Opticks

THE 2023 ANNUAL

Ad Fraud Report

What's in it?

1. Executive Summary

Global digital ad spending is predicted to surpass $626 billion in 2023. Yet, ad fraud continues to cost the advertising industry a colossal $100 billion.

In 2023, advertisers continue to struggle to generate quality traffic and leads, despair at quickly dwindling budgets, and endure distorted analytics, all while ignoring one of the biggest, most insidious culprits: Ad fraud.

Despite the many warnings that ad fraud is a global phenomenon that impacts all industries and marketing channels, tackling ad fraud is still not an overarching priority for the industry.

All of this applies in normal circumstances. But as we face a possible recession, many marketers will have fewer advertising resources to both hit their targets and tackle ad fraud – which has an additional impact on those targets. And while this plays out, fraudsters are presented with ample opportunity to continue to evolve their ad fraud techniques and become more sophisticated than ever before.

Here's the bottom line: advertisers and marketers need to take an active role in implementing a strategy for combating ad fraud, or face an inevitable decline in revenue and return on ad spend.

To provide stakeholders with the data they need to instigate their own anti–ad fraud strategy, in this report, we:

- ✔ **Explore** key insights from Opticks' proprietary advertising and ad fraud trends survey

- ✔ **Demonstrate** how prevalent and widespread the effects of ad fraud are across all marketing channels, industries, continents, and countries

- ✔ **Provide insights** on how marketers can protect their campaigns from ad fraud
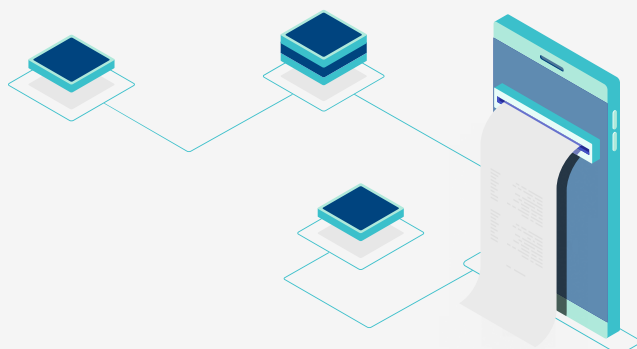
Anton Albajes-Eizagirre
Lead Data Scientist

Eduardo Aznar
CEO

Marc Rubia
R&D Lead

Alex Serra
Product Owner

About this report

Methodological notes

1. **Gathering and assessment of data** (how Opticks gathered and analyzed the data shown).

   a. Data capture: Opticks' solutions capture telemetry in real-time at network, application, and user level to create a comprehensive set of valuable data about each visit. The data shown in this report has been captured during the natural calendar year of 2022. This report aggregates over 4,736,038,576 clicks.

   b. Assessment of the data: Our sensor evaluates the captured data in real-time. It delivers an analysis and assessment of each visit (either fraudulent or not) using an intricate model of rules–based, statistical, and machine learning components.

2. **Interpretation of the data**

   a. In this report, we highlight countries with enough traffic volume for our statistical fraud benchmark. The third quartile (Q3) has been set as the threshold.

   b. When highlighting the threats of ad fraud, we showcase them using candlestick charts, since in many cases, fraudsters utilize a mix of several techniques to perform fraud.

> 4,7 BILLION CLICKS
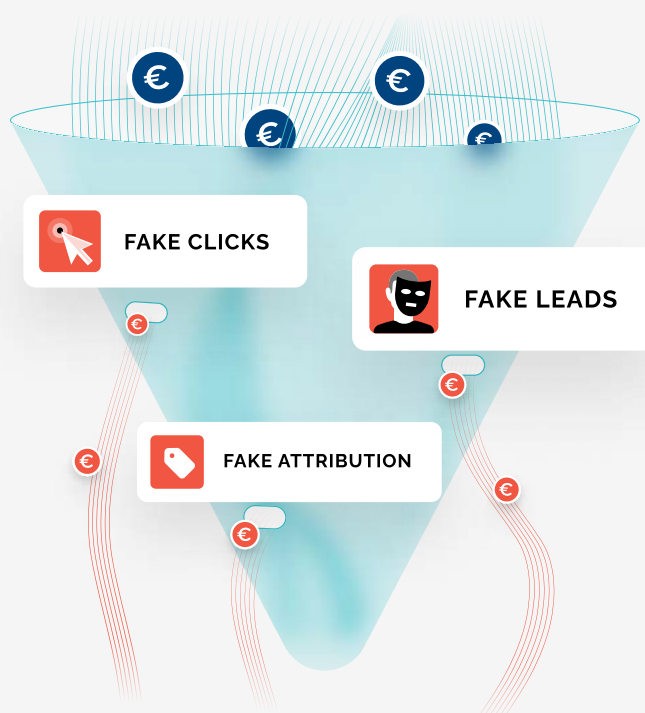
2. The State of Advertising

2.1 Advertising trends

In 2022, Opticks conducted a survey to learn more about advertisers' main priorities.

Between June 1st and July 30th, 2022, we surveyed 39 people working in the advertising industry. Two-thirds of respondents work in Europe; the remaining third are based in North America, South America, the Asia-Pacific region, and the Middle East and Africa.

2.2 Priorities for marketers

Our findings demonstrated that the advertising industry is largely focused on improving within the following areas:

### Customer acquisition costs and return on ad spend

80% of respondents revealed that **improving their return on ad spend (ROAS)** is a key strategy that they will be pursuing.

The majority of respondents also said that Tier 1 metrics – such as customer acquisition costs **(CAC)** and return on ad spend **(ROAS)** – are the most important metrics in terms of measuring campaign effectiveness.

When asked which strategies they will be addressing, almost 80% of survey respondents said that improving how they **measure ROAS is key**.

Ad fraud not only causes an **11% reduction in ROAS but also a 9% increase in CAC**. With no ad fraud prevention function in place, advertisers are highly susceptible to not reaching goals and targets.

