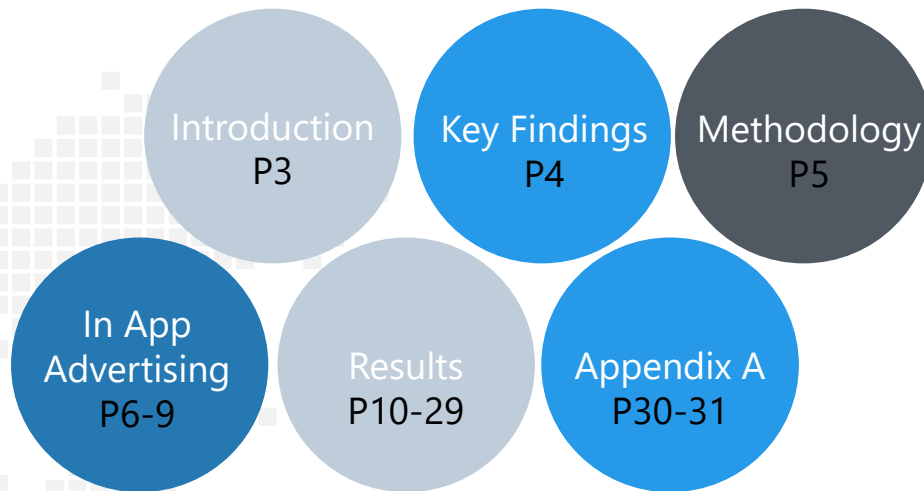


THE STATE OF MOBILE MONETIZATION

September 2017



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Introduction

To improve and ultimately perfect an app, developers need to select the right SDKs – Software Development Kits. However, in today's marketplace app developers are literally inundated with SDK choices, making it difficult to choose the best ones.

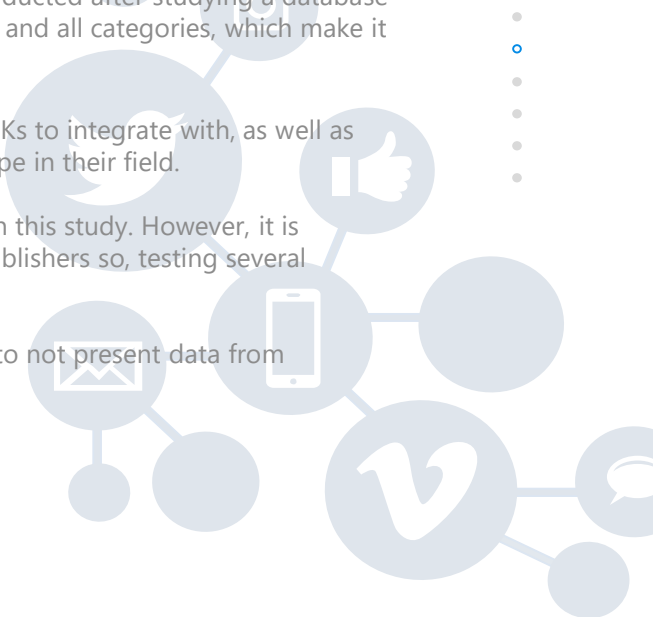
The Mobbo Power Index offers app publishers and marketers robust benchmarks of mobile app SDK components, helping them to make informed decisions about the best technology stacks. The report sheds light on the scale and performance of popular SDK components and tracks the movers and shakers in the mobile industry. This research has been conducted after studying a database of over 4 Million analyzed apps, and over 1,000 SDK components scanned across iOS and Android and all categories, which make it the most in depth study to date.

The findings provide valuable information for app publishers in their quest to pinpoint the best SDKs to integrate with, as well as for service providers in the mobile app economy who want to understand the competitive landscape in their field.

Since scale is a key factor in achieving statistical validity, larger media sources gain an advantage in this study. However, it is important to remember that smaller, niche SDK providers may also deliver good results for app publishers so, testing several technology providers - both large and small - is recommended.

Changes in the mobile ad industry and the sunset of SDK's due to M&A and Consolidation led us to not present data from Mobilecore, MobPartner, Adwhirl and PlayHaven.

For any feedback and insights about this report, feel free to email us at info@mobbo.com.



Key Findings

1

Google and Facebook continue to dominate: The search giant is making headway in mobile, with 65.84% of Android Share of Voice and 81.99% on iOS, Facebook took the 2nd place on Android with 21.81% SOV and is up to 6th place on iOS with 5.89%.

2

Facebook Scales android: The social network keeps its position as a top monetization SDK and passes Chartboost to become the second ranked mobile advertising SDK in H1 2017 on Android with 21.81% SOV vs Chartboost's 18.86%.

3

Fyber becomes the fastest growing Monetization SDK: With a 392.98% growth from beginning of 2017 Fyber quadruples its client base and becomes the fastest growing ad Monetization SDK.

4

Tappx becomes the 2nd fastest growing Monetization SDK: Tappx is at second place nearly tripling their users with 296.57% growth rate.

5

Chartboost catching up to AdMob: The Game centered in app advertising network has shown impressive advances, Chartboost is catching up to AdMob as more game developers keep testing game centered advertising SDKs.

6

Unity Ads becomes the third most popular Monetization SDK among game developers.

