GUIDE

# Mobile app trends 2022

A global benchmark of app performance

ADJUST

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# Introduction

**2021 was another transformative year for the fast-moving world of app marketing. The global shift toward mobile continued as more users than ever turned to apps for entertainment, information, and completing essential daily tasks.**

The industry successfully grappled with the broad shifts to consumer patterns and user habits brought about by the COVID-19 pandemic, including sustained lockdowns and social distancing rules. It also faced new challenges as user privacy, spearheaded by the rollout of iOS 14.5 in April, took center stage.

Despite these challenges, the mobile app ecosystem continued to thrive, demonstrating how robust and adaptable the app marketing industry is and how adept advertisers and developers are at finding and retaining audiences in markets across the globe.

In 2021, consumer spend on mobile apps reached US$170 billion, marking a 19% increase from 2020. Ad spend also reached a record US$288 billion and is predicted to grow to $336 billion in 2022. The mobile app industry is bigger than ever and shows no signs of slowing down as consumer reach broadens and the quality of services offered continues to exceed expectations — and revolutionize to meet diverse demands.

In 2022, the competition is fierce, but the opportunity is exponential. This report draws on internal data and expert industry analysis to provide marketers with the insights needed to drive performance and empower a comprehensive understanding of audiences via actionable data.

**"The mobile app marketing industry has continually demonstrated its ability to take on challenges and distinguish itself via adaptability and rigorous dedication to quality. Apps not only provide outstanding, globally leading entertainment formats and convenient ways to complete tasks that enhance our daily lives, but they also solve problems and empower users in markets all around the world. 2022 will continue to pose challenges, but also it's a year of opportunity, as the need and want for apps is more pronounced than ever."**

Simon Dussart,
CEO

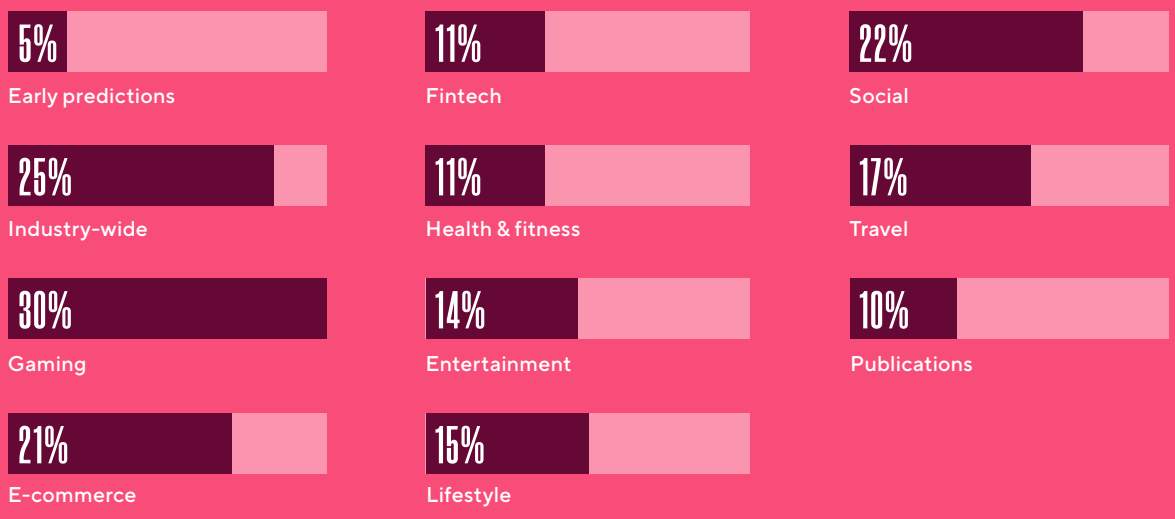
ADJUST

# iOS 14.5+ and the opt-in

It's been almost one year since iOS 14.5 was rolled out and Apple's AppTrackingTransparency (ATT) framework requiring user consent to share the Identifier for Advertisers (IDFA) became a reality for mobile marketers and developers. Since the first announcement of the change at the Worldwide Developers Conference in June of 2020, the mobile advertising ecosystem was sent into overdrive and pushed to reassess the way it approaches user privacy, targeted advertising, and user acquisition in general. While the industry has largely adapted and come to understand the benefits of working with a mix of ATT opted-in, device-level data, and aggregated SKAdNetwork data, getting the opt-in has become a pivotal strategic starting point.

Early predictions hypothesized industry-wide opt-in rates as low as 5%, but recent Adjust data shows that this figure is actually sitting at approximately 25% (having grown from 16% in May 2021), and that for gaming, it's hit 30%. Data from AppLovin owned studios shows even more promising results, with multiple popular games yielding opt-in rates of as high as 75%. Consent rates do, however, vary widely, but we expect to see a continued upward trend as more users understand the value of opting in and receiving personalized advertisements — something the gaming industry has been most successful in presenting until now.

ATT opt-in rate by vertical




Percentage of users opting in following prompt-served

**"The traditional paradigms around mobile advertising have been disrupted this past year with an accelerated embrace towards privacy. While privacy has always been part of Snap's DNA, it has catalyzed a fundamental shift in our approach to measurement, made possible by partners like Adjust. Despite these headwinds, Snap has seen a 50% YoY growth in our App Install objective in Q4'21, proving yet again how resilient the app ecosystem can be."**

Sheila Bhardwa,
Measurement Partnerships Manager

**Snap Inc.**

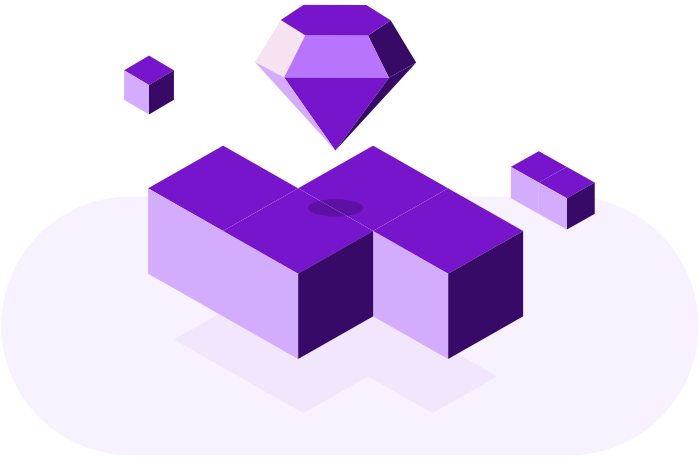
# Proving ROI on Connected TV campaigns

As Connected TV (CTV) and Over-the-top (OTT) are becoming more prevalent in marketing and advertising strategies, Adjust has responded with leading research and innovation in this area to turn CTV campaigns into measurable campaigns. We've seen our clients leverage our innovative solutions for cross-device measurement to understand the true impact of their CTV campaigns on their app downloads, including the use of QR codes. In addition, clients across a variety of verticals, including fintech, e-commerce, and gaming, are making use of our CTV solutions to answer the critical question: How does CTV impact my overall marketing strategy?

# The verticals

## Industry insights

This report puts a spotlight on three of the leading verticals on mobile: Fintech, e-commerce, and gaming. Having backed immense growth in 2020 with top-performing years all-round in 2021, these industry-defining verticals continue to demonstrate best practices while offering huge opportunities for developers and advertisers alike.



# Fintech

- Banking app revenue reached $6.8 billion in 2021, an 88% increase on 2020.
- Finance app downloads hit 573.1 million in the U.S. alone, a 19% uptick compared to 2020.
- More than half of purchases (52%) were made with a digital wallet in 2021, and use of cash has declined 42% since 2019.
- Top uses of fintech apps cited by users in North America in 2021 were paying bills, followed by banking, filing taxes, wiring money to friends, investing, and buying-and-selling of crypto currencies.
- China is the global leader for mobile proximity payments, with an adoption rate of 87%. India sits at 40%, South Korea at 46%, and the U.S. at 43%.

**What we're keeping an eye on in 2022:** Buy Now, Pay Later (BNPL) services, digital wallets enabling access to cryptocurrencies, and cloud banking from traditional banks.

banking app revenue for 2021 reached

**$6.8B**

**19%**

uptick compared to 2020 for finance app downlaods

adoption rate for mobile proximity payments in China

**87%**

**$3.56T**
2021 mobile retail e-commerce sales

**67%**
of e-commerce sales are made up by mobile

**55%**
of people shop on their smart phones

the amount of hours spent in shopping apps in 2021
**1B**

**35%**
increase in MAUs compared to pre-pandemic

# E-commerce

- Mobile retail e-commerce sales reached $3.56 trillion worldwide in 2021, up 22.3% from 2020.
- Mobile is now the leader in e-commerce, with 67% of e-commerce sales coming from mobile in 2021, up 14% from 2020.
- In 2021, 55% of people who shop on their smartphones made a purchase after seeing a social media ad.
- Time spent in shopping apps reached over 100 billion hours in 2021, up 18% year-on-year.
- Top e-commerce apps saw MAUs up by 35% compared to pre-pandemic levels in the leadup to Black Friday in 2021.

**What we're keeping an eye on in 2022:** The coupon industry, which is forecast to grow 56.5% by 2025, utilizing gamification to drive user acquisition and retention, and social commerce.

# Gaming

- Mobile gaming made up 52% of consumer spend on gaming globally in 2021, a figure that reached $93.2 billion, and represents a 7.3% increase year-over-year. The mobile gaming market is expected to register a CAGR of 12.3% from 2021 - 2026.
- In December of 2021 alone, the global mobile games market generated $7.4 billion from player spending across Google Play and the App Store. The number one market was the U.S., followed by Japan and China.
- 8 mobile games reached revenues of over $1 billion in 2021: PUBG Mobile, Honor of Kings, Genshin Impact, Roblox, Coin Master, Pokémon Go, Candy Crush Saga, and Garena Free Fire.
- Ad spend on mobile games saw 23% year-on-year growth in 2021, reaching $295 billion, and is predicted to reach $350 billion in 2022.