+ ROAS

- CAC
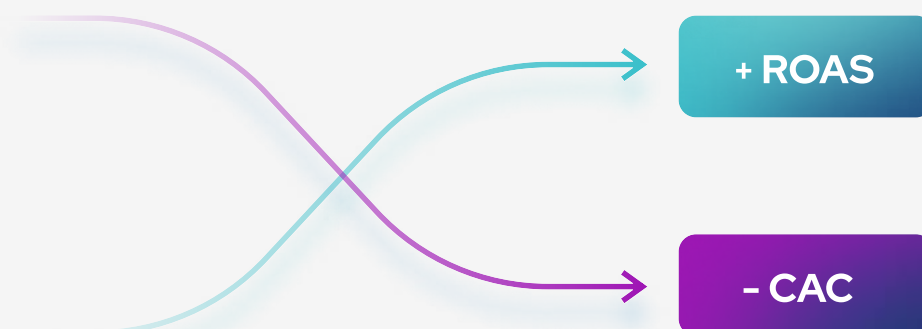
Generating quality leads to increase sales

In lead generation verticals, over three-quarters of respondents stated that **generating more quality leads** and online sales is their main advertising objective.

Ad fraud presents a huge obstacle to attaining this objective. **Fraudsters leverage highly sophisticated** automated and non-automated **methods** to infiltrate lead generation campaigns (in particular, bots, malware, and click fraud farms) to complete forms in online marketing campaigns. This leads to **false leads** which will never convert into customers and inflates campaign metrics – wasting advertisers' budgets and resources.

Advertisers select the best audiences to target based on the profitability of each channel, but often forget to check the validity of these channels. Opticks' survey and experience have demonstrated that advertisers often redefine their channel, partner, and affiliate strategy once they gain insights into ad fraud rates.

Implementing ad fraud prevention measures is essential for advertisers that want to **protect their lead-generation campaigns** and reach their leads and sales objectives.

Brand awareness

Almost 16% of respondents revealed that their main advertising objective is to improve brand awareness. Bad ad placements and bad bot traffic driven by ad fraud also have a huge impact on an organization's ability to protect its brand image in the marketplace.

2.3 Ad fraud prevention as the lever to reach these goals

Ad fraud prevention is the only solution that can resolve these three plights simultaneously.

Even though ad fraud is still rapidly increasing, our findings show that many advertisers are unaware of how detrimental its impacts are. Almost 7 out of 10 advertisers claim they haven't experienced ad fraud recently – yet the majority have not implemented solutions to detect or measure it.

Digital advertising spending forecast: 2023

Worldwide digital ad spending is forecast to reach $626 billion in 2023. According to the latest research, all regions globally are demonstrating strong growth in digital advertising, with the industry expecting to witness a growth of over 10%:

The **U.S.** is the **biggest digital advertising market**, followed by **China** and **Europe**. It accounts for more than one-third of the world's digital advertising spending – $190.4 billion.

The **U.S.** and **China** have the **highest growth rate**; with a **compound annual growth rate** (CAGR) of **8.7%** by 2025.

The European market is expected to grow by **6.4%**.

Ad fraud in 2023: A summary

Worldwide ad fraud cost the industry $42 billion in 2021 based on the number of false or misleading impressions, clicks, and ad placements that were detected and attributed to ad fraud.

This figure is predicted to increase to a staggering $100 billion in 2023.

Ad fraud affects all parties involved in the advertising ecosystem, including advertisers, publishers, and end-users.

Finally, the increase in the use of programmatic advertising (where ads are bought and sold automatically through algorithms) has made it easier for fraudsters to exploit vulnerabilities in the system. This is translated to an increase in the total cost of ad fraud.

3. The State of Ad Fraud

3.1 By advertising channel

Analyzing traffic sources across marketing channels enabled us to determine which channels are currently most susceptible to ad fraud. However, it must be noted that our research demonstrates that no channel is free of ad fraud.

Our data shows that while fraudsters target and exploit the entire marketing funnel – from native to programmatic advertising – certain channels take a bigger hit.

	Affiliation	SEM	Programmatic	Social	Native
AVERAGE	**14.3**%	**4.4**%	**12.2**%	**2**%	**2.6**%
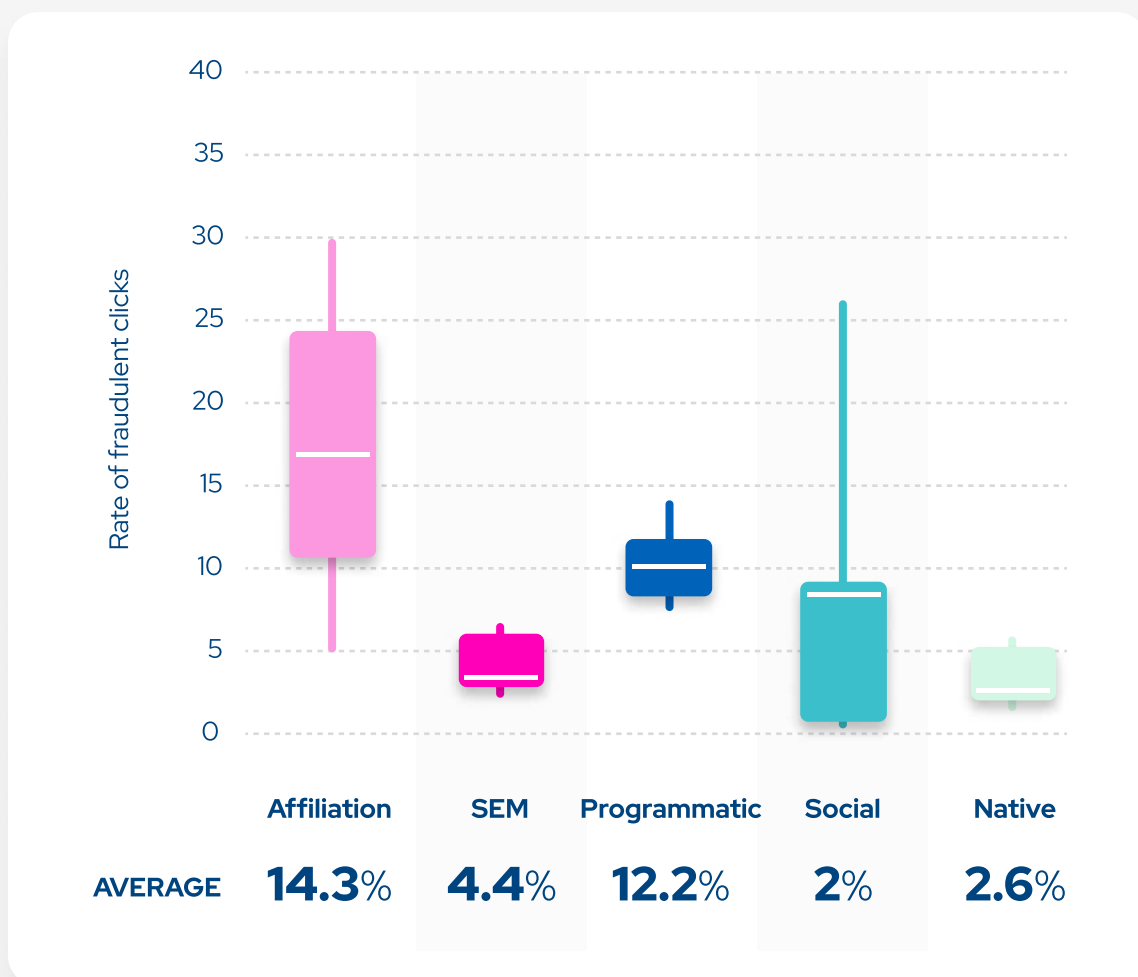
Affiliate marketing is by far the channel most affected by ad fraud (14.3%), with programmatic advertising not far behind (12.2%).