7

Cheetah Mobile sees highest lift in retention: The China-based global network sees the best retention rate on Android.

8

Startapp becomes the third most popular Monetization SDK among app developers: And the fourth most popular Monetization SDK overall.

9

Video is here to stay: Video networks Adcolony, Unity, Vungle all showed impressive growth and climbed in ranking.

10

Mediation platforms are gaining ground, nearly one third of the top monetization SDK's act also as mediations in addition to providing their own demand.

Methodology

Scope

Scope: +1,000 Technology stacks of 4.2 Million apps worldwide, across all categories on iTunes and Google Play.

Date range: +H1 (January-August) 2017



Retention Rate

Retention Rate figure was calculated by one minus - the number of SDK removals (uninstalls) from January to August 2017 (inclusive) and dividing it by the total number of active SDK implementations.

Share of Voice

Share Of Voice (SOV) - is the percentage of apps utilizing a specific SDK in the monetization category taking into consideration that apps often employ several SDKs simultaneously.



Growth

Growth was calculated by:

A) Subtracting SDK removals from the number of new SDK implementations from January to August 2017 (inclusive) to get the gross implementations for that period, followed by: B) Dividing the number of gross implementations by the number of implementations at the start of the period.

Market Share

Market Share is the percentage of the market controlled by a specific SDK in the In-App Advertising vendors' category. It is calculated by dividing the number of apps that have implemented each SDK by the total number of apps that use an SDK from the same category.



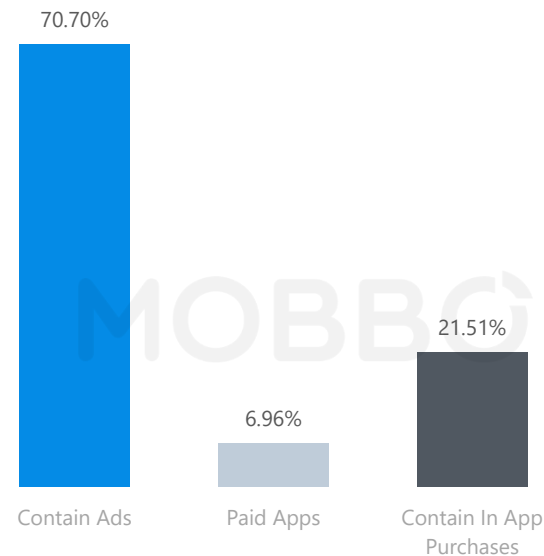
Power Index

A rank combining three factors given to each media source:

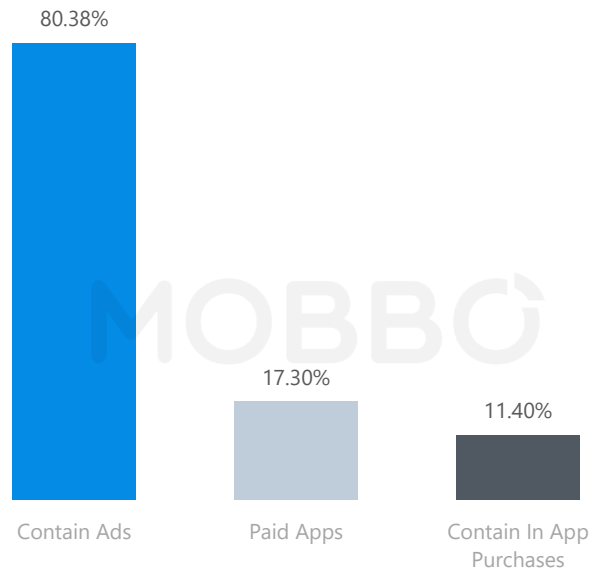
- 50% weight given to scale (- total number of active SDK implementations)
- 30% weight given to popularity among top apps (- number of SDK implementations in apps ranked in top charts)
- 20% weight given to Retention (- uninstall rate)

Monetization Methods - Games

Games



Android

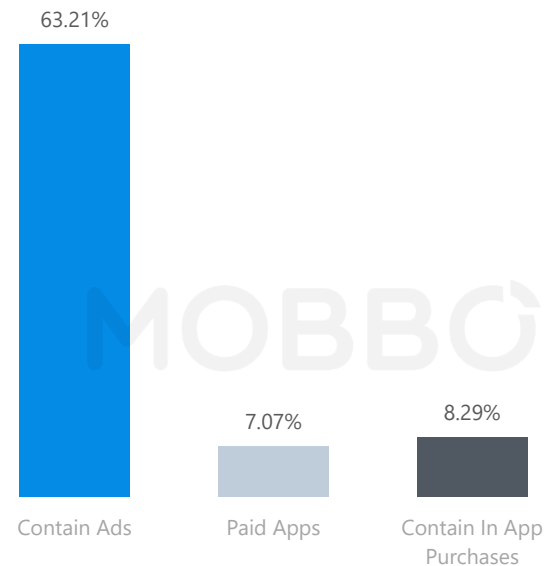


iOS

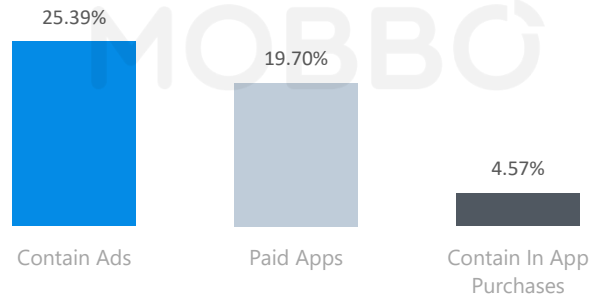


Monetization Methods – Apps (Non Game Apps)