**What we're keeping an eye on in 2022:** Blockchain gaming/NFTs, play-to-earn business models, and converting of games to HTML5 formats for distribution on social networks.

**52%**
of gaming consumer spend is on mobile

**$7.4B**
generated from player spending

**$1B**
gaming revenue in 2021

year-on-year growth for ad spend on mobile games in 2021

**23%**

# Top takeaways

**35%**

Installs have grown year-on-year in all verticals tracked. **Fintech is up 35%**, e-commerce by 12%, and gaming by 32%.

**17%**

Stock trading and crypto apps make up 7% and 2% of all fintech app installs, respectively, but account for **17% and 6% of sessions**.

**30%**

Hyper casual makes up the highest share of installs in the gaming vertical (27%), **while action accounts for the largest proportion of sessions (30%).**

**10%**

**Marketplace apps have significantly better retention rates** than the rest of the e-commerce vertical (day 1 27% vs. 19% and day 30 **10% vs. 7%)**.

# The methodology

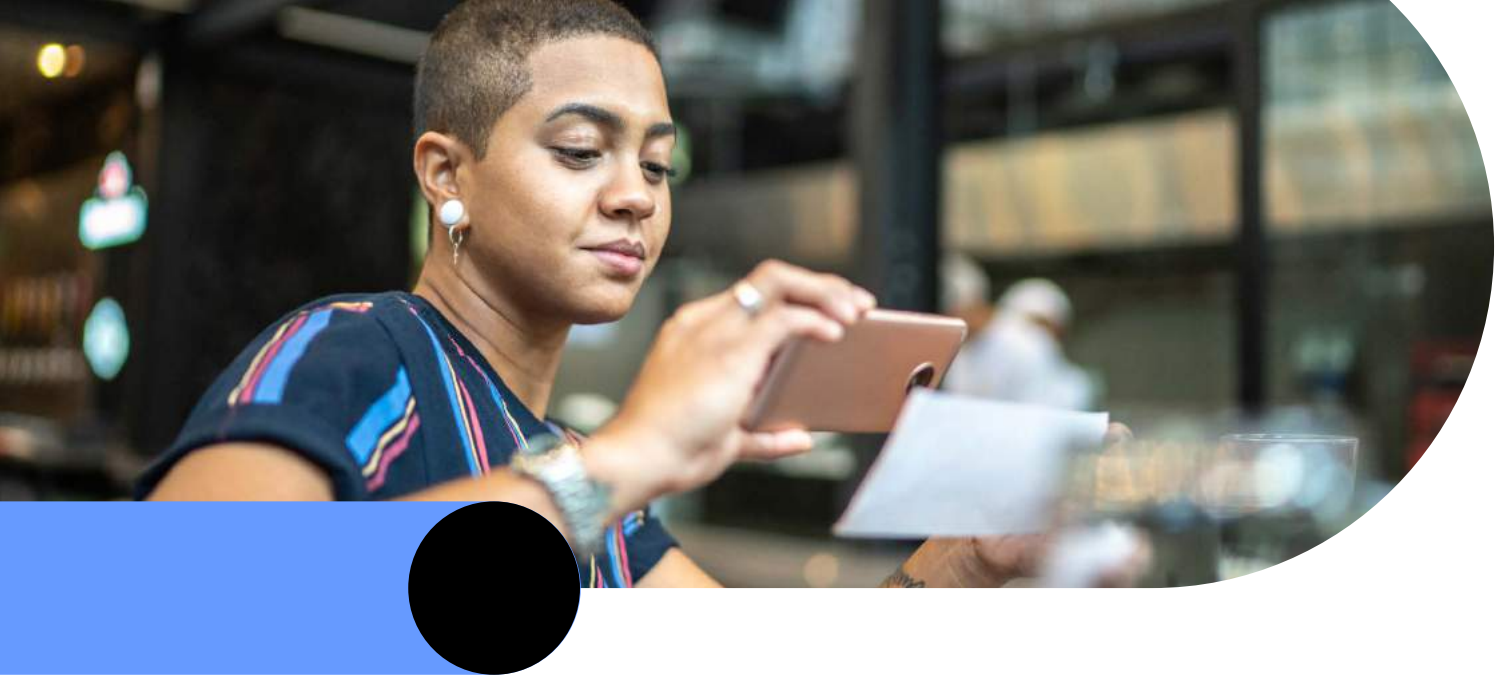
**The verticals**
Fintech, e-commerce, gaming

**Dataset**
A mix of Adjust's top 2,000 apps and the total dataset of all apps tracked by Adjust. Our data comes from two sources, one including a list of 45 countries and one with approximately 250 based on the ISO 3166-1 standard.

**Date**
01.01.2020 - 31.12.2021

**Reattributions, paid/organic, and stickiness**
The reattributions share and paid/organic ratio are both expressed as ratios, where X:1. In the case of the paid/organic ratio, a value of 3 (3:1) would mean that for every 100 organic installs, there are 300 paid installs. Similarly, for the reattributions share, a value of 0.7 (0.7:1) would mean that for every 100 installs, there are 70 reattributions. Stickiness is represented as a percentage, meaning a stickiness ratio (daily active users (DAU) / monthly active users (MAU)) of 0.34 would be represented as 34%.

**All dollar amounts are represented in USD.**



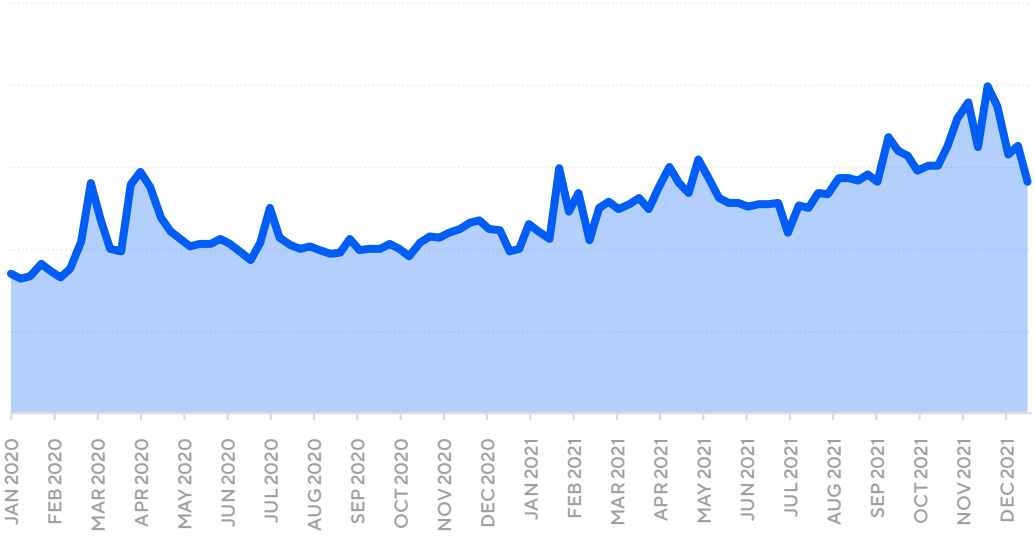
PART 1

# Fintech

## Installs and finding users

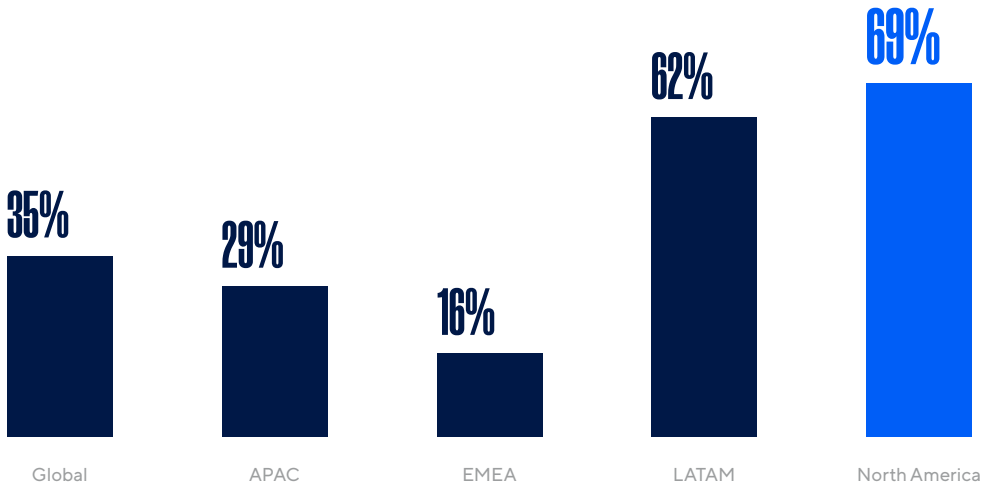
Globally, installs of fintech apps grew by 35% from 2020 to 2021 year-over-year, with November representing the largest spike, up 26% compared to the average of 2021, or 82% compared to 2020.

Fintech app install growth 2020 - 2021 (Global)



Growth can also be seen in all regions. North America comes out on top with a 69% year-over-year increase in installs in 2021. LATAM also saw a spike of 62%, APAC grew by 29%, and EMEA added 16% to its average.