The high rates of ad fraud within affiliate marketing are due to fraudsters' repeated clicking on ads – whether using sophisticated, automated software or manual methods – to generate more dollars from publishers and advertising networks.

Programmatic advertising is known for being a target because of fraudsters' ability to hide large volumes of ad fraud. This is due to the large-scale automatization of the purchasing process which cannot be kept track of by humans in real time.
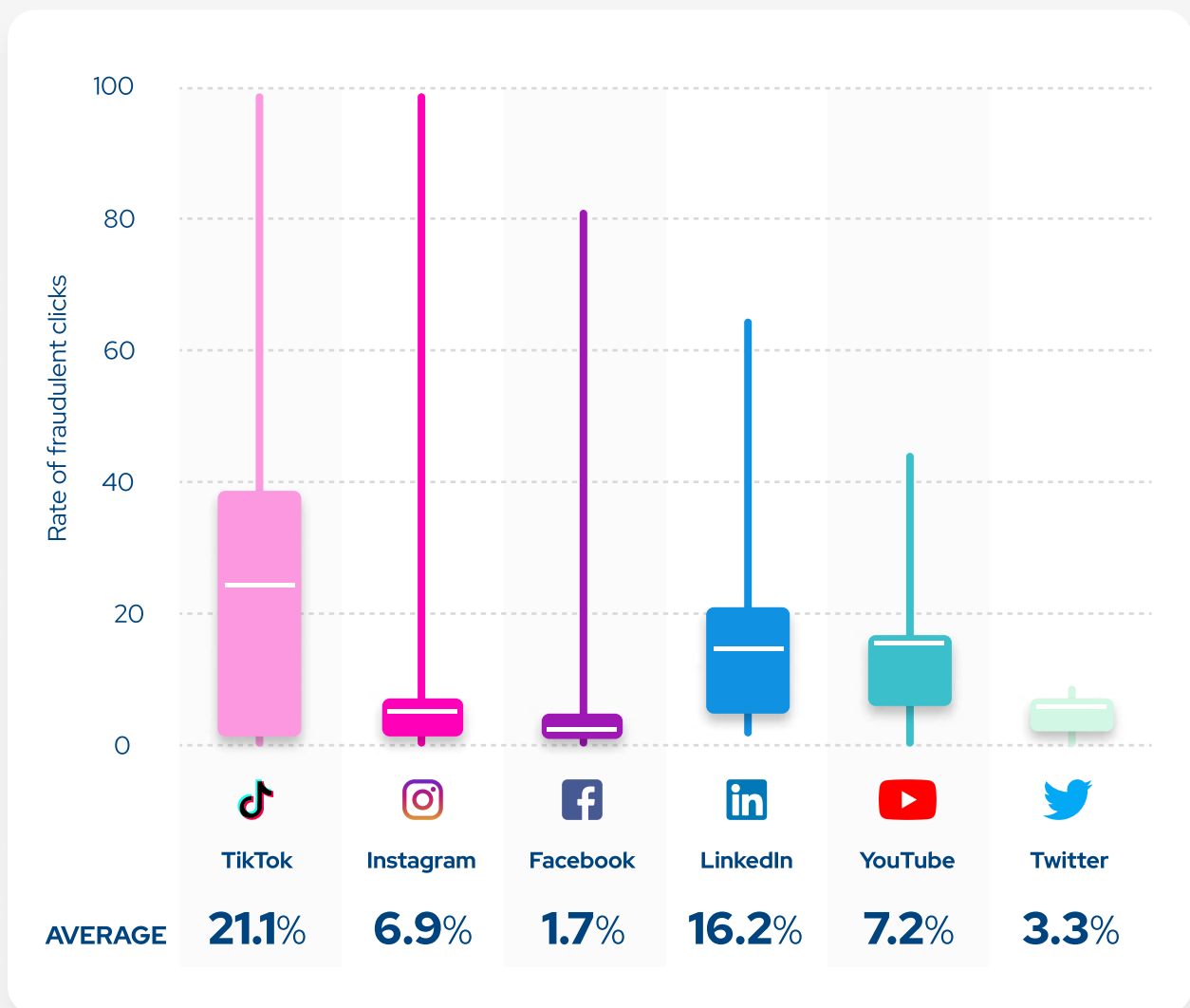
Native advertising saw a 2.6% rate of ad fraud, mainly due to fraudsters using techniques such as cross-domain embedding, iFrames, and URL substitution to generate inventory, loading ads within invisible windows and background services, and stacking ads in layers so that users click the same ads multiple times.

SEM and paid social channels saw lower rates of ad fraud — 4.4% and 2% respectively — yet these are not insignificant numbers. Since they are the most popular channels for digital advertising, their impact on ROAS and CAC is the strongest.

3.1.1 By advertising social channel

Based on data from the Ad Fraud Trends Report, the majority of advertisers will primarily invest their ad spend in search and social channels. Although all channels are susceptible to ad fraud, we broke our analysis of social media channels down further to demonstrate which channels have the highest incidences of ad fraud.

AVERAGE	TikTok	Instagram	Facebook	LinkedIn	YouTube	Twitter
	21.1%	**6.9**%	**1.7**%	**16.2**%	**7.2**%	**3.3**%

TikTok is by far the channel most affected by ad fraud, with a rate of 21.1%. Previous Opticks research also detected a large amount of click fraud throughout the platform, mostly related to smartphone emulators running the app in order to generate views and clicks.