Apps



Android



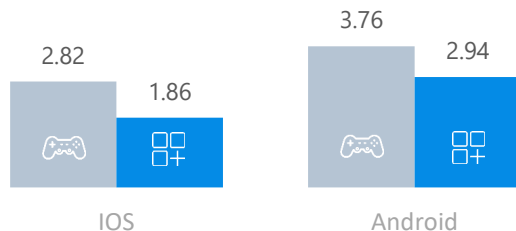
iOS



Advertising SDK count per app that contains adverts

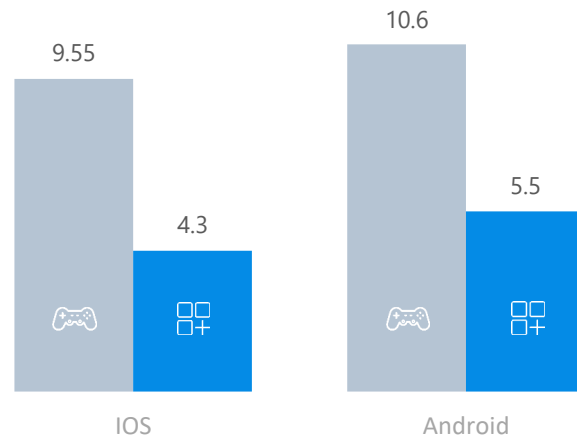
2.7

Average Count across all apps with advertising SDK's



6.5

Average SDK count per app – Among Top Publishers + Popular Apps



Methodology - Top Publishers that were tested include: Miniclip, Kiloo, Outfit7, Chetah Mobile, Halfbrick Studios, Surpax, Fingersoft, Sega, Second arm

Monetization Methods. Key Observations

- Android apps are more aggressive with ads, Over X2.5 Android apps (- non games) contain ads versus iOS apps, 63.21% of the apps on Android Versus 25.4% on iOS.
- Apps that contain advertising SDK's, do not settle on one single monetization SDK in their app, Android and iOS Games contain on average 3.76 and 2.82 Advertising SDK's components per app.
- Top Game Publishers on Android and iOS utilize on average a whopping 10 different Advertising SDK's in their gaming apps in order to maximize their in-app advertising revenues.
- iOS apps have X2.5 more Paid applications and games versus Android, probably because iPhone owners prefer to pay for content rather than skirt paid content for free ad-supported apps.
- iOS users spend more per app and are more willing to spend in the first place compared to their Android using counterparts.
- 21% of Android games contain in app purchases, compared to 11.4% in iOS, this monetization method is likely to keep growing on both platforms.
- Although Android based devices outsell iPhones, iPhone developers still make more money from in app purchases, thus they seem to rely less on ads for generating income.

In-App Advertising. Share of Voice

ANDROID



In-App Advertising. Share of Voice

IOS



Share Of Voice. Key Observations

1

Admob Domination Continues

Admob continues to dominate the market with 65.84% of Android Share of Voice and 81.99% on iOS, Facebook took the 2nd place on Android with 21.81% SOV and is up to 6th place on iOS.

2

Facebook gaining dominance on Android

Facebook overtook Chartboost on Android with 21.81% SOV vs Chartboost's 18.86%.

3

Startapp Pulling Ahead on Android

Startapp is the third most popular Monetization SDK among app developers, and the fourth most popular Monetization SDK overall with 16.22% SOV.



Mobile Ad-Tech Industry Overview

With the ever-increasing pace of technical and creative innovation across app development, the past few years have brought some unanticipated market developments, particularly in terms of market consolidation, all of which benefits the advertiser, the app development industry and end users.

This paper sets out some of the movements in the ad-tech sector and looks at industries seeking to increase their involvement with software developers. There are a number of advantages perceived by both buyers and the SDK providers in aggregating their resources, which we will outline. We will look at the movers and shakers in the changing mobile ad-tech landscape and what can be learnt by any company seeking to scale up their operations, maximize their In-App Advertising and keep up with the competition to keep their edge.

The Push For Ad Industry Consolidation

There have been numerous high ticket M&A's in the advertising industry in the last few years, with optimism looking set to continue for the foreseeable future. TechCrunch reported that in the first quarter of 2016 alone, there were 72 merger and acquisitions between advertising and marketing technology and digital media firms: "...to bolster or establish their own audience, round out their tech stack or neutralize potential threats." *1

Acquisitions of ad-tech companies come not just from within the tech sector, but from other industries. Verizon, a telecoms company, for instance, has been involved in over a dozen acquisitions to date. Market leaders such as Oracle in the Cloud and Data sector have been involved in ten and Walmart seven moves apiece. Industries as diverse as telecoms, retail and business software are investing in ad-tech as trends involving their verticals and those in tech merge.