Fintech app install growth percentages YoY 2020 - 2021

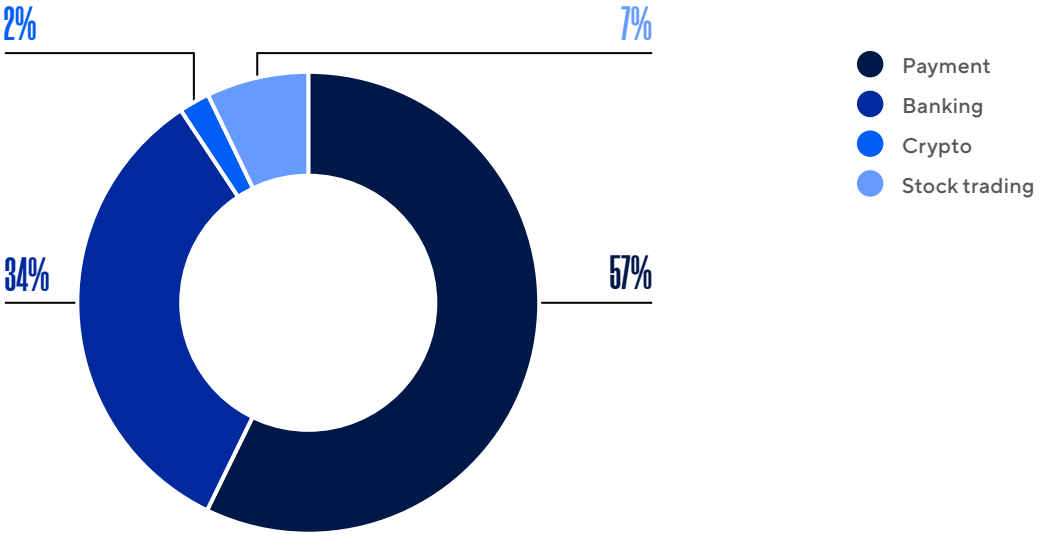



**"Data privacy changes in 2021 have reinforced the need for marketers in verticals like fintech to extract value from their own 1st-party data. While our machine learning engine provides marketers with performance against key metrics, transparency, and actionable insights, partnering with a mobile analytics partner like Adjust is critical to help app publishers make further strategic decisions to drive their mobile growth."**

Kezia Vere Nicoll,
Senior Digital Director
MOLOCO

Getting a little more granular and breaking the data down by subvertical, our data also shows the categories in which these installs were occurring on a global level. Payment makes up for approximately 57% of the installs share, followed by banking at 34%, stock trading at 7%, and crypto at 2%.

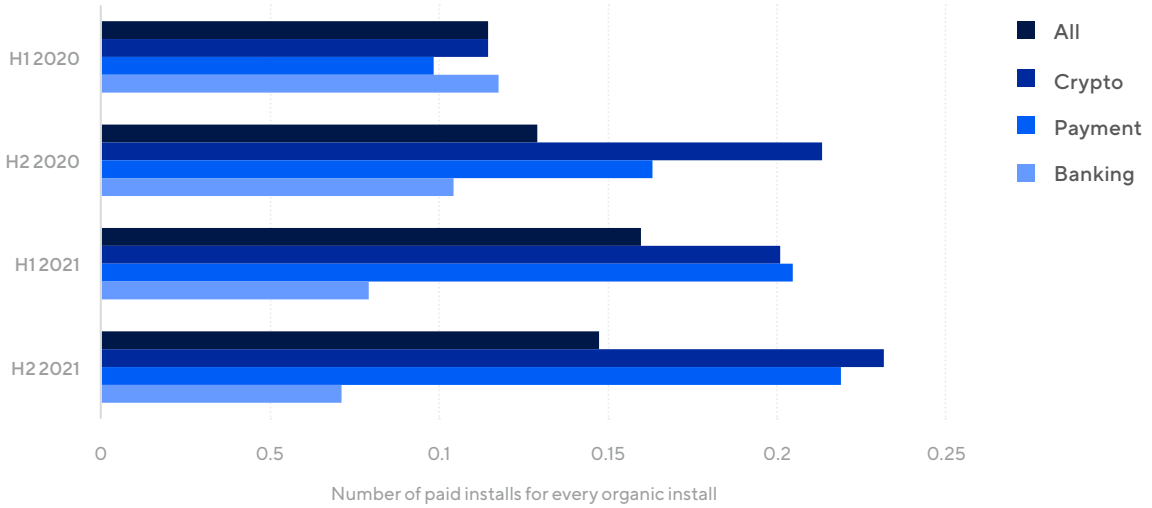
Fintech app installs by vertical 2020 & 2021




**Post-pandemic user interest in investing apps continued to grow in 2021, with asset management apps seeing record installs in the U.S. in Q1, growing by an unprecedented 198% quarter-over-quarter. While the "meme stock" trend drove high volume to stock trading apps such as Robinhood at the beginning of the year, a surge of user interest in cryptocurrencies led crypto apps to surpass stock trading apps to become the majority of asset management app downloads. Bitcoin and overall crypto market capitalization reached new all-time highs in April and November, with user interest closely following, while mainstream coverage of "meme coins" such as Dogecoin and Shiba Inu and the popularity of NFTs on the Ethereum blockchain drove a flood of new users into the space.**

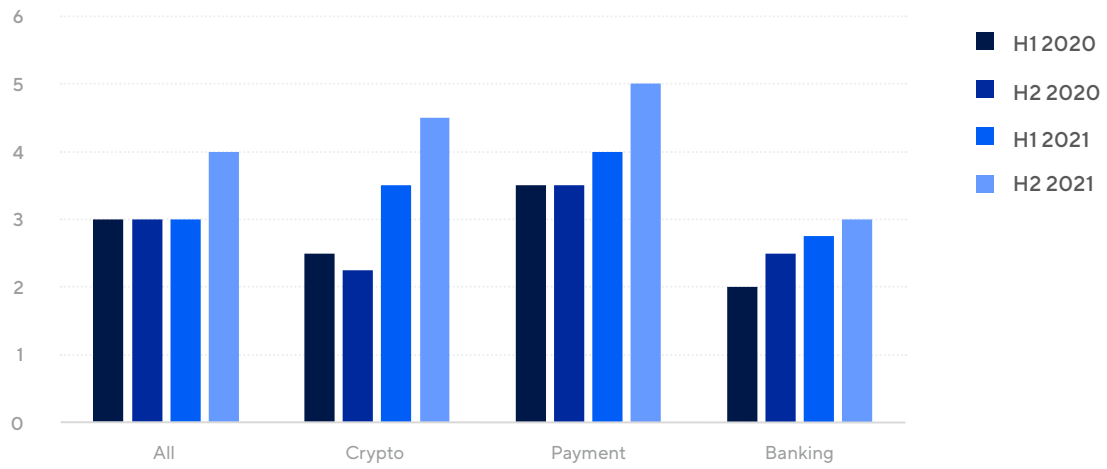
Globally, the share of paid installs relative to organic installs in the fintech vertical grew from the beginning of 2020 until midway through 2021. Starting at 0.11 and growing to 0.15, 2021 ended with a ratio of 0.14. The most exponential growth can be seen in the crypto vertical, which started 2020 at 0.11 and finished 2021 at 0.23, indicating that the big increase in paid campaigns for cryptocurrency apps also, logically, resulted in a boost in the number of paid installs. Banking's ratio dropped consistently, starting at 0.12 and finishing at 0.07, showing that the increased need and interest in banking apps caused users to seek the apps out themselves — a win-win.

## Global fintech app paid/organic ratio 2020 - 2021

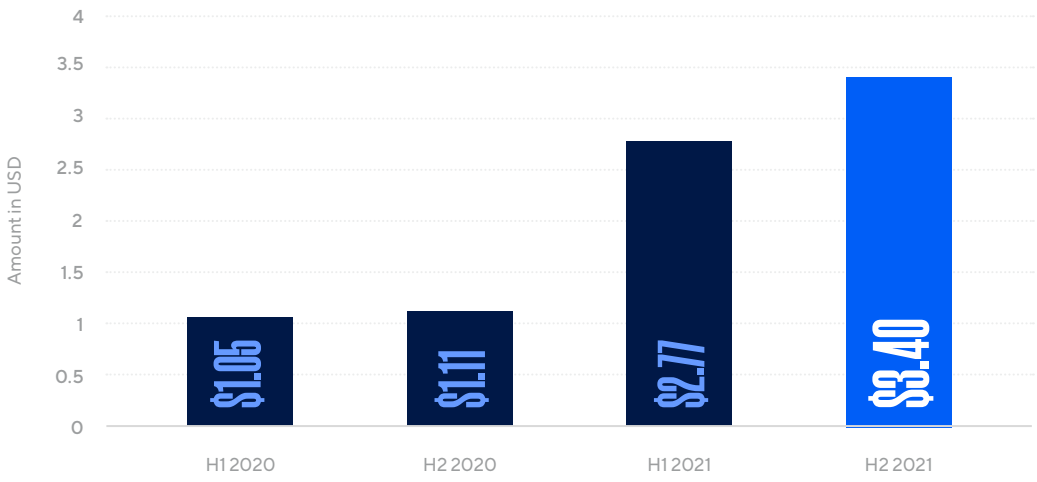


The number of partners each fintech app is working with has also increased alongside the competition. With more users than ever flocking to apps in the vertical, it makes sense that marketers and developers want to expand their channel mixes to capture the largest number of potential new customers. The average number of partners for the vertical as a whole grew from 3-4 in 2021. Crypto saw the biggest jump — starting 2020 with an average of 2.5 partners per app and finishing 2021 with an average of 4.5.

