the operational indicators will hopefully allow for a discussion about how to increase transparency in order to improve sites' accountability to their readers while balancing safety concerns in the editorial room.

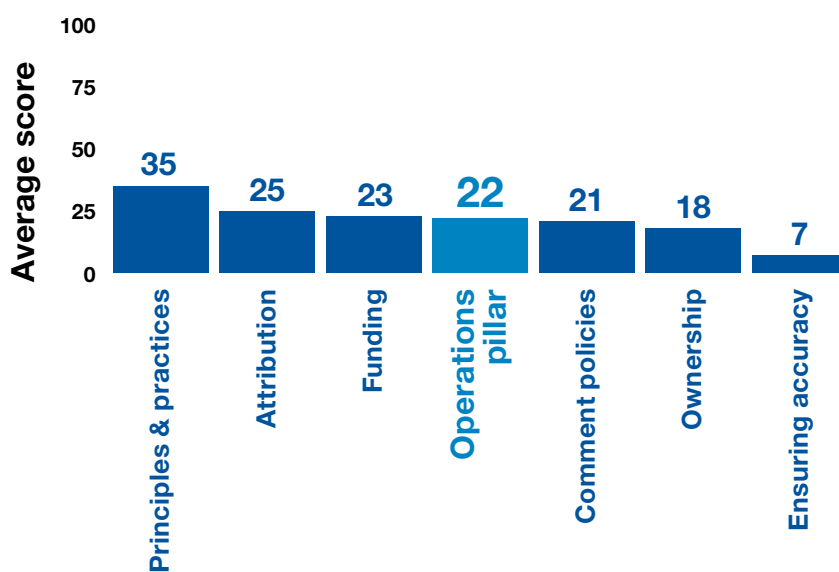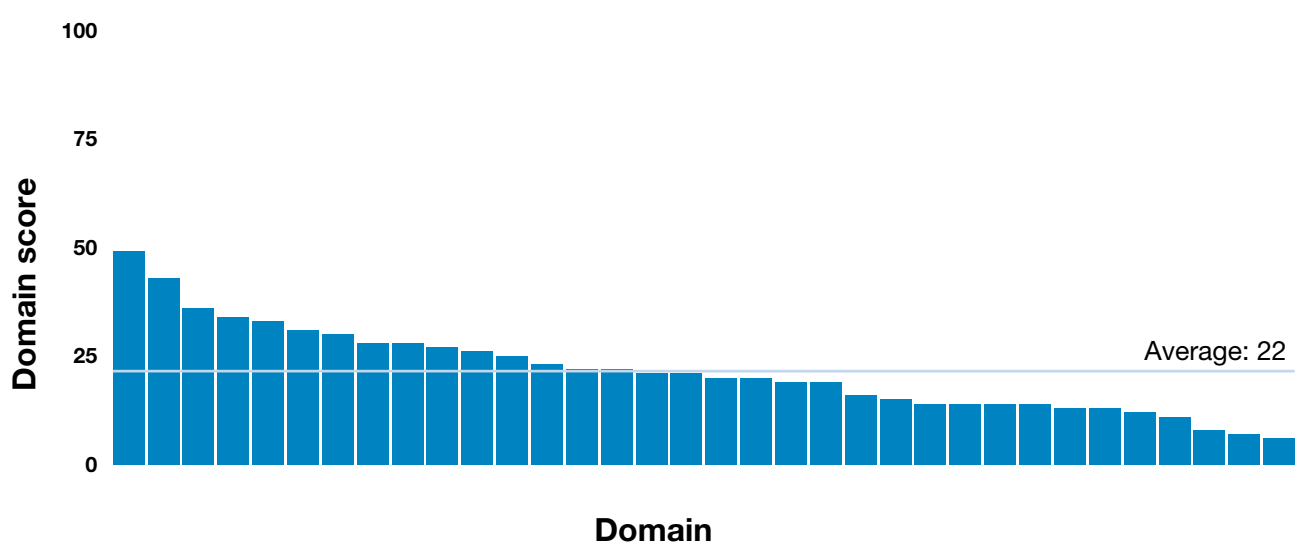**Figure 7.** Average Operations pillar scores by indicator

Figure 8. Operations pillar scores by site

Context pillar

The success of a platform on this pillar is a strong indication of brand trust in a given media site. All scores are based on a scale of zero (worst) to 100 (best), as rated by online users. The Context pillar findings are based on an independent survey conducted to measure online users' perceptions of brand trust in the media sites included in our sample for Nigeria.