Mobile Ad-Tech Industry Overview

Conversion By Consolidation: Mobile Ad-Tech M&A activity

In a world, that is increasingly shifting its focus to a mobile first scenario, the *Desktop Internet* as we know is slowly declining. Companies are gradually understanding the impact of an app ecosystem and many of them are taking the plunge from being mobile-first to an app-only model. One of the driving factors behind this change of outlook has been the success of mobile-focused ad networks showcased in our report that have been the key in driving user interaction inside apps by placing targeted ads based on meticulous user profiling. While Google did have a head start in the business with Admob being the current global market leader, things are starting to change.

Over the past years' buy ups of SDK in-app advertising companies have continued apace, e.g.:

- NativeX - Acquired by Mobvista
- HeyZap - Acquired by (- Fyber parent company) RNTS
- InnerActive – Acquired by RNTS
- MobPartner - Acquired by Cheetah Mobile
- AdColony - Acquired by Opera
- Nexage - Acquired by Millennial Media owned by AOL
- Avocarrot - Acquired by company Glispa
- Smaato - Acquired by Spearhead
- SuperSonic – Merged with IronSource
- AppLovin - Acquired by Orient Hontai Capital
- LiquidM - Acquired by Litagus
- TapJoy - Acquired by Offerpal-Media
- Mopub - Acquired by Twitter
- Flurry - Acquired by Yahoo
- Millennial Media – Acquired by AOL (Verizon)
- MobFox – Acquired by Matomy.
- Fiksu - Acquired by ClickDealer.
- PlayHaven - Acquired by RockYou

Growth Rate – H1 2017

ANDROID



Movers & Shakers in the In-App Advertising Category



Growth Rate. Key Observations

1

Fyber is the fastest growing Monetization SDK with 392.98% from beginning of 2017.

2

Tappx is at second place nearly tripling their users with 296.57% growth rate.

3

Cheetah Mobile is at 247.59%.

4

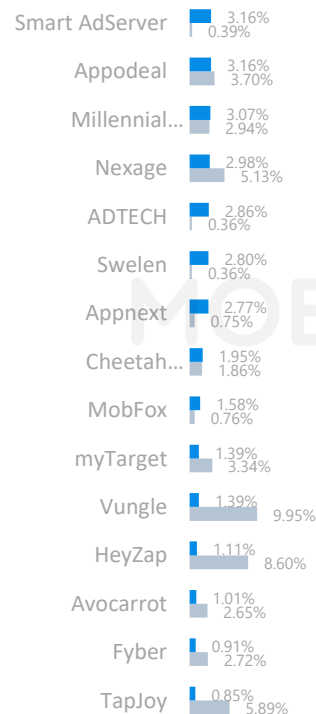
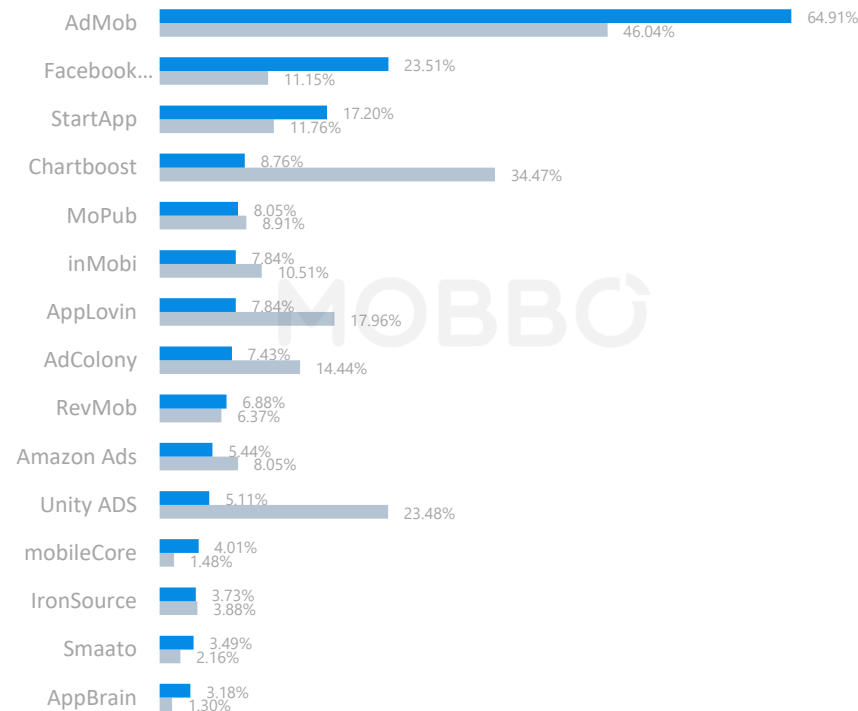
Bigget networks are at the bottom partly because high Growth Rate is hard to achieve when you are one of the biggest on the market.

Share of Voice. Apps vs Games

ANDROID



Mobile Monetization Share Of Voice: Apps vs. Games



Games



Apps

Android Apps vs Games – Key Observations

ANDROID



- AdMob continues to dominate both in Android games and apps.
- Chartboost catching up to AdMob: The Game centered in app advertising network has shown impressive advances, Chartboost is catching up to AdMob as more game developers keep testing game centered advertising SDKs.
- Startapp becomes the third most popular Monetization SDK among app developers: And the fourth most popular Monetization SDK overall.
- Unity Ads becomes the third most popular Monetization SDK among game developers.