### Fintech app partners per app 2020 - 2021 (Global)

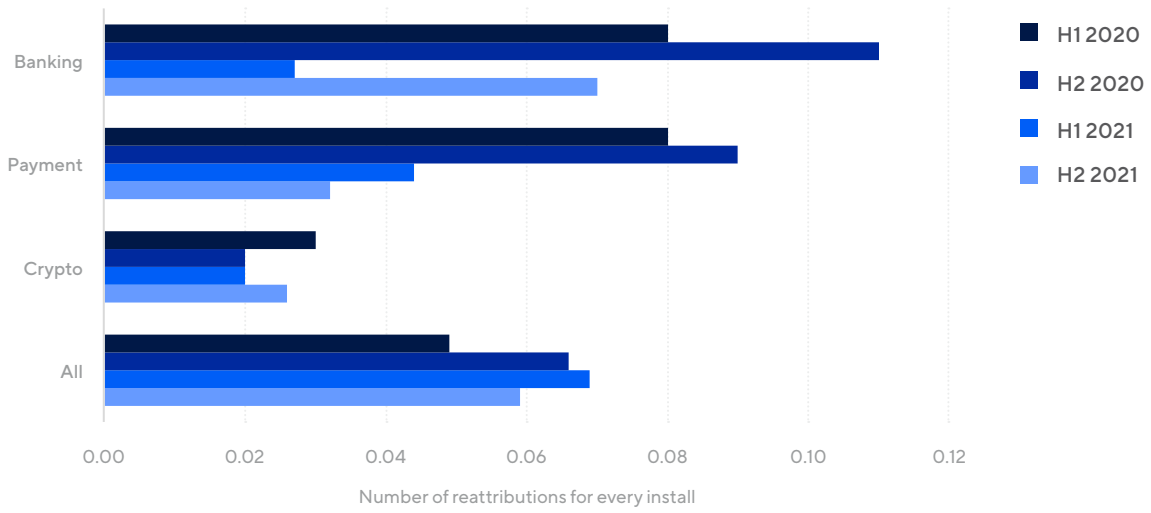


## Global fintech app eCPI 2020 - 2021



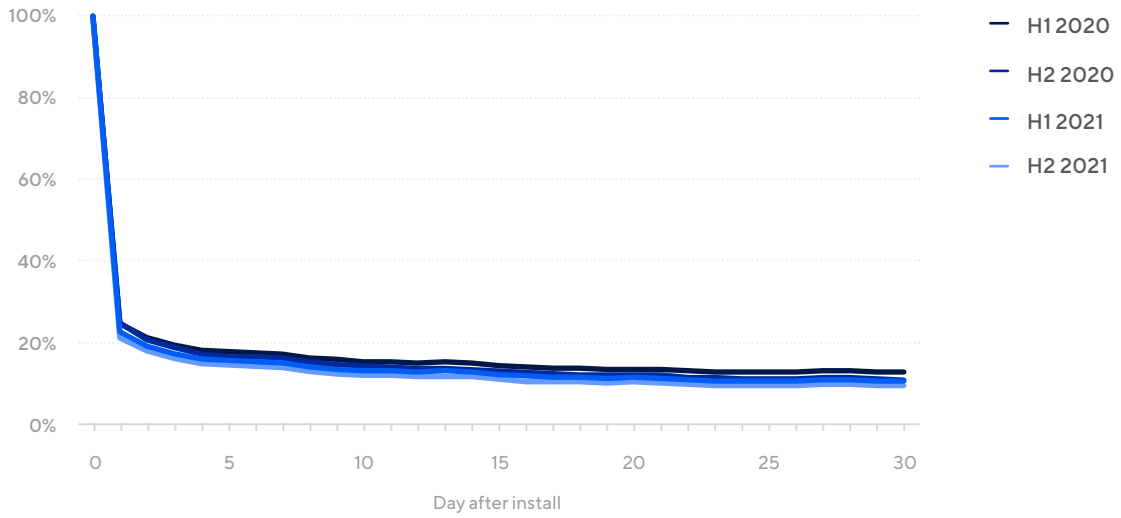

Coinciding with this huge increase in interest and the push for more users in a more diversified set of subverticals, the average eCPI for fintech apps has increased drastically. Starting at $1.05 per install in H1 of 2021, the average catapulted to $3.40 by H2 of 2021. As more players enter the space and the cost of acquiring users continues to increase, it's vital that marketers focus on driving high-value users to their apps while retaining those who've already installed.

## Global fintech app reattribution share 2020 - 2021




Many users who install fintech apps are reattributed users, highlighting the importance of maintaining a strong retention strategy and creating an excellent user experience. Reattributions hit a high in H2 of 2020, with a ratio of 0.07, and have since declined to 0.05. Payment apps represent the highest number of reattributions, coming in at 0.09 in H2 of 2021.

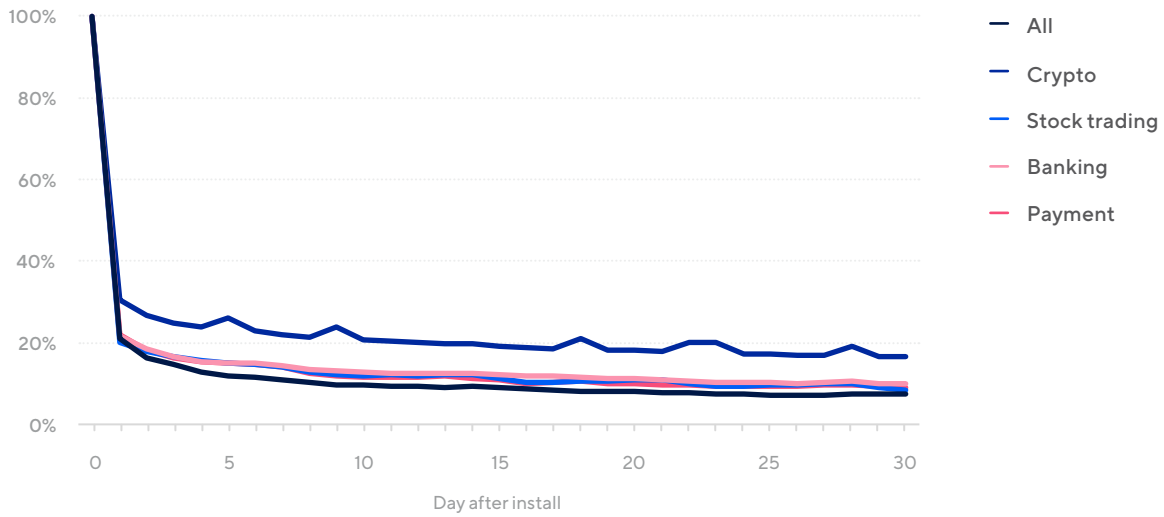
## Global fintech app retention rates 2020 - 2021




Retention rates for fintech apps declined slowly from H1 2020, where they had a day 1 rate of 25%, a day 7 rate of 17%, a day 14 rate of 14%, and a day 30 rate of 12%. Dropping a few percentage points over the following 18 months, the numbers have started to bounce back, with H2 2021 posting a day 1 rate of 23%, day 7 rate of 16%, day 14 rate of 13%, and a day 30 rate of 11%.

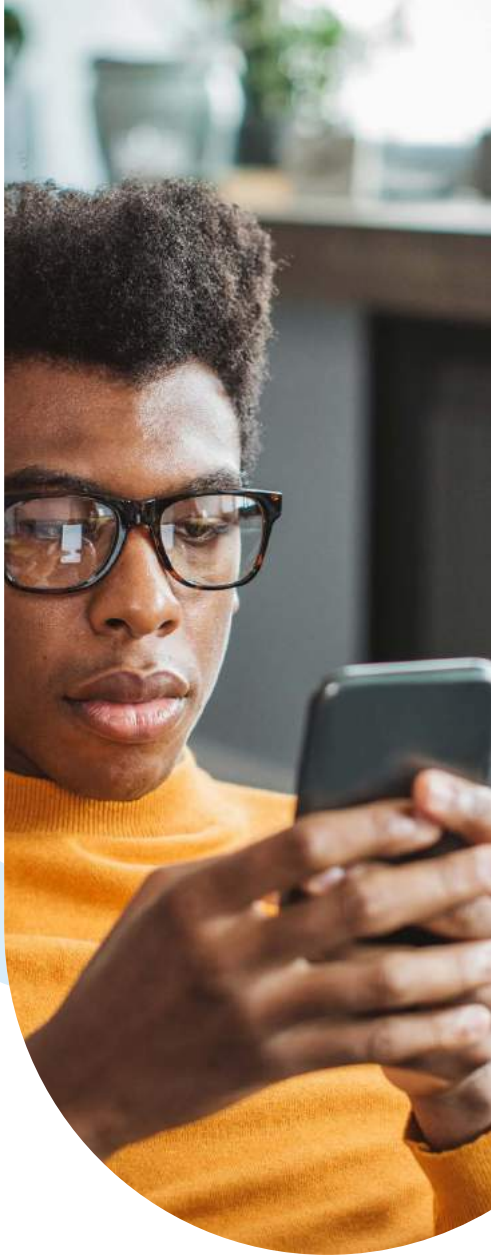
Broken down by subvertical, it's clear that banking, payment, crypto, and stock trading app users all behave differently throughout the 30 day period following install. Crypto posts the highest retention rates, with 30% on day 1, 22% on day 7, 20% on day 14, and 16% on day 30. It's also worth noting that the crypto cohort doesn't follow the same consistent trend of slowly tapering off, but show peaks and troughs likely in response to movements in the market, coverage in the media, and the bitcoin price.