Our Ad Fraud Trends Report demonstrated that marketers will continue to make huge investments in TikTok advertising, and the platform is expected to represent 3.1% of total digital ad spending in 2023.

LinkedIn saw a 16.2% rate of ad fraud, which is consistent with findings from our ad fraud benchmark report, including the fact that the platform has previously been sued for ad performance fraud.

YouTube experienced a 7.2% rate of ad fraud. Viewbots (bad bots that are created to watch videos or live streams) are a common vehicle employed by fraudsters to inflate fake views, live view counts, and other channel statistics, and will have contributed to the platform's significant ad fraud rate.

Twitter, **Instagram**, and **Facebook** saw lower rates of ad fraud (**3.3%**, **6.9%**, and **1.7% respectively**). Once again, these are not insignificant numbers, since they are among the most popular social media channels for digital advertising.

Finally, despite TikTok being an attractive source of traffic for advertisers, fraudsters are already taking advantage of the platform's apparent lack of prevention against rife click fraud.
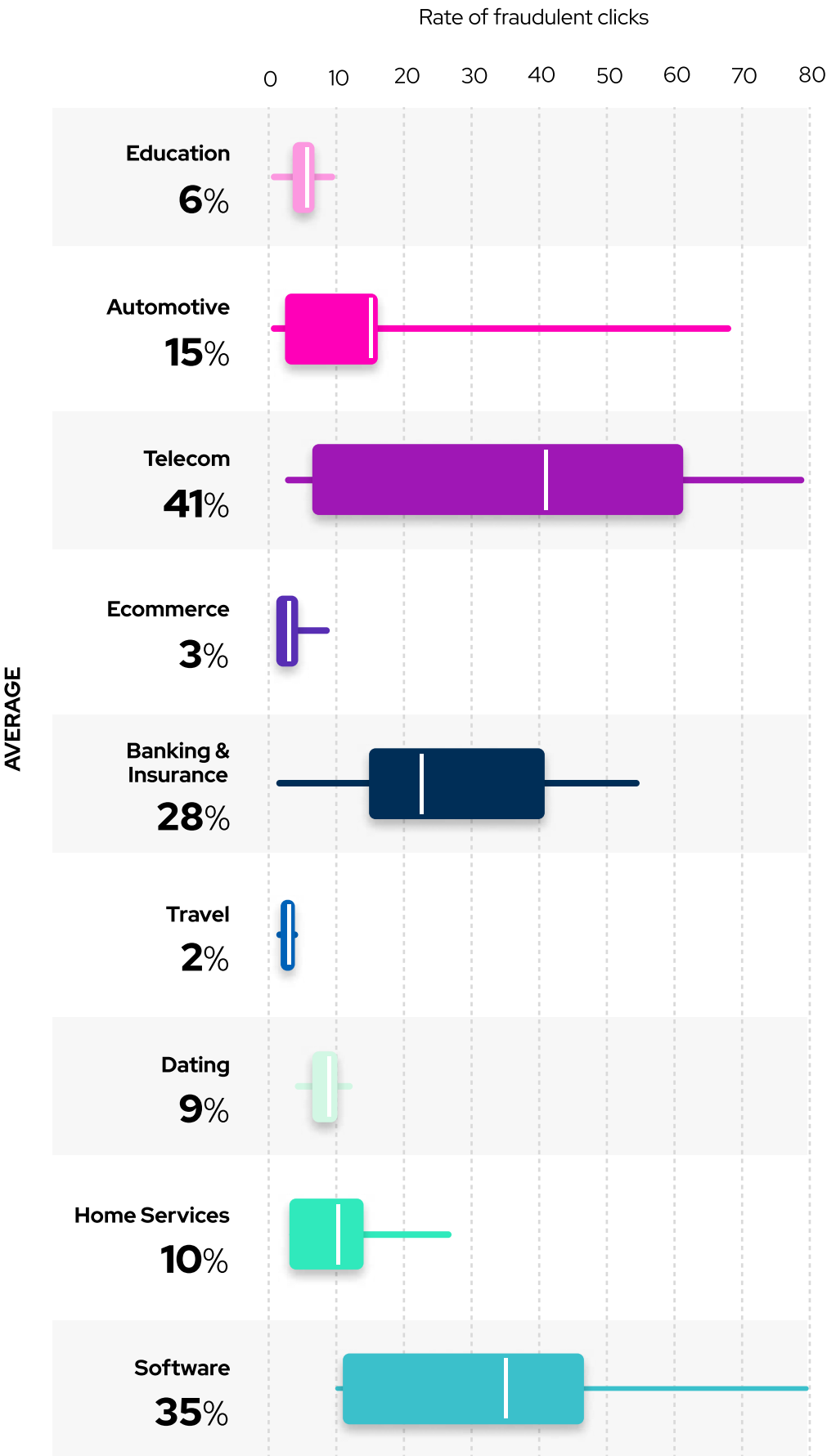
However, as our data shows, no platform is completely free from ad fraud, which means that advertisers that plan to use them – as well as those that already are – must invest in sophisticated anti-ad fraud prevention to protect their budgets.

3.2 By industry

While some industries are more susceptible to ad fraud – often because they are more reliant on digital advertising, making them easier targets for fraudsters – all industries are affected by ad fraud.

Industries such as telecom services, banking, and insurance are typically more saturated markets that have strong competition to capture digital audiences. Additionally, many of these industries have high volumes of traffic, which makes it impossible for manual fraud detection methods to detect fraudulent activity.

Rate of fraudulent clicks

AVERAGE

| | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |

Education
6%

Automotive
15%

Telecom
41%

Ecommerce
3%

Banking &
Insurance
28%

Travel
2%

Dating
9%

Home Services
10%

Software
35%

Our data demonstrated that the **telecom industry suffers from the worst rate of overall ad fraud at a staggering 41%**. Using sophisticated bots to generate traffic at scale in combination with geo-masking techniques such as residential proxies, fraudsters take advantage of the high CPA payouts offered by the industry. These fraud schemes invoke fake leads and consumer complaints, among many other issues.

Meanwhile, **the software industry suffers from a 35% ad fraud rate**. Software advertisers are usually susceptible to more widespread fraud schemes than others, including login attempts, scrapers, impersonation by malware, and more. Additionally, they're also subject to SEM budget inefficiencies related to users clicking on paid links instead of direct or organic browsing when accessing the platforms.