Despite the largely poor performance on the Operations pillar, the Context pillar scores show that users' perceptions of news domains in Nigeria are generally positive. Our data show that most Nigerian domains are perceived as providing accurate coverage, where factual and opinion pieces are clearly distinguished. However, most domains are perceived to use clickbait headlines almost regularly and to rarely publish error corrections. This latter point further suggests that most Nigerian domains operate within a media system in which accountability to readers for errors in reporting is not the norm.

We also find it relevant to note that there is a strong and significant correlation between readers' perceptions of the use of clickbait and researchers' findings regarding inaccurate headlines and sensationalised text and visuals in the assessed online content.[33] Such relationships suggest that sensationalised content does not go unnoticed by informed readers in Nigeria.

Figure 9. Average Context pillar scores by indicator
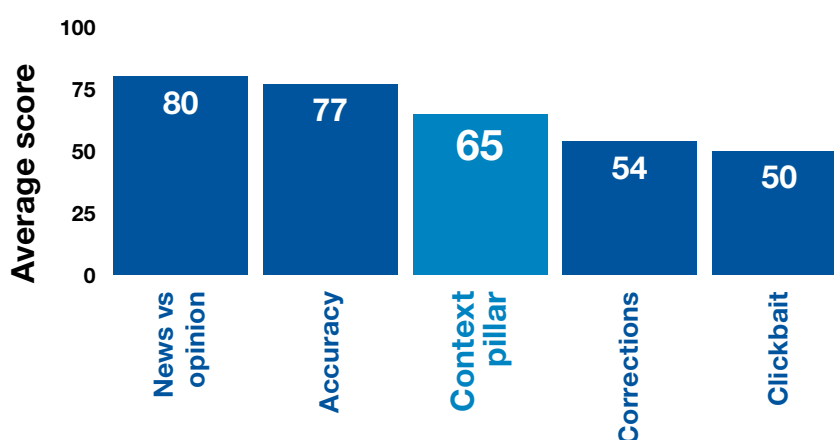
Looking forward, any improvements to informed online readers' perceptions of their trust in brands are likely to materialise only over time, due to the fact that perceptions can be 'sticky' and take time to realign with a site's current realities.

Figure 10. Context pillar scores by site
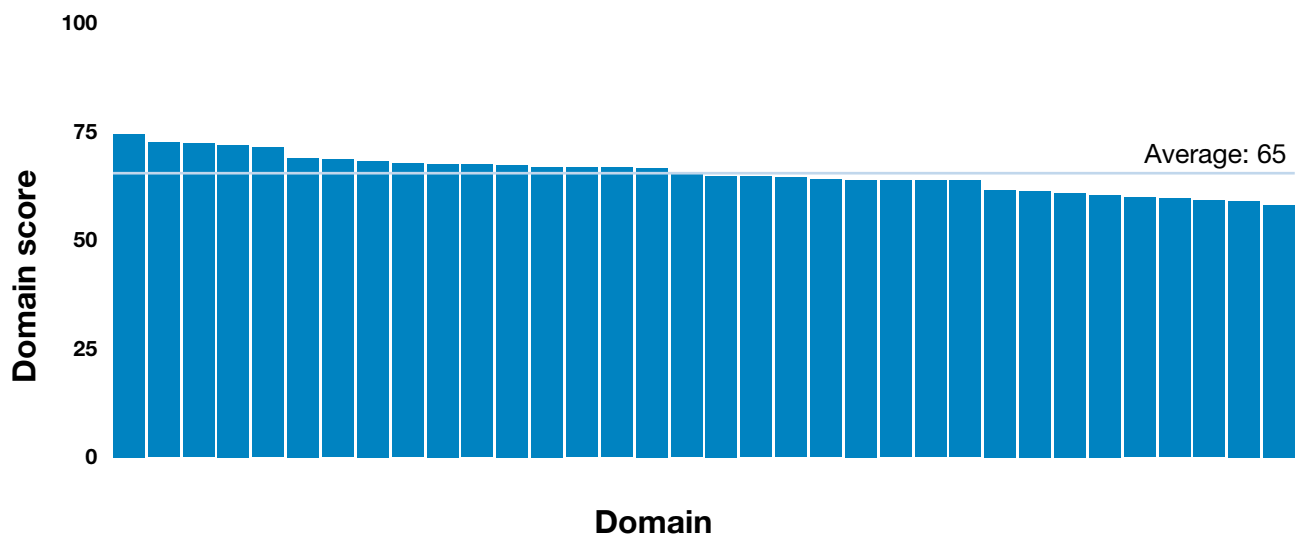
Conclusion

The findings from the Nigerian media market show moderate to elevated levels of disinformation risk for its online readers.