### Global fintech app retention rates by subvertical Q4 2021

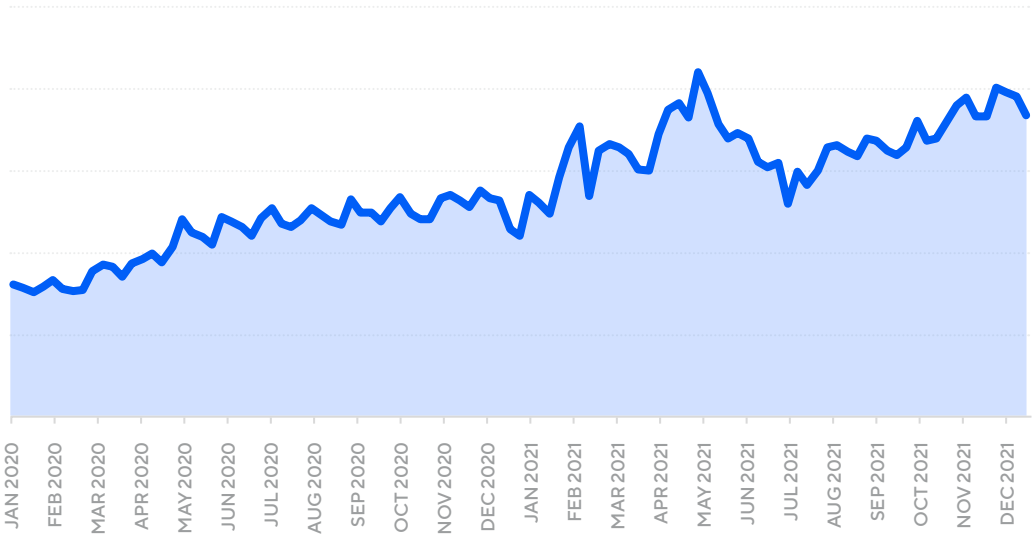


# Sessions and user behavior

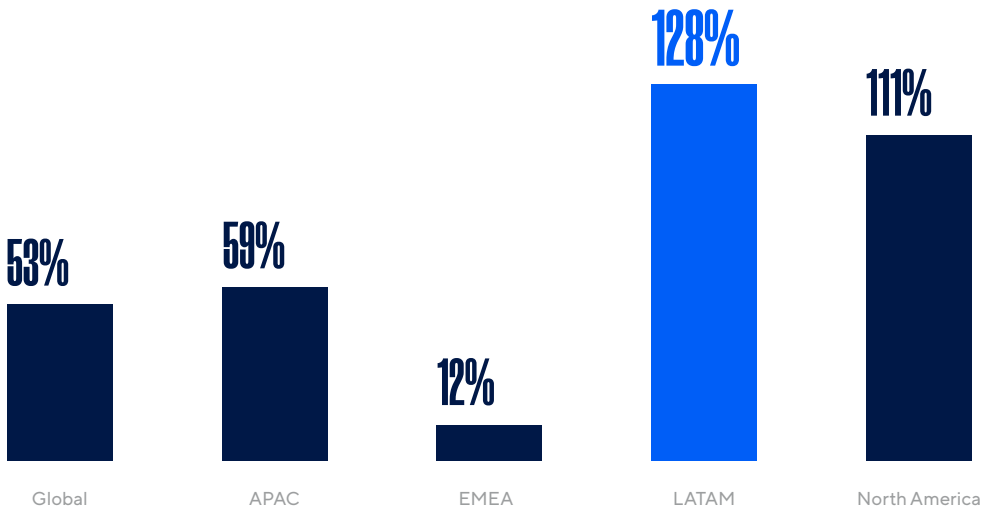
Getting into sessions, the growth charted is even more impressive, with an increase of 53% globally. This demonstrates a boost in engagement within the fintech vertical, as existing and newly acquired users clock more sessions than ever before. While global sessions follow a continued upward trend throughout the year, the highest point can be seen in April, which was 92% higher than the 2020 average, and 27% up on the rest of 2021.



Fintech app session growth 2020 - 2021 (Global)



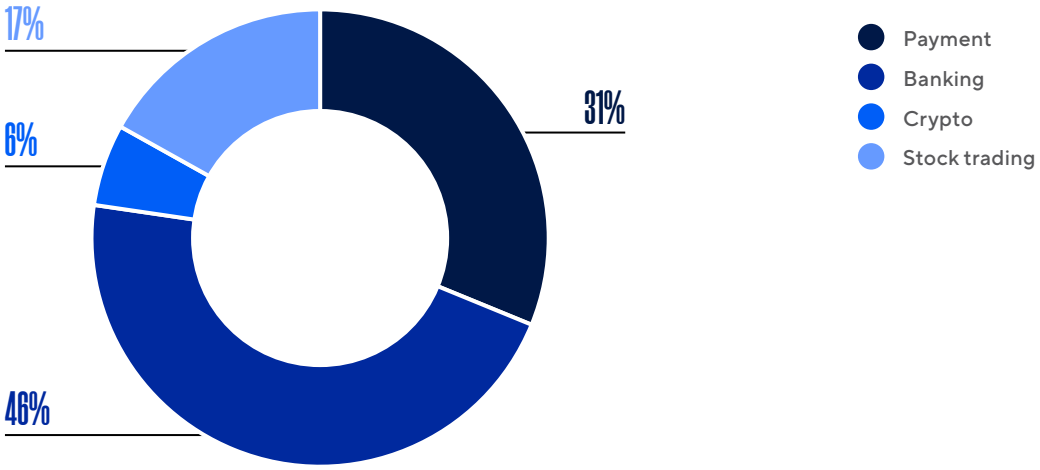
Fintech app session growth percentages YoY 2020 - 2021



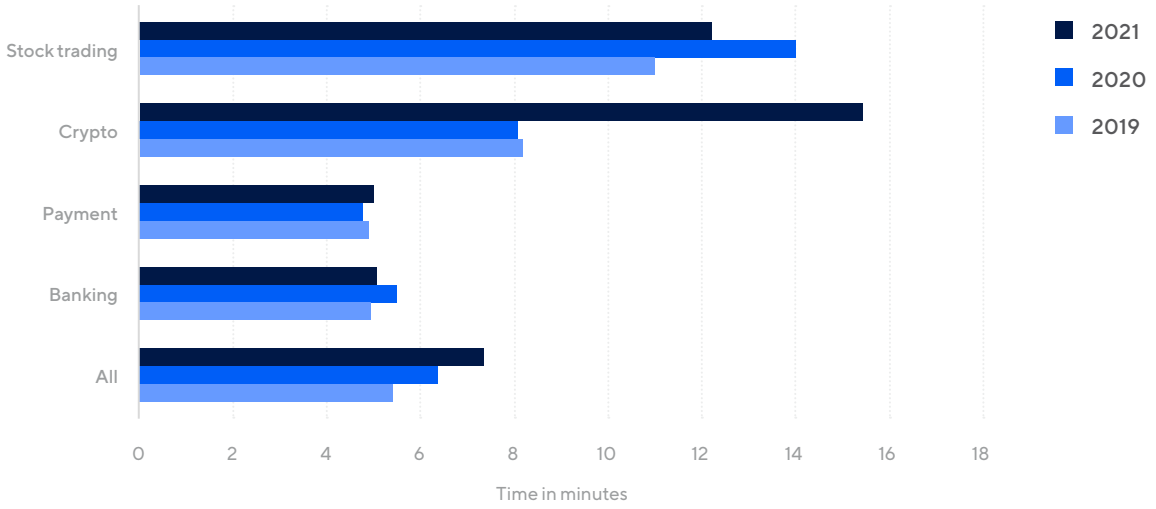

At regional level, LATAM and North America come in with the largest increases again, at 128% and 111%, respectively. APAC also saw an impressive 59% uptick, with EMEA following at 12%.

When it comes to session distribution within the fintech subverticals, the breakdown differs significantly from what we see with installs. Banking takes the number one spot at 46%, followed by payment at 31%. Stock trading and crypto take more of the sessions share than the installs share, at 17% and 6%, respectively, indicating that the users who download apps in these categories are clocking more sessions than the swathes of users in the banking and payment spaces.

### Fintech app sessions by subvertical 2020 & 2021

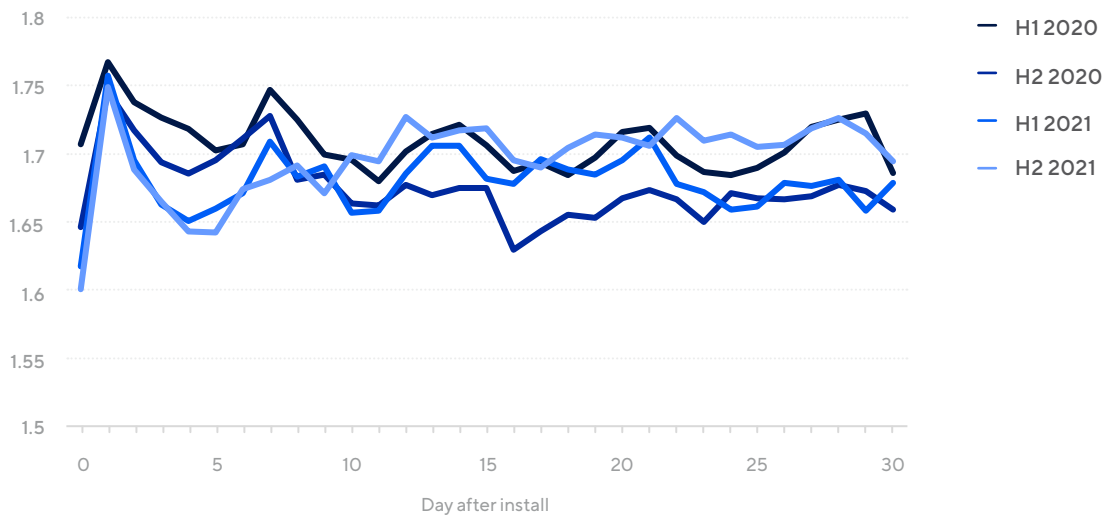


Fintech app session lengths 2019 - 2021 (Global)