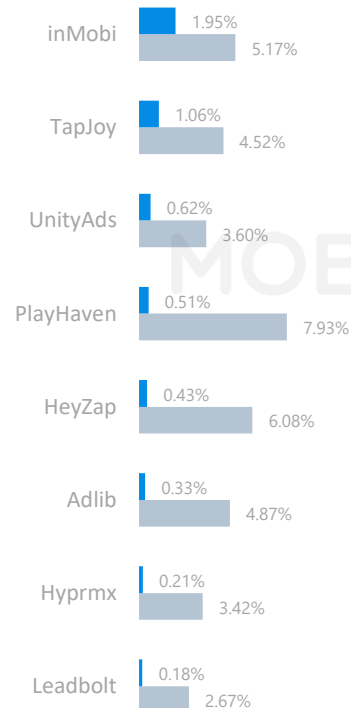
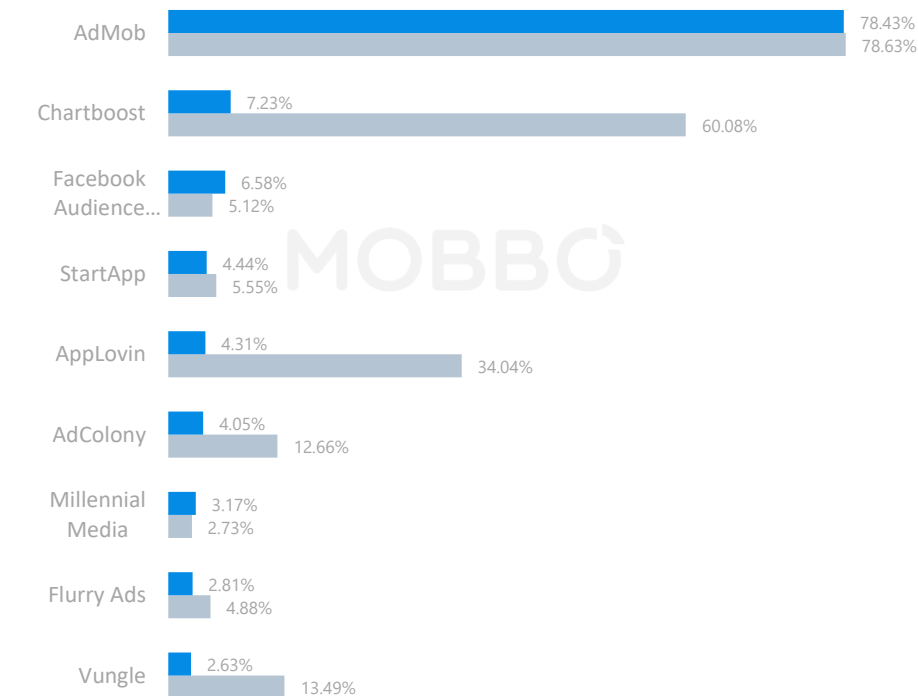


Share of Voice. Apps vs Games

IOS



Mobile Monetization Share Of Voice: Apps vs. Games



Games



Apps

iOS Games vs Apps. Key Observations

iOS



- AdMob is leading the pack in both Apps and Games.
- ChartBoost lost a bit of market share dropping to 7.23% in Apps and rising to 60.08% in Games.
- Facebook Audience Network has a larger SOV in Apps than Games, with 7.23% share on games versus 60.08% in Games.
- AppLovin is the third most popular monetization SDK in Games with 34.04% SOV in Games.

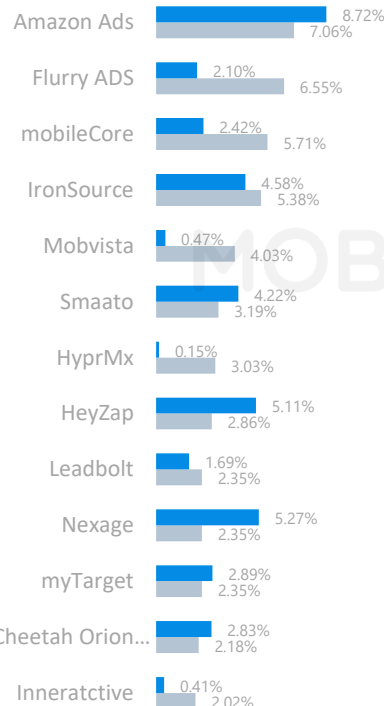
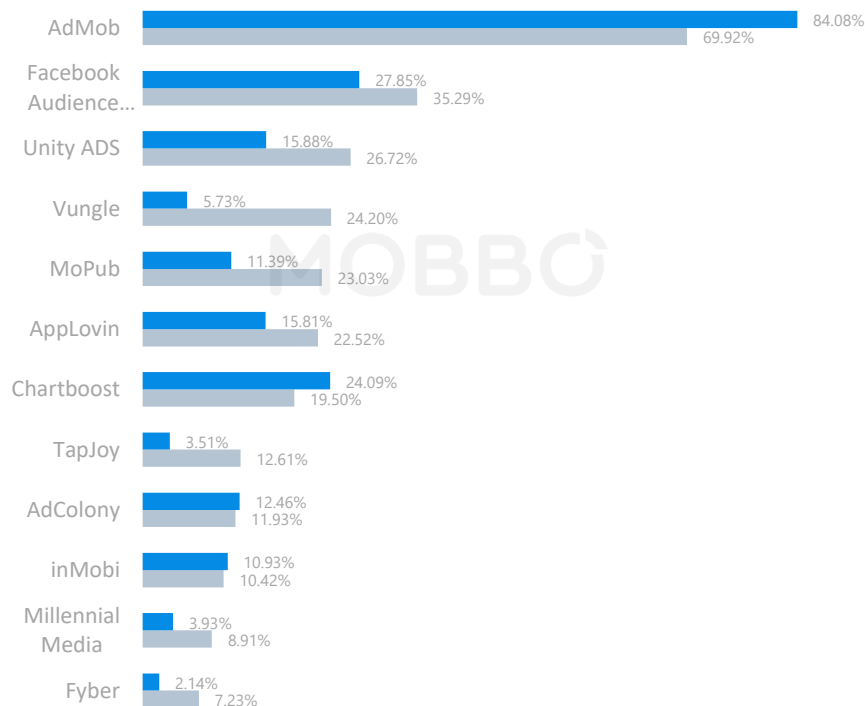