Four out of five sites in the Nigerian media market sample were seen as having a medium risk of disinforming their readers. No site was determined to have a minimum disinformation risk.

Overall, our findings suggest that while Nigerian domains currently provide seemingly reliable and accurate content, the lack of operational and editorial checks and balances presents a latent risk. There is a general absence of many key transparency and accountability mechanisms in newsrooms in the sample, such as their publishing information about their ownership structures, editorial practices and funding. As our findings show, while users' perceptions of Nigerian domains are generally favourable, most users do question the frequent use of clickbait and the seemingly normative lack of correction policies which characterise the Nigerian media market.

Nigerian news outlets could address the shortcomings discussed in this study by taking actions such as to:

- Focus on explicitly publishing news sites' operational standards and their ownership structures.

- Make public news sites' sources of funding. Access to this information helps to build trust among users and serves as a check for conflicts of interest in reporting.

- Adopt—or at least explicitly develop—the standard good practice for fact-checking procedures, both prior to and following the publication of news content.

- Ensure the publication of bylines and/or related policies to promote transparency and accountability. In cases where there is concern for journalists' safety, sites could provide clear and justified policies explaining the need for authors' anonymity.

- Ensure the adoption and publication of comment review policies in order to restrict harmful content generated by users.

- Make unequivocal their editorial principles, especially with regards to independence from political affiliations, advertisers, government and any other external influences.

The need for a trustworthy, independent rating of disinformation risk is pressing. The launch of this risk-rating framework for Nigerian media will provide crucial information to policy-makers, news websites, and the ad tech industry, enabling key decision-makers to stem the tide of money that incentivises and sustains disinformation.

Appendix: Methodology

Pillar scoring

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 three pillars: Content, Operations, and Context. The three 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 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 Context pillar relies on indicators that measure the perceived credibility and reliability of news-related information published by each domain.

Each of GDI's media market risk assessments is 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.[34] 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 30 to 35 sites for which complete data could be collected throughout the review process.

Data collection

The Content indicators are based on the review of a sample of ten articles published by each domain. Five of these articles are randomly selected from a domain's most frequently shared articles on Facebook within a two-week period. The remaining five articles are randomly selected among a group of a domain's articles covering 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 into 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 aimed at evaluating 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's 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's review.

The Context pillar is based on a public perception survey conducted by an international internet-based market research and data analytics organisation. This external organisation creates and disseminates a survey among informed readers in the media market in the relevant study languages. The survey seeks to capture the perceived quality and reliability of the content published by each domain, along with a set of country-specific control variables.

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's indicators included in the final risk rating are: article bias, byline information, common coverage, headline accuracy, lead presentation, negative targeting, recent coverage, sensational language, and visual presentation. For each indicator, values are normalised to a scale of zero to 100. The domain-level score for each indicator in this pillar is the average score obtained across the ten articles. The pillar score for each domain is the average of all the scores for all of the pillar's indicators, and ranges from zero 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's indicators are: attribution, comment policies, editorial principles and practices, ensuring accuracy, funding, and ownership. For each indicator, values are normalised to a scale of zero to 100. The domain score for the Operations pillar is the average score across indicators.