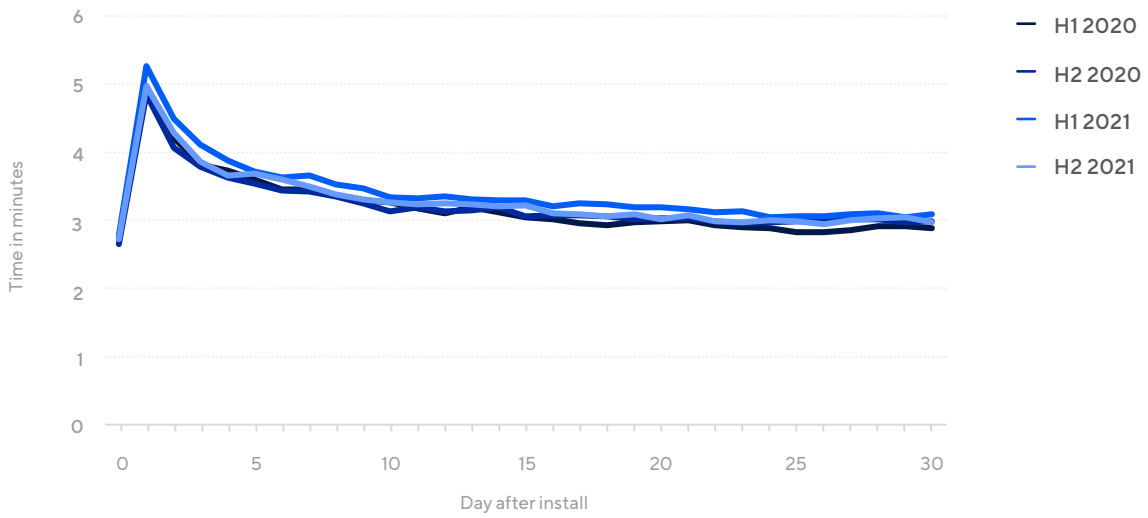

This high level of engagement is also reflected in the length of sessions by users in each subvertical. Session lengths in crypto and stock trading are consistently longer than those in banking and payment, which maps to the business models of each category. A payment app might only be needed for a number of seconds for a task to be fulfilled, while users buying and selling stocks or cryptocurrencies likely need much longer time periods to complete actions. The most impressive growth in session lengths can be seen for crypto, which increased from 8.05 minutes per session in 2020 to 15.44 minutes in 2021. Session lengths for fintech overall also saw an uptick, jumping from 6.36 minutes in 2020 to 7.36 minutes in 2021.

## Sessions per user per day (fintech) 2020 - 2021




The total number of sessions per user per day decreased slightly in 2021 compared to 2020, dropping from a day 1 rate of 1.76 sessions in H1 2020 to a day 1 rate of 1.74 sessions in H2 of 2021. Interestingly, however, users in the 2021 cohort are more likely to stick around for a longer time period, with day 30 rates increasing from 1.68 sessions to 1.69 sessions for the same time period. Users of crypto and stock trading apps also log more sessions per day than the average for fintech overall. In Q4 of 2021, crypto had a day 1 rate of 3.31 sessions per day and a day 30 rate of 3.36 — stock trading clocked 2.64 for day 1 and 2.92 for day 30.

## Time spent in-app (fintech) per user per day 2020 - 2021



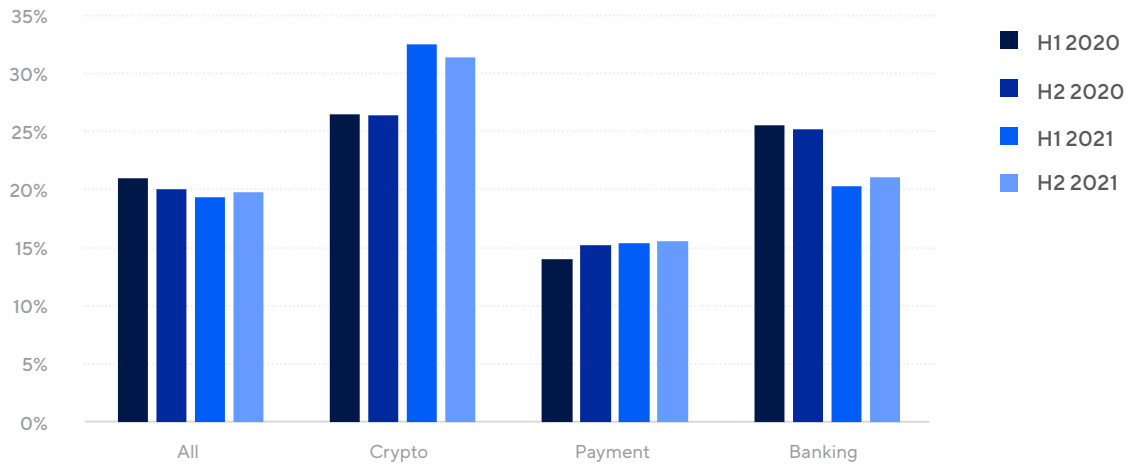

**2.8**
MINUTES

**Day 0 average for H1 2021**

Looking at total time spent in app per day, we can see how many minutes these sessions are tallying up to. H1 of 2021 was the highest point, with a day 0 average of 2.8 minutes per day, 3.7 on day 7, 3.3 on day 14, and 3.1 on day 30. H2 followed closely behind, starting with 2.7 minutes on day 0 and 3 minutes on day 30. These numbers are significantly higher for crypto and stock trading, with the former averaging 6.6 minutes per day on day 0 and 5 minutes on day 30, and the latter posting 4.7 and 6.8 minutes for the same days.

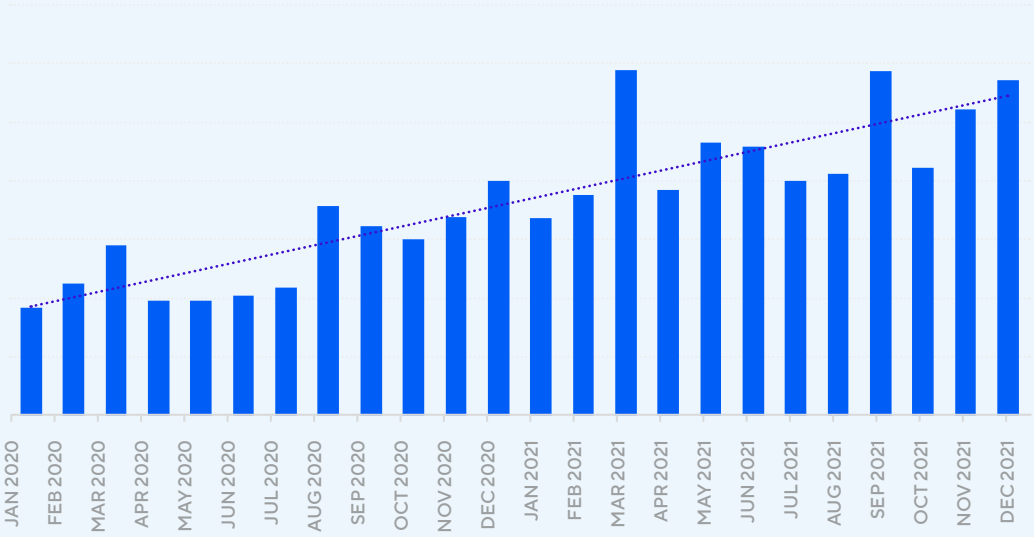
Pivoting to stickiness, we see a drop in early 2021 and a bounceback at the end of the year. Starting 2020 with a ratio of 20%, this number dropped to 19% in H1 of 2021, and climbed back to 20% by the end of the year. Payment is the only category to see steady growth, trending up slowly from 14% to 16%.

### Global fintech app stickiness 2020 - 2021




In-app revenue for fintech apps is also increasing steadily, showing a consistent upward trend from January 2020 through to December 2021. The highest performing month was March 2021, followed by September, and then December. While third-parties and advertising are the key ways that fintechs monetize, subscription models have become increasingly prominent, helping to drive the uptick in in-app revenue, as many fintechs have emerged from the growth stage into the profitability stage.

Fintech in-app revenue January 2020 - December 2021




## Top fintech takeaways:

**53%**

Installs and sessions in the **fintech vertical increased globally by 34% and 53%, respectively**.

**62%**

Growth was also seen in all regions and all subverticals, **with LATAM's installs increasing 62%** and sessions jumping by 128%. North America saw increases of 69% (installs) and 111% (sessions).

**7.36**

Session lengths for fintech apps have increased year-over-year since 2019, growing from 5.42 minutes in 2019 to **7.36 minutes in 2021**. Crypto had the longest average session length in 2021 at 15.44 minutes.