The banking and insurance industry is impacted by a 28% ad fraud rate. Banks and insurance organizations are mainly affected by click and lead fraud since they usually partner with aggregators and similar sites to obtain leads to contact later. Lead fraud, therefore, causes inefficiencies across the whole process.

The automotive industry is impacted by a 15% rate of ad fraud and has always invested a lot in marketing through more traditional channels. When shifting to digital advertising, automotive marketers are usually using premium channels to drive clicks to their sites, which makes them a target for costly, high-rate CPC fraud.

The home services industry suffers from a 10% ad fraud rate. In particular, in industries with huge potential revenues such as rentals and mortgages, the CPC is higher compared to others and many keywords are extremely competitive. Click fraud is a vehicle not only for monetization, but also a way for other companies to drain the budgets of their competitors, lower their bids, and obtain more human traffic.

Dating websites are impacted by a 9% rate of ad fraud. These sites usually work with affiliate networks to obtain leads and new users for their products since they are usually non-compliant with SEM or social channels. They are both affected by higher fraud ratios found in affiliation channels and lead fraud.

The education industry suffers from a 6% ad fraud rate since organizations usually want to collect and engage with leads. Due to the nature of the product, they typically use other channels such as email marketing or video ads, which are also targeted by fraudsters.

Ecommerce companies experience a 3% rate of ad fraud. These companies spend most of their marketing budgets on SEM and social channels. While these channels have lower amounts of fraud, the competition for keywords can be fierce. There are plenty of instances whereby competitors use automated or manual attacks to target competitive keywords, leading to both poor performance and wasted budgets.

With a 2% rate of ad fraud, the travel industry is one that generates a huge amount of online activity. However, this means that fraud in the travel sector is diluted among millions of real clicks. This enables fraudsters since they can collect part of the ad spend with bots in keywords (in huge volumes) without attracting too much attention.

3.3. By geography

Ad fraud is known to have a global impact, and as ad spend continues to increase, fraudsters will follow the money no matter where it is to be found.

This means that all countries throughout all continents are vulnerable to ad fraud. The level and type of ad fraud threats are not linear across them – some countries may be more susceptible to ad fraud because they have higher levels of internet access and more mobile device users, while others might have less stringent laws and enforcement against ad fraud.

This means that each region's ad fraud outlook and challenges require different resolutions.

However, they all have one thing in common: Without the widespread implementation of sophisticated anti-ad fraud prevention solutions, all countries will continue to suffer from the damaging impacts of ad fraud.

To provide context for the scale of the ad fraud challenge and the remedies needed, we've broken down the data to show ad fraud by type, continent, and then on a country-by-country basis.
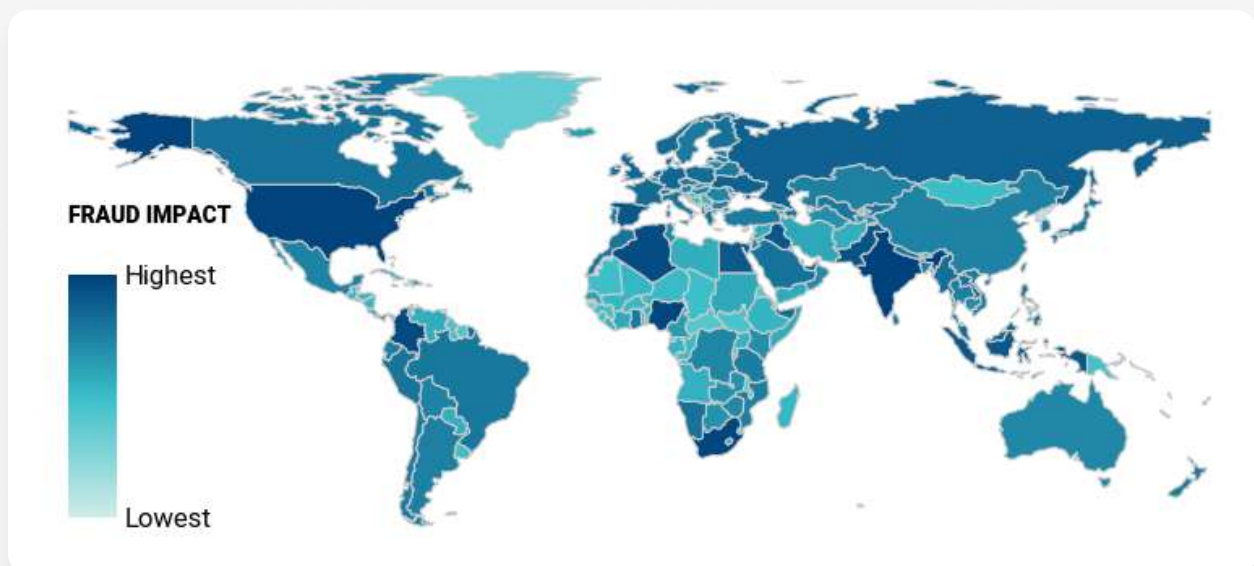
WORLDWIDE IMPACT

This year, India jumped from 24th place in 2022 to first place, while the United States also vaulted from 17th to second position.

Colombia, Algeria, and Indonesia have all also entered the top 10 board, while Ukraine, Greece, Egypt, Belarus, Thailand, and Laos have dropped from the top 10 positions.

Top 10 worldwide:

1. 🇮🇳 India
2. 🇺🇸 U.S.A.
3. 🇳🇬 Nigeria
4. 🇿🇦 South Africa
5. 🇨🇴 Colombia
6. 🇩🇿 Algeria
7. 🇵🇰 Pakistan
8. 🇮🇶 Iraq
9. 🇪🇸 Spain
10. 🇮🇩 Indonesia

FRAUD IMPACT

Highest

Lowest

EUROPE

Digital advertising is regulated on a more regional basis in Europe, which means that – for the most part – it has better ad fraud protection than some other continents. However, since the continent is also associated with higher payouts, fraudsters tend to target performance marketing campaigns across Europe.

While Ukraine was the country most affected by ad fraud throughout Europe in 2022, the top spot is now occupied by Spain. Greece's position dropped from second to tenth, while Russia rose from ninth to second position.

Several European countries like Ukraine, the Netherlands, and Germany are home to large data centers and cloud and hosting providers.

For this reason, there is significant traffic from bots, crawlers, and users browsing via VPNs.

Europe is mostly divided into three types of invalid traffic segments, the most prominent being traffic from data centers and virtual private server traffic.