Share Of Voice. Top Apps

ANDROID



Mobile In-App Advertising Share Of Voice By Platform: Top Apps vs. All Apps



Top Apps

All Apps

Share Of Voice. Top Apps Key Observations

ANDROID



AdMob

AdMob is leading the pack with 69.92% of the Android apps on the Top Charts.

Facebook Audience

Facebook Audience Network is the second most popular Monetization SDK with 35.29% SOV among the top Android apps.

Vungle

Vungle is integrated in 24.20% of the Android Top Apps but only 5.73% among all the Android apps.

TapJoy

TapJoy is popular among the Android Top Apps with 12.61% SOV but only 3.51% of all the Android apps.

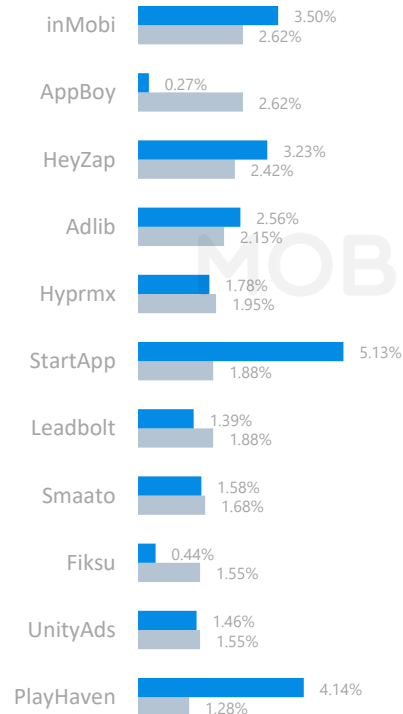
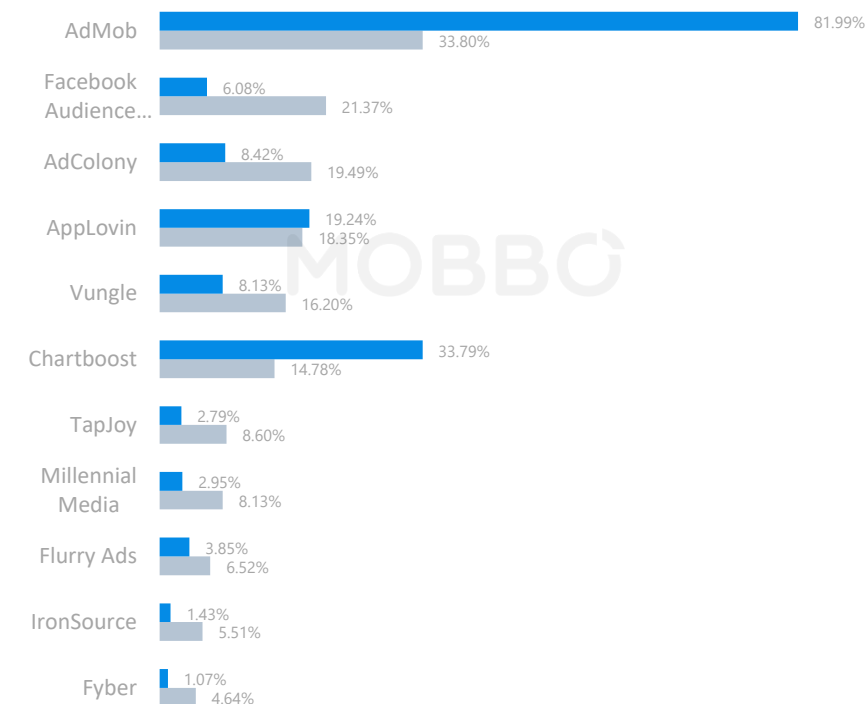


Share Of Voice. Top Apps

IOS



Mobile In-App Advertising Share Of Voice By Platform: Top Apps vs. All Apps



Top Apps

All Apps

Share Of Voice. Top Apps Key Observations - iOS



1

AdMob Still Top SDK

AdMob is down to 33.08% SOV among the Top Apps.