**"As a result of the COVID-19 pandemic, competition for mobile apps has increased drastically. There are also increased challenges for user acquisition managers as they're faced with a more complex user privacy space than ever before — which the fintech vertical, among many others, is grappling with. But this also presents an outstanding new opportunity for great UA and UX minds to work together, experiment, and create brilliant user journeys by understanding customer segments and finding the best ways to interact with them."**

Jack Nguyen,
Regional Managing Director Of SEA

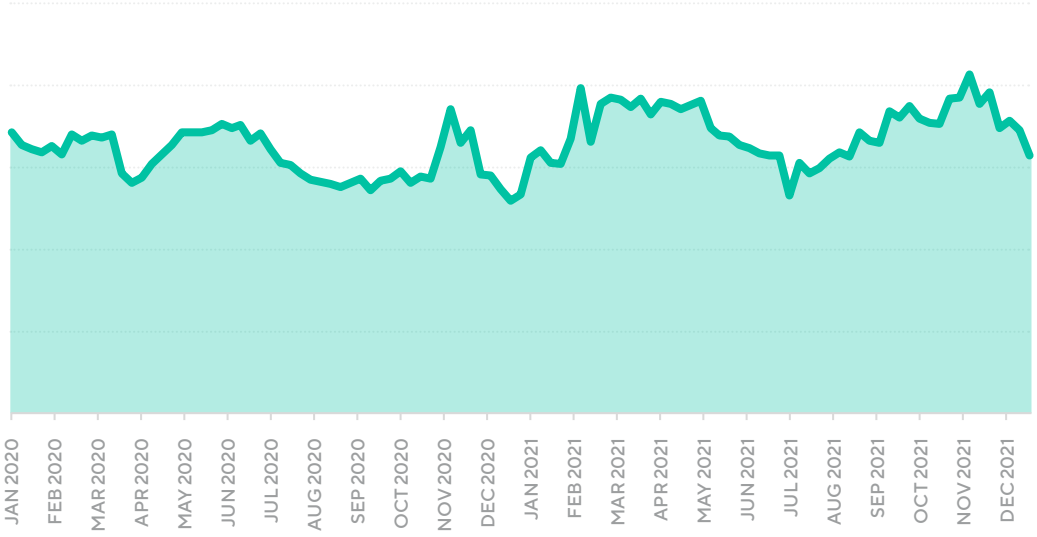
PART 2

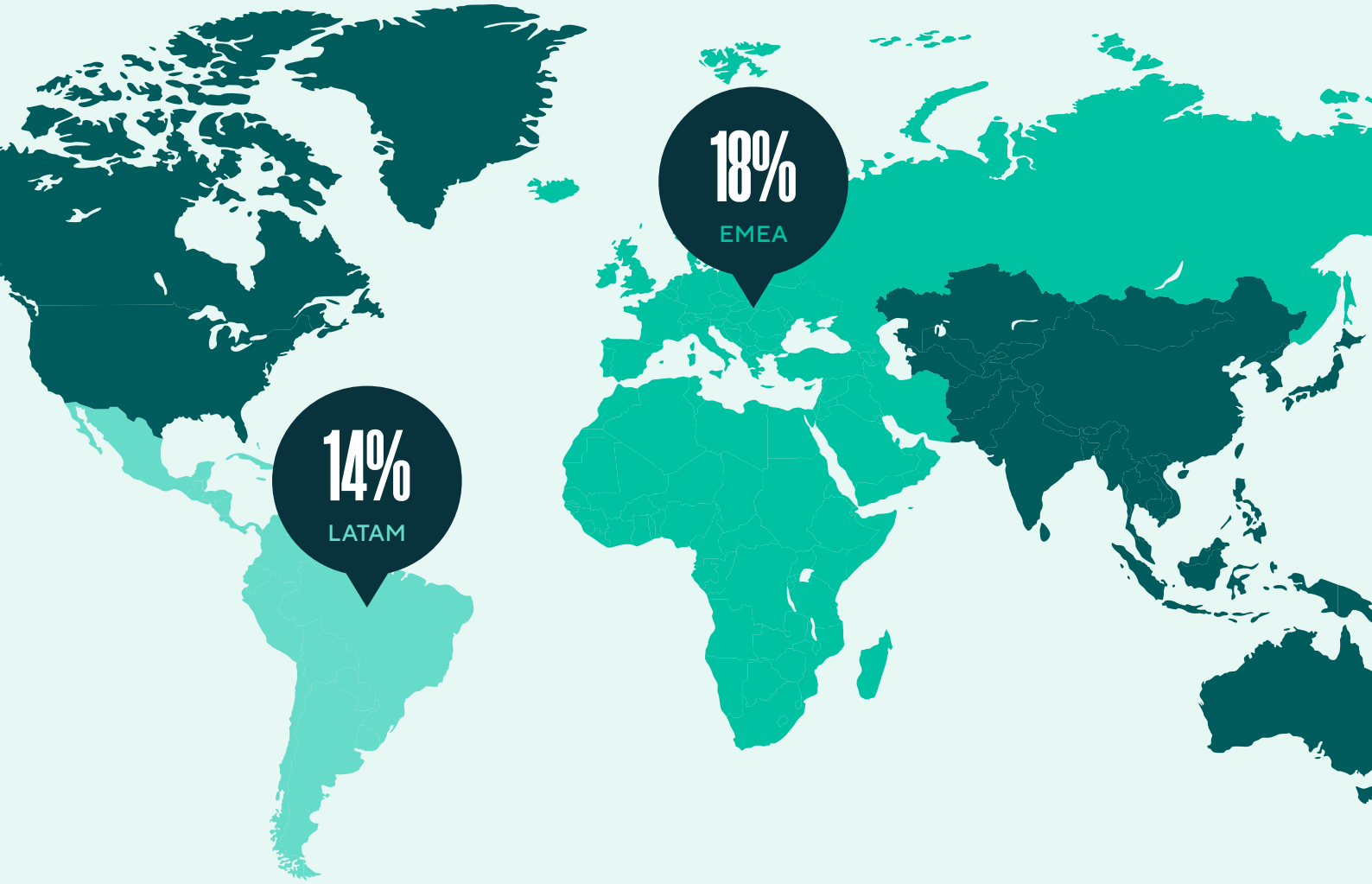
# E-commerce

## Installs and finding users

Mobile e-commerce boosted its presence in markets all around the globe throughout lockdowns and as social distancing rules permeated over the last two years. Considering that the growth has been steady, the 12% year-over-year boost in installs Adjust data reports for 2021 is impressive. As always, Q4 was the highest charting period, with the first week of November up 34% compared to 2020 and 20% compared to the average of 2021.

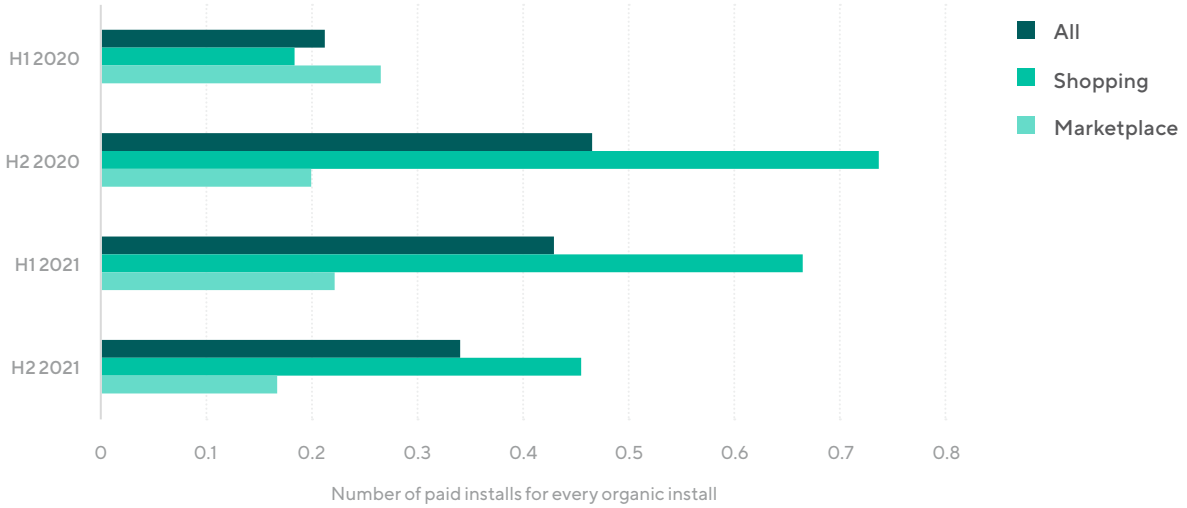
E-commerce app installs 2020 - 2021 (Global)





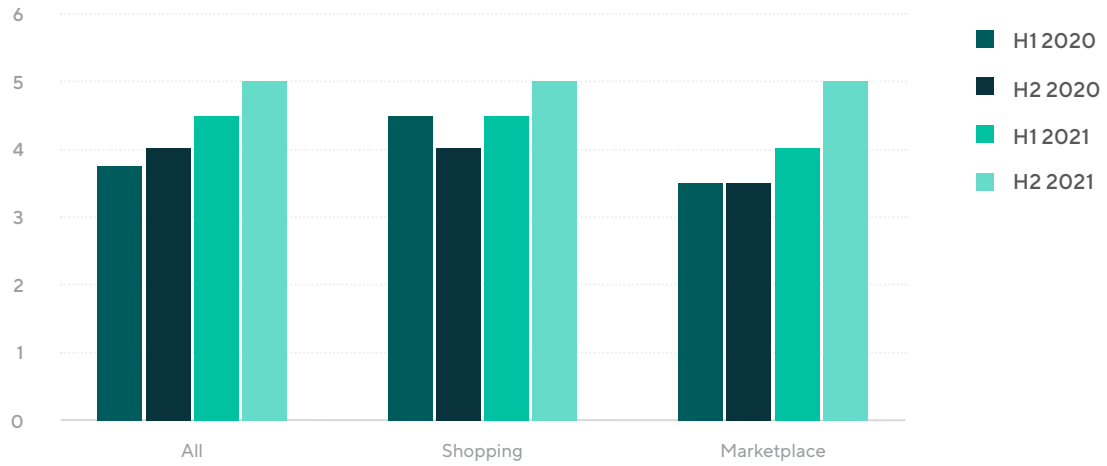

The two most notable markets for growth were EMEA and LATAM, where we saw 18% and 14% year-over-year growth, respectively.