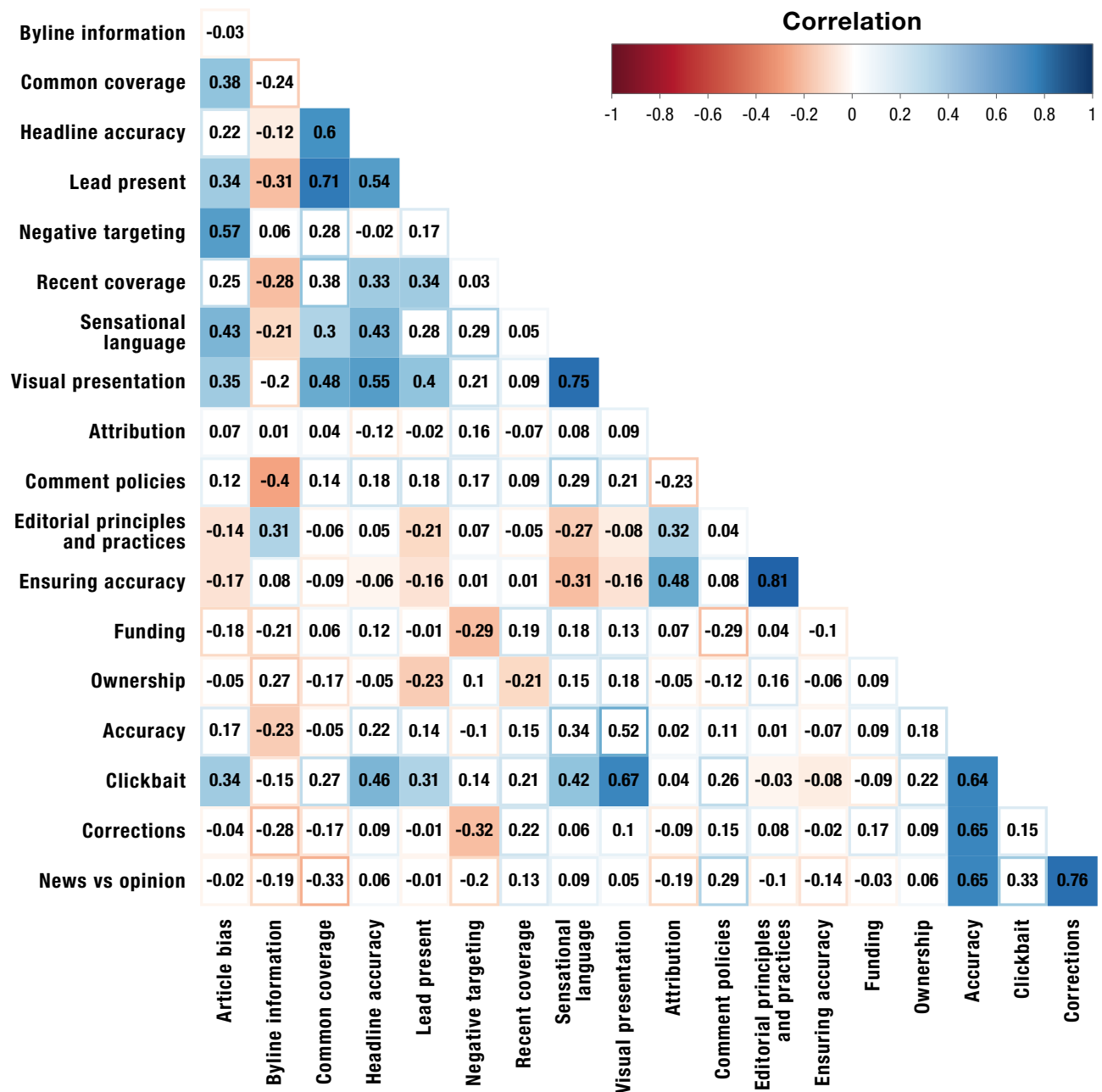The answers to the perception survey are transmitted to GDI as a dataset, which is used to compute the indicators for the Context pillar. The Context pillar captures four indicators: accuracy, clear differentiation between news and opinion articles, use of clickbait titles, and error reporting. The total score for each domain in this pillar ranges from zero to 100 based on an average score across indicators.

Table 2. 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
	Lead present			Rating for whether the article begins with a fact-based lead	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 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
Context	Accuracy	None	Domain	Respondent rating for perceived level of accuracy in covering news events	Assesses accuracy of the site's content without the need to directly fact-check
	Clickbait			Respondent rating for perceived use of clickbait headlines	Assesses the site's use of clickbait
	News vs. opinion			Respondent rating for ability to differentiate between opinion and news articles	Assesses how well the site communicates the difference between fact and opinion to its readers
	Corrections			Respondent rating for perceived frequency of issuing corrections in response to errors	Assesses the site's credibility in terms of issuing corrections

Figure 11 visualises the relationships between each of the GDI indicators in the Nigerian media market.