2

Facebook Rising

Facebook took the second place with 21.37% SOV.

3

AdColony is at 3rd

AdColony is down to the 3rd place with 19.49% SOV in the Top Apps.

4

Chartboost Losing SOV

Chartboost is down to the 6th place among the Top Apps with 14.78% SOV.



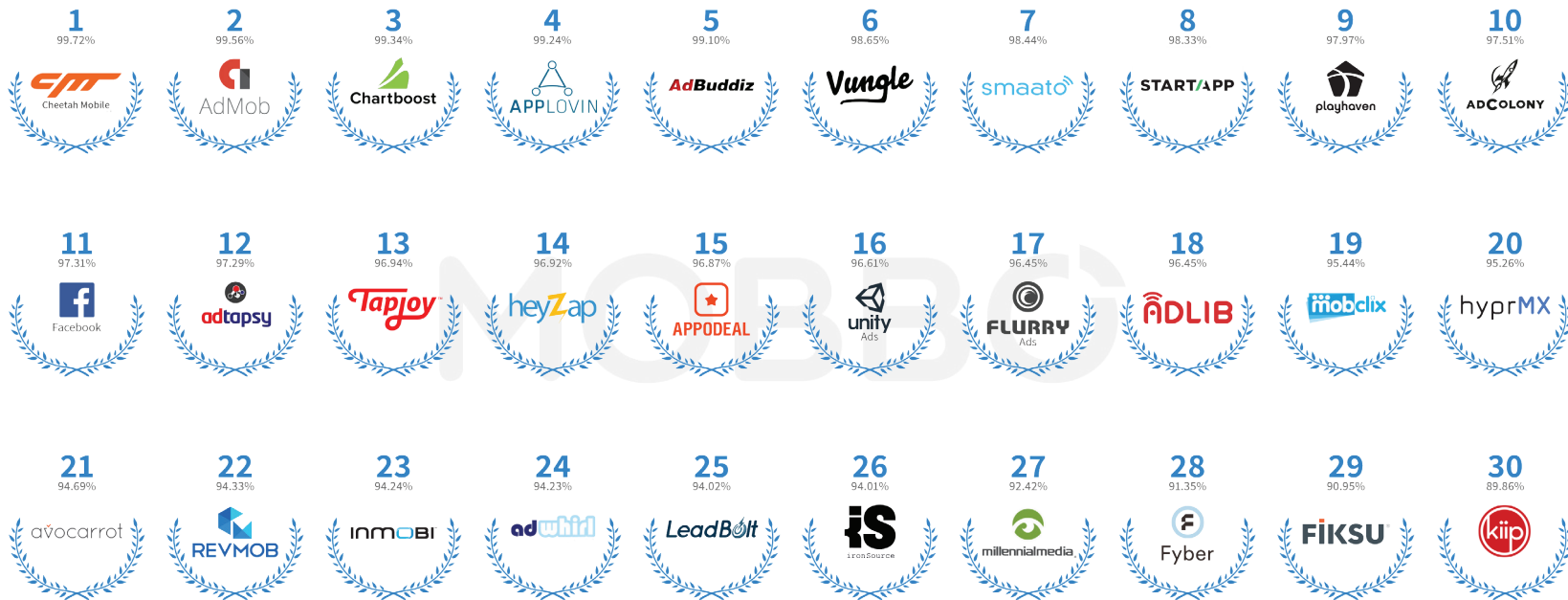
In-App Advertising. Retention Rate

ANDROID



In-App Advertising. Retention Rate

IOS



Retention Rate. Key Observations

Android

- Cheetah Mobile has the best retention with 98.07%.
- Tappx is at second place with 96.89%.

iOS

- Cheetah mobile (Mobpartner) is the leader with 99.72% retention rate.
- AdMob is at second place with 99.56% retention rate.



Power Index

Top 20 Advertising SDK's



Powered By
MOBBO

01



02



03



04



05



06



07



08



09



10



11



12



13



14



15



16



17



18



19



20



Power Index

Top 20 Advertising SDK's



Powered By
MOBBO

01



02



03



04



05



06



07



08



09



10



11



12



13



14



15



16



17



18



19



20



Mobile Ad-Tech Industry Overview

Drivers of Ad-tech Aggregation Trends

Corporations face a market increasingly constrained from various angles; finding new ways to create revenue is challenging. U.S. Telecoms providers foresee their wireless market reaching its peak domestically. Furthermore, the Federal Communications Commission and Department of Justice prevents mergers and acquisitions within their own sector (e.g. AT&T lawsuit for trying to purchase T-Mobile USA).

Diversifying into ad-tech allows them to profit from their biggest existing asset i.e. specific and unique data about their consumers. They can build and offer services that are precisely targeted, measurable and flexible for 3rd party advertisers. Everyone benefits. Companies wanting to monetize data assets can tap into new technical resources, offering measurable ROI to clients marketing to mobile consumers. Advertisers monetise their marketing budgets more effectively. Tech companies benefit from investment and reach fresh huge markets their partner has access to.

Tech buyers bring media buying, digital advertising and marketing automation capabilities in-house, simultaneously solving their own media agency transparency challenges. Cohesion of financial, development and marketing strategies also improves.