## Global e-commerce paid/organic ratio 2020 - 2021



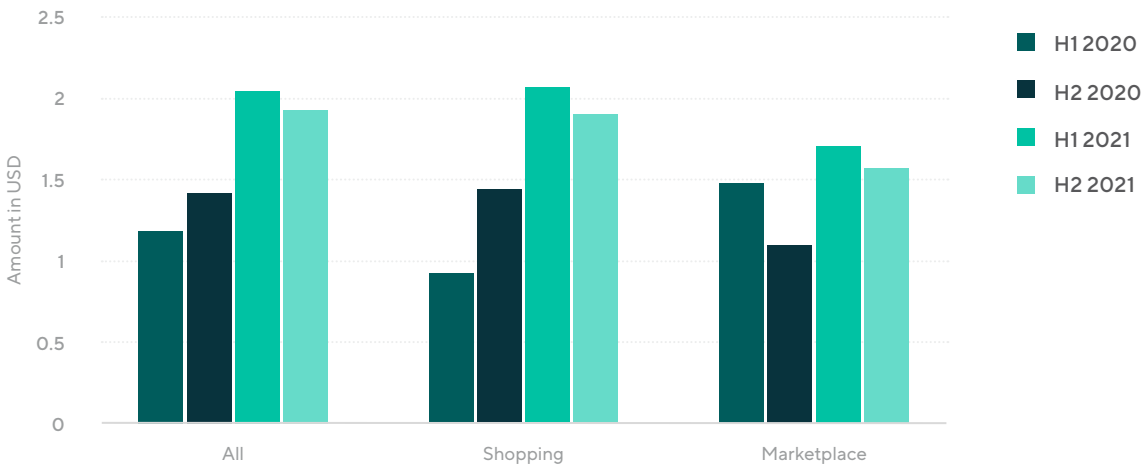

The ratio of paid installs to organic installs increased significantly from the end of 2020 into the first half of 2021, jumping from 0.21 to 0.46. Having since decreased to 0.34, it's a good time for marketers to think about increasing paid campaigns again, as competition seems to have decreased slightly, which has caused the pendulum to swing back toward organic. Shopping apps saw the biggest boost, growing from 0.18 to 0.73 in 2020 before cooling off slightly, back down to 0.45 by the end of 2021.

## E-commerce partners per app 2020 - 2021



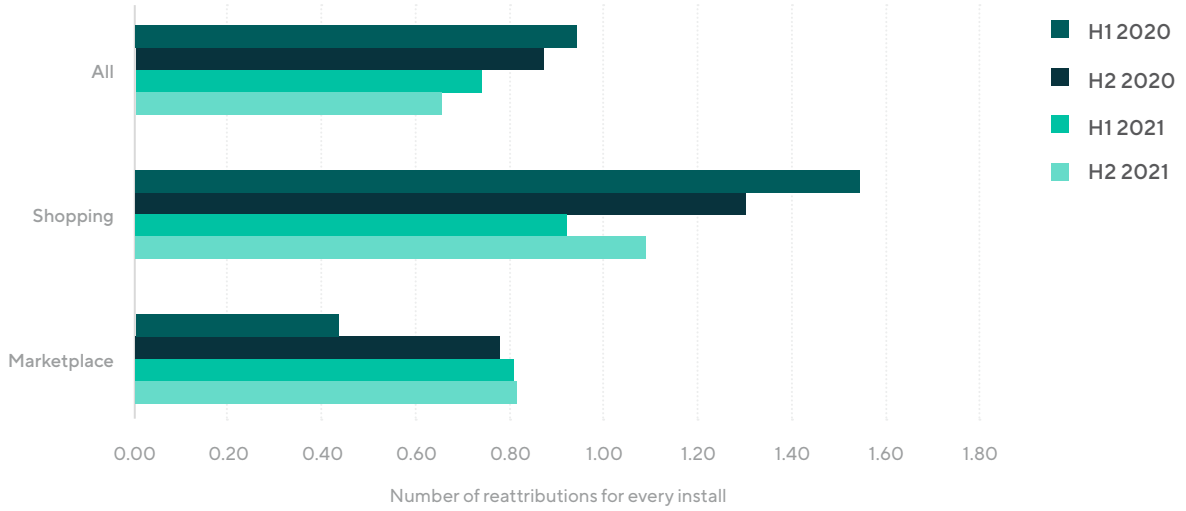

The total partners that each app works with has increased slowly but surely over the past two years for e-commerce overall, and for the shopping and marketplace categories. As more users than ever have turned to m-commerce, it's the apps that expand their reach by working with more partners that are able to target and acquire audiences most effectively. Starting with an average of 3.75 partners per app in H1 of 2020, by H2 of 2021, the average e-commerce app now works with 5 partners.

## Global eCPI e-commerce 2020 - 2021



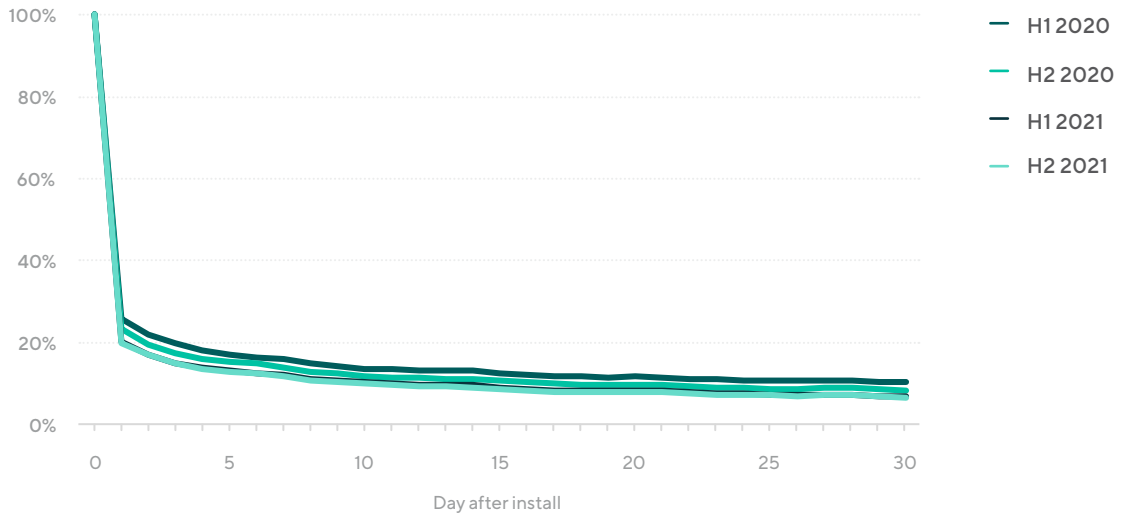

Keeping this increase in partner activity, and in sessions, installs, and share of paid installs in mind, it comes as no surprise that the median eCPI for installs has also risen sharply. Starting at $1.18 at the beginning of 2020, the median eCPI for e-commerce apps sits at $1.92 as of H2 2021. eCPI for shopping apps underwent huge growth, starting at $0.92 in H1 of 2020 and rising to $2.07 by H1 of 2021, before decreasing back somewhat to $1.89 by the end of 2021.

## Global e-commerce reattribution share 2020 - 2021




The overall share of reattributions (traditionally very high for the e-commerce vertical) has decreased overall, from 0.94 in H1 of 2020 to 0.66 in H2 of 2021. After falling from 1.5 to 0.92 for shopping, the ratio bounced back to 1.09 in H2 of 2021. This shows how significant the influx of new users has been, and that those extra dollars spent working with new partners and paying more for installs has led to a shift in the breakdown of new vs. reattributed users. Marketplace apps followed a slightly different journey, increasing slowly over the 24-month period, starting with a reattribution share of 0.44, and finishing at 0.82.

## Global e-commerce retention rates 2020 - 2021



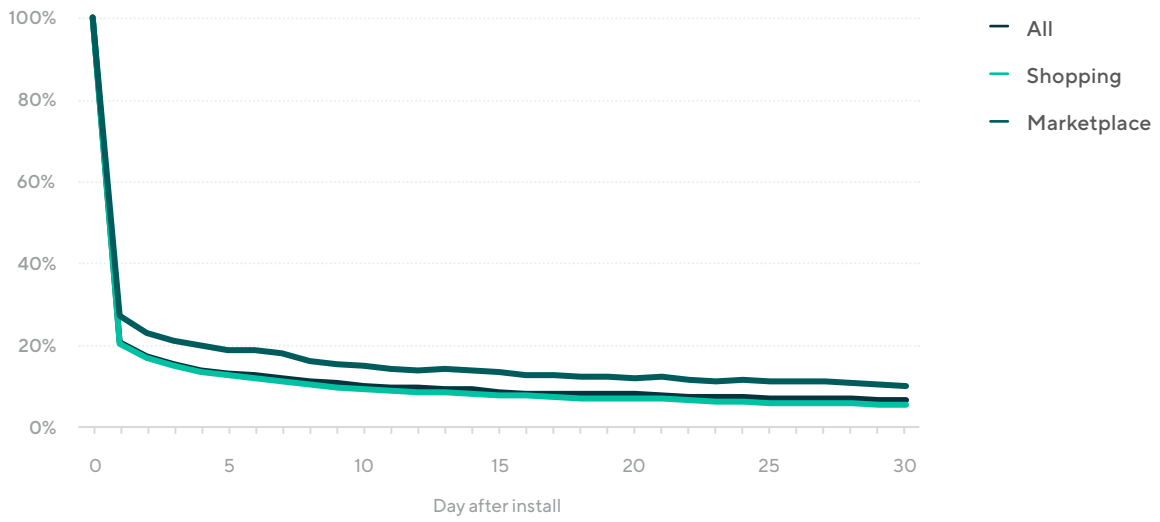

It's clear that m-commerce has witnessed an immense spike of new users, but Adjust data shows that retention rates are slightly down, implying it could be time to revisit marketing strategies and ensure that retention is being properly balanced in accordance with