Figure 11. Correlations matrix, GDI indicators, Nigerian media market

	Article bias	Byline information	Common coverage	Headline accuracy	Lead present	Negative targeting	Recent coverage	Sensational language	Visual presentation	Attribution	Comment policies	Editorial principles and practices	Ensuring accuracy	Funding	Ownership	Accuracy	Clickbait	Corrections
Byline information	-0.03																	
Common coverage	0.38	-0.24																
Headline accuracy	0.22	-0.12	0.6															
Lead present	0.34	-0.31	0.71	0.54														
Negative targeting	0.57	0.06	0.28	-0.02	0.17													
Recent coverage	0.25	-0.28	0.38	0.33	0.34	0.03												
Sensational language	0.43	-0.21	0.3	0.43	0.28	0.29	0.05											
Visual presentation	0.35	-0.2	0.48	0.55	0.4	0.21	0.09	0.75										
Attribution	0.07	0.01	0.04	-0.12	-0.02	0.16	-0.07	0.08	0.09									
Comment policies	0.12	-0.4	0.14	0.18	0.18	0.17	0.09	0.29	0.21	-0.23								
Editorial principles and practices	-0.14	0.31	-0.06	0.05	-0.21	0.07	-0.05	-0.27	-0.08	0.32	0.04							
Ensuring accuracy	-0.17	0.08	-0.09	-0.06	-0.16	0.01	0.01	-0.31	-0.16	0.48	0.08	0.81						
Funding	-0.18	-0.21	0.06	0.12	-0.01	-0.29	0.19	0.18	0.13	0.07	-0.29	0.04	-0.1					
Ownership	-0.05	0.27	-0.17	-0.05	-0.23	0.1	-0.21	0.15	0.18	-0.05	-0.12	0.16	-0.06	0.09				
Accuracy	0.17	-0.23	-0.05	0.22	0.14	-0.1	0.15	0.34	0.52	0.02	0.11	0.01	-0.07	0.09	0.18			
Clickbait	0.34	-0.15	0.27	0.46	0.31	0.14	0.21	0.42	0.67	0.04	0.26	-0.03	-0.08	-0.09	0.22	0.64		
Corrections	-0.04	-0.28	-0.17	0.09	-0.01	-0.32	0.22	0.06	0.1	-0.09	0.15	0.08	-0.02	0.17	0.09	0.65	0.15	
News vs opinion	-0.02	-0.19	-0.33	0.06	-0.01	-0.2	0.13	0.09	0.05	-0.19	0.29	-0.1	-0.14	-0.03	0.06	0.65	0.33	0.76

Correlation scale: -1, -0.8, -0.6, -0.4, -0.2, 0, 0.2, 0.4, 0.6, 0.8, 1

*Note: Statistically significant correlations are highlighted.

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 3. These bands are then used to categorise the risk levels for sites in each subsequent media market analysis.

Table 3. Disinformation risk levels

Risk level	Lower limit	Upper limit	Distribution
Minimum risk	76.17	100	> 1.5 SD from mean
Low risk	63.89	76.16	> 0.5 and ≤ 1.5 SD from mean
Medium risk	51.60	63.88	> -0.5 and ≤ 0.5 SD from mean
High risk	39.32	51.59	≥ -1.5 and ≤ -0.5 SD from mean
Maximum risk	0	39.31	< -1.5 SD from mean

Endnotes

1 We define disinformation in terms of the verb 'to disinform': 'to deliberately mislead; opposite of inform'.

2 The human review elements of the framework were developed in collaboration with Alexandra Mousavizadeh (head of insights for Tortoise Media and co-founder of the GDI). The framework was advised by, vetted by, and finalised with the support of a technical advisory group (TAG), including Ben Nimmo (Facebook), Camille François (Graphika), Miguel Martinez (co-founder & 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).

3 For more on our methodology, see the Appendix and methodology at: https://disinformationindex.org/research/.

4 In 2021, media market assessments will be produced for the following countries: Argentina, Australia, Brazil, Canada, India, Italy, Malaysia, Mexico, and Spain. Additional countries may also be added.

5 All sites included in the report were informed of their individual scores and risk ratings, as well as the overall market averages.

6 Two researchers assessed each site and indicator. The informed online readers sample used by GDI is based on YouGov's 'catalyst audience': a group considered to be the top 10 percent of its country panel, drawing change-makers from civil society, business, politics, media, the third sector and beyond. They are defined by their recent activities which include entrepreneurialism, leadership and activism. Typical roles in this group include business and social entrepreneurs, organisational leaders, and political activists. The survey for Nigeria included 500 respondents and was conducted between 17 February and 6 March 2021. All respondents answered a standard set of questions used by the Global Disinformation Index (GDI) in all countries where it conducts risk ratings. Each respondent provided their perceptions of brand trust and credibility for up to 10 sites that they said they were 'familiar' with.

7 Minimal risk is the best risk rating, followed by a low-risk rating. Both ratings suggest a news site that has scored well across all of the indicators. For all countries, individual site scores were shared confidentially with the site operators to allow for engagement, feedback and any necessary changes. All sites were contacted in advance to provide them with information on the methodology and rating process. In all countries covered by the risk ratings, the composite scores are shared only for the sites assessed to have a low or minimal disinformation risk. As a result, the number of sites disclosed in the report will vary by country.