Secondly, bad bots are highly present in markets with higher levels of affiliation, programmatic, and native advertising marketing, including Spain, Poland, and Italy.

Nevertheless, it should be noted that traffic originating from Europe doesn't always mean the real user is actually based there. Fraudulent schemes from all over the world can be posing as European.

FRAUD IMPACT

Highest

Lowest
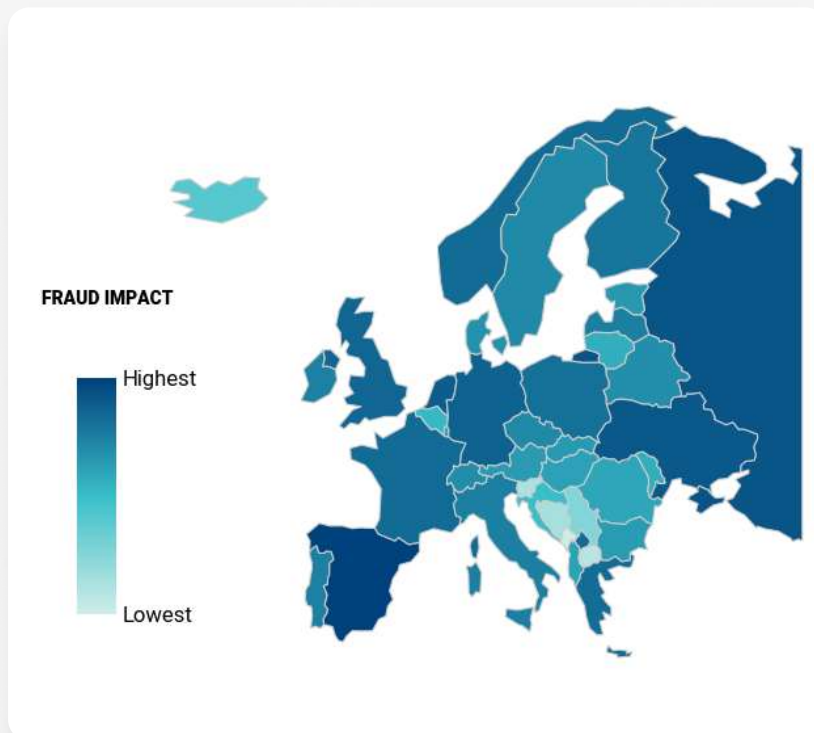
Top 10 European countries exposed to ad fraud:

1. 🇪🇸 Spain
2. 🇷🇺 Russia
3. 🇺🇦 Ukraine
4. 🇳🇱 Netherlands
5. 🇩🇪 Germany
6. 🇬🇧 United Kingdom
7. 🇽🇰 Kosovo
8. 🇳🇴 Norway
9. 🇫🇷 France
10. 🇬🇷 Greece

AMERICAS

Digital advertising in North America versus South America is highly different. While North America has some of the largest worldwide advertisers, South America is still playing catch-up in terms of advertising prowess.

For the second year in a row, the United States occupies the number one position in the top 10 countries exposed to ad fraud across the Americas. Similarly, Canada has only dropped from second to third place, while Mexico fell from third to tenth position.

North America is an interesting case since it houses one of the biggest data centers in the world and the largest cloud providers. In Central and South America, the most common fraud schemes involve fraudulent publisher apps outside of the Google Play Store, massive ad loading, and bots. In order to compensate for lower payouts, fraudsters have to generate higher amounts of fake traffic through these methods.

Although the regulation of ad fraud has been increasing over recent years, markets like Mexico, Brazil, and Argentina are still plagued by fraudsters attempting to collect high CPA rates.

FRAUD IMPACT
Highest
Lowest
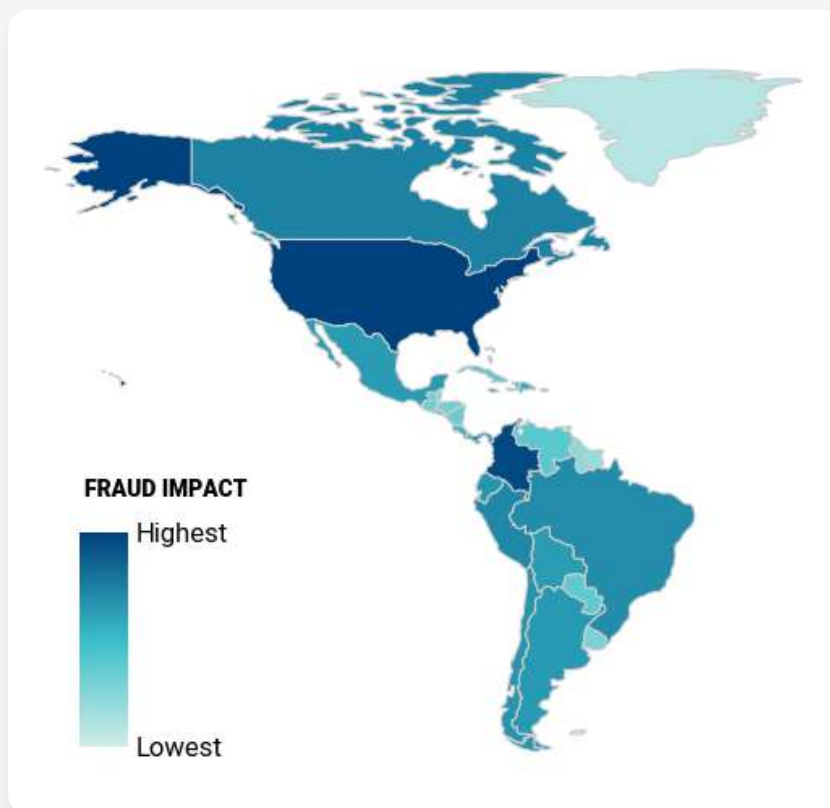
Top 10 American countries exposed to ad fraud:

1. 🇺🇸 U.S.A.
2. 🇨🇴 Colombia
3. 🇨🇦 Canada
4. 🇵🇪 Peru
5. 🇧🇷 Brazil
6. 🇵🇦 Panama
7. 🇨🇱 Chile
8. 🇪🇨 Ecuador
9. 🇦🇷 Argentina
10. 🇲🇽 Mexico

AFRICA

Africa is home to many emerging markets, which presents ample opportunities for advertisers and marketers. Yet these countries still face the common challenges that come with large-scale unstructured growth.