Demand for digital and mobile advertising is increasing exponentially amongst business to customer companies. According to e-Marketer ^{*4}, Consumer Packaged Goods (CPG) advertisers are [estimated to spend nearly \\$6 billion on digital advertising](#) in 2016; this offers exponential growth for service providers.

Some corporations see transitioning from hardware to software as vital to adapt to this emerging digitally aggregated environment. As clients of software behemoths such as IBM, Oracle and Salesforce increase their spend on digital marketing, so SaaS and DaaS companies expand their cloud-based marketing services and parent companies capitalise on digital's developments.

Technology M&A's are helping companies evolve their business strategy in keeping with market trends, ultimately securing their survival.

"...technology the key focus for growth... Without a winning technological product to provide additional value for mobile advertisers, the battle for market share for most networks is already lost." ^{*2}

Mobile Ad-Tech Industry Overview

Disruptive Tech Trends and The Drivers For M&A

It seems that telecoms companies, B2C enterprises, SaaS/DaaS, gaming companies and Chinese firms investing in tech will be the market movers to watch in the emerging market re-structuring.

"...mobile ad tech is transforming, and only those with superior technology or size will survive." ^{*2}

Whatever the background the rationale for entering into M&A arrangements will vary, but the statistics will doubtless drive investments.

For instance, according to NewZoo, the mobile gaming market continues its exponential growth and is, "... [set to reach about 50% of the entire game market by 2020](#)." ^{*2} NewZoo's latest quarterly [Global Games Market Report](#) ^{*5} says that the gaming market has already reached \$99.6bn this year. Of this market, 37% (valued at \$36.9bn), is mobile users. As a whole, the market is healthily up 8.5% compared to 2015. APAC currently have 47% of market share.

Verizon has shown aggressive, high value market acquisitions in the ad-tech sphere. For example: AOL was purchased in 2015 for \$4.4 billion, then Yahoo in July 2016 for \$4.8 billion. This brought exposure to a larger audience, through content sites such as The Huffington Post, Yahoo! Finance and TechCrunch; 'ownership' and monetizing connections to audiences is key to adding value.

In the retail sector, the global brand Walmart has been acquiring multiple marketing, engagement and analytics service providers. In 2014, [WalmartLabs purchased Stylr](#), a fashion app drawing on inventory from local outlets to help customers find clothes they like more easily. They then bought [Adchemy](#), an e-commerce technology company. 2015 saw them purchase [PunchTab](#), a platform that collects data about customer in-store activity and loyalty. Their buy-up of [Jet.com](#) e-commerce software developers further highlight the importance Walmart places on digital objectives for customer monetization.

In 2014 Oracle invested heavily in consumer data and advertising technology capabilities, investing \$400 million in acquiring [BlueKai](#), \$1.2 billion in [Datalogix](#) for, buying [Maxymiser](#) in 2015 and recently, [AddThis](#) for \$200 million. ^{*1} Oracle Data Cloud has been critically boosted via their acquisitions ^{*8} and has increased their competitiveness e.g. Adobe. Protection of market position by leveraging technology to use data more affordably offers competitive advantage.

ABOUT MOBBO

Mobbo measures the Mobile world, monitors the mobile technology stack of Millions of apps and offers a robust sales intelligence software for service providers in mobile app economy. Mobbo tells sales teams which prospect to contact, and how.

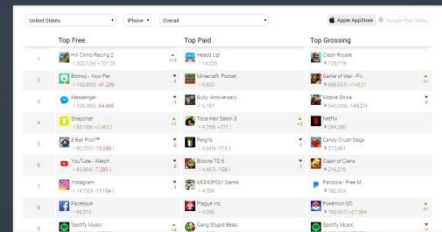
Mobbo's provides powerful data driven market research tools, providing insights to help publishers, investors, marketers and analysts across the world, make more informed decisions, and succeed in the global app economy.

With Mobbo App Intelligence and SDK Intelligence, one can easily measure and compare the metrics that matter most to their business.

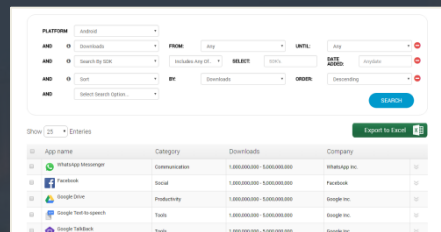
Efficiently identify acquisition targets, determine a prospect potential and conduct public company due diligence by combining download and revenue estimates with data around engagement and usage with a robust competitive analysis tool for measuring the mobile world.



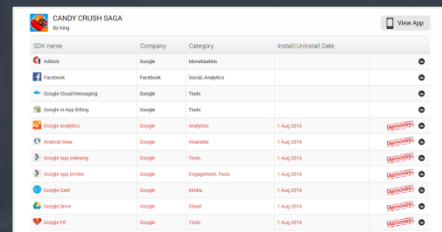
App intelligence



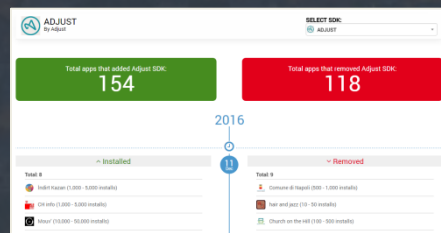
Top charts



Market Explorer



App Inspector



Timeline



Market Share