8 The GDI looks forward to working with the entire industry in this effort. There is strong demand for such a risk assessment of sites, and a notable concern that less trusted, less independent actors may seek to fill this gap.

9 As per GDI policy, the report names only sites that received a 'minimum' disinformation risk rating.

10 This determination is based on Nigeria's gross domestic product (GDP), according to data from 2018: https://datatopics.worldbank.org/world-development-indicators/stories/many-economies-in-ssa-larger-than-previously-thought.html.

11 Based on findings from the 2017 report by the Oxford Business Group. See: https://oxfordbusinessgroup.com/nigeria-2017 (paywall). Also see: https://rsf.org/en/nigeria.

12 See: https://rsf.org/en/ranking.

13 See: https://rsf.org/en/nigeria.

14 See: https://www.article19.org/wp-content/uploads/2020/11/Nigeria_free_media_threatened.pdf.

15 See: https://www.cjr.org/analysis/nigeria-endsars-press-freedom.php.

16 This is based on figures from the International Telecommunications Union (ITU). See: https://www.statista.com/statistics/183849/internet-users-nigeria/.

17 See: https://rsf.org/en/nigeria. Also see: https://reader.elsevier.com/reader/sd/pii/S2666374020300224?token=B33F8855B016097CD0E7941F8ACF4B14C3B5F21AB0FC688361DB7F473A1E81D3C13320FAF86C4656171E79045FE71377&originRegion=eu-west-1&originCreation=20210517123924.

18 See: http://cseaafrica.org/covid-19-risk-control-measures-threatens-to-deepen-nigerias-education-crisis/.

19 See: https://www.statista.com/statistics/508900/nigeria-internet-ad-revenue/#:~:text=According%20to%20the%20calculations%2C%20total,to%20133%20million%20in%202023.

20 See: https://techcabal.com/2020/10/01/why-is-facebook-really-coming-to-nigeria/.

21 See: https://foreignpolicy.com/2016/10/27/facebooks-plan-to-wire-africa-is-a-dictators-dream-come-true-free-basics-internet/.

22 See: https://www.researchgate.net/publication/340832156_Access_granted_Facebook's_free_basics_in_Africa.

23 See: https://www.tandfonline.com/doi/abs/10.1080/23743670.2019.1627230.

24 See: https://www.researchgate.net/profile/Oberiri-Apuke/publication/340255686_FAKE_NEWS_PROLIFERATION_IN_NIGERIA_CONSEQUENCES_MOTIVATIONS_AND_PREVENTION_THROUGH_AWARENESS_STRATEGIES/links/5e7f8a37a6fdcc139c102c5d/FAKE-NEWS-PROLIFERATION-IN-NIGERIA-CONSEQUENCES-MOTIVATIONS-AND-PREVENTION-THROUGH-AWARENESS-STRATEGIES.pdf.

25 In our sample, six domains provide coverage in English and Hausa, two domains provide coverage in Hausa exclusively and the remaining domains provide coverage in English only.

26 Reach was measured using each site's Alexa rankings, Facebook followers, and Twitter followers.

27 For more information on the JTI, which has adopted an ISO standard for the industry, please see: https://jti-rsf.org/en/.

28 This sampling process is designed to select articles that concern topics which are frequently associated with polarising discussions and/or disinformation campaigns. The general topics are selected on the basis of GDI internal research and monitoring work. The keyword list includes more than 170 keywords associated with more than 20 topics. The topic list is discussed further in the Methodology section of this report.

29 See the Methodology section in the Appendix for a full overview of all indicators.

30 The Operations pillar looks at whether relevant policies are in place. It does not assess the level of robustness of the policy based on good practice and does not look at how the policies are being implemented. However, other indicators in the framework do capture some of the relevant practices, such as by measuring perceptions on how often sites correct errors or are viewed as presenting accurate content.

31 For more information on the JTI, which has adopted an ISO standard for the industry, please see: https://jti-rsf.org/en/.

32 The best-performing site on the operational indicators still showed the need to improve its transparency in areas such as its comment policies, funding and ownership structure. However, this domain was sufficiently transparent about its principles and practices (regarding editorial standards and comments), and about ensuring accuracy (content and fact-checking policies).

33 See the correlations matrix in the Appendix (Figure 11).

34 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.