Nigeria is still the country most affected by ad fraud in 2023, not relinquishing its position from 2022. Other noteworthy changes include Ghana dropping from third to eighth place, and new appearances from Somaliland, Morocco and Mozambique.

While telecom and mobile billing ad fraud are on the rise everywhere, Africa is a sweet spot for fraudsters. The combination of fast, mainstream smartphone adoption and the lack of legislation (due to most platforms and regulators still being in the early stages) makes most African countries both risky and interesting locations for most advertisers.

Top 10 African countries exposed to ad fraud:

1. 🇳🇬 Nigeria
2. 🇿🇦 South Africa
3. 🇩🇿 Algeria
4. 🇪🇬 Egypt
5. 🇸🇴 Somaliland
6. 🇳🇦 Namibia
7. 🇲🇦 Morocco
8. 🇬🇭 Ghana
9. 🇹🇿 Tanzania
10. 🇲🇿 Mozambique

FRAUD IMPACT

Highest

Lowest
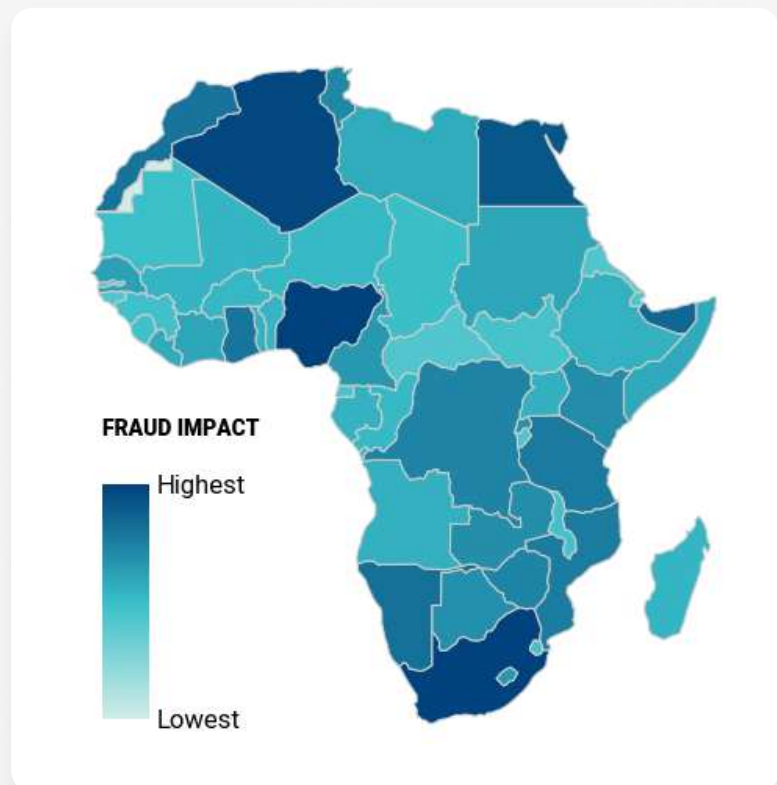
ASIA

Asia is often named the ad fraud capital of the world. China, Thailand and Laos (among other locations in South East Asia), Indonesia, and India are considered some of the largest ad markets globally.

The continent is an attractive target for fraudsters, in part due to the region's large population, high levels of internet use, and lack of regulation to combat fraud.

Additionally, the low cost of internet access and the prevalence of mobile devices in Asia have also enabled more sophisticated forms of fraud such as click fraud and mobile ad fraud.

India is the country most affected by ad fraud in Asia in 2023, with last year's number one country, Thailand, dropping out of the top ten completely. Meanwhile, Pakistan and Iraq retained their second and third positions, while Sri Lanka and Bangladesh have also dropped out.

Asia, and notably the South-East region, is where bots have more impact than anywhere else in the world. In fact, in some cases, traffic can consist of up to 99% bot-related traffic, with bot origins located mostly in India, China, and Singapore data centers.

These countries are also home to major device farms, where workers carry out manual tasks such as app installs or ad clicks through real devices. These massive bot and device farms have usually little to no local impact, as the targets are usually located in other locations such as Europe or the Middle East, among others.


FRAUD IMPACT

Highest

Lowest
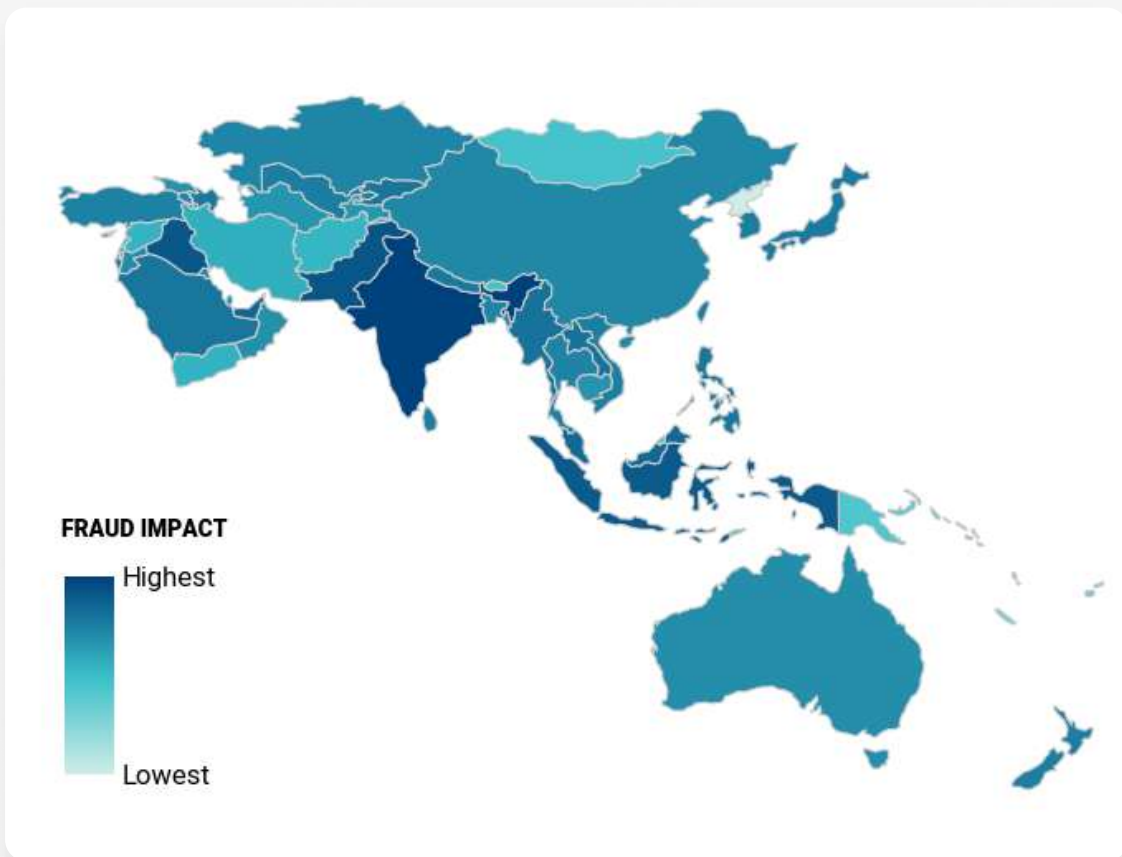
Top 10 Asian countries exposed to ad fraud:

1. 🇮🇳 India
2. 🇵🇰 Pakistan
3. 🇮🇶 Iraq
4. 🇮🇩 Indonesia
5. 🇦🇪 United Arab Emirates
6. 🇲🇾 Malaysia
7. N. Cyprus
8. 🇱🇦 Laos
9. 🇲🇲 Myanmar
10. 🇰🇬 Kyrgystan

4. Conclusions & Predictions for 2023

1. **Invalid traffic will continue to grow in complexity**, in part due to new media types and higher volumes of programmatic advertising. Additionally, fraud techniques will continue to evolve to become more sophisticated and difficult to detect.

2. **AI chatbots**, such as ChatGPT, are already **enabling anyone to run ad fraud**, which will cause more ad fraud overall. While not as complex, this type of fraud will still require adequate solutions to detect and prevent it.

3. Advertisers that want to boost their advertising performance will begin to **align their ROAS** improvement strategies with their **anti-ad fraud strategies**.

4. **Ad fraud will increase across video and streaming platforms**. Video is expected to be the fastest-growing ad format in 2023, and with this comes the risk of fraudsters exploiting its popularity by using bots and other high-tech methods to generate fake views and clicks.

5. **Advertisers and ad fraud detection** companies will work more **closely together** to combat ad fraud by implementing a robust anti-ad fraud strategy.

6. **Tier 1 agencies** and **networks** will make ad fraud prevention a crucial strategy to position themselves as **trusted partners** in digital advertising.

7. **Without intervention now**, the ad fraud money flow will continue on its course, **draining your budgets** and ruining your campaigns.

By partnering with an ad fraud detection and prevention solution like Opticks that detects and prevents fraud in real-time, you will protect both your ad spend and your campaign data. With this in place, you can focus on identifying your best-performing channels and build optimized campaigns that produce real results.
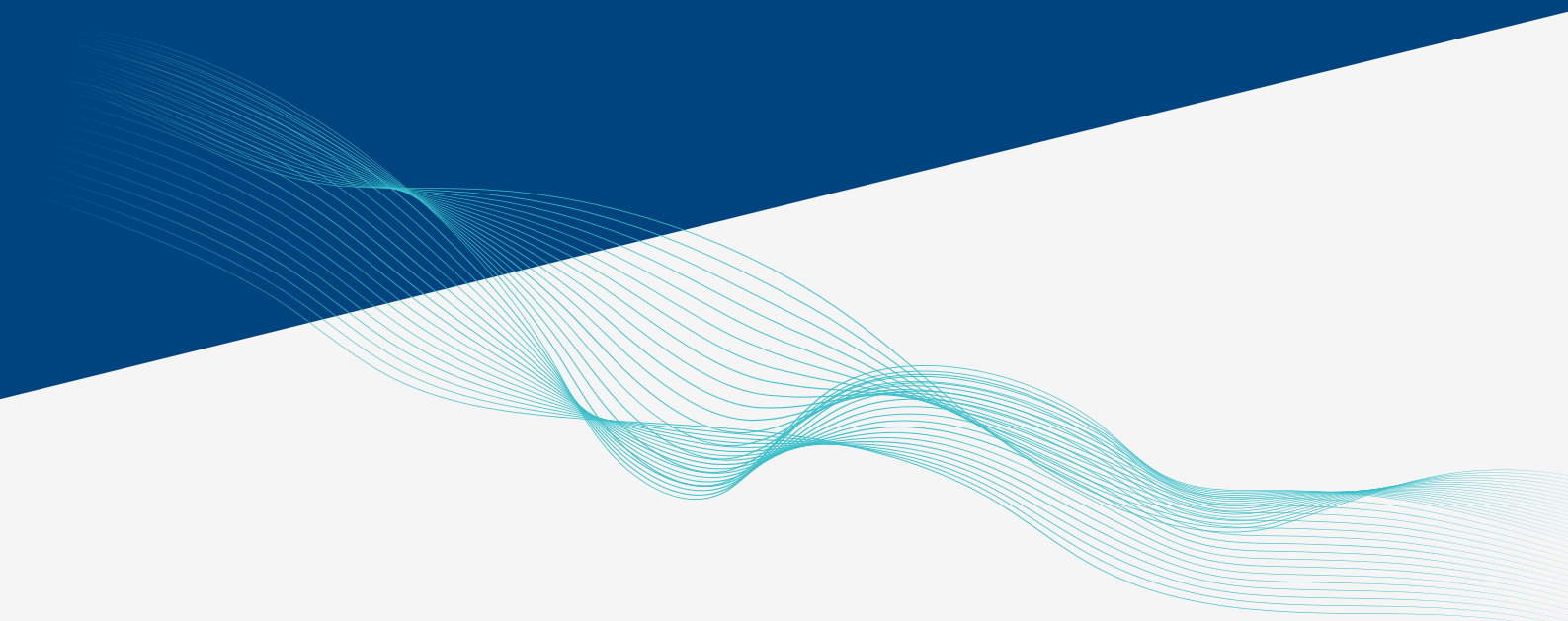
A few words about Opticks

ABOUT OPTICKS

Opticks helps marketers to reach their acquisition and growth goals by identifying and preventing ad fraud. Our relentless mission is to deliver reliable and innovative software to beat ad fraud.

FRAUD INSIGHTS

Fraud Insights is an editorial line of thought leadership compiled by our Data Science and Fraud Research experts directly from the battleground against fraud.

Opticks

Less fake traffic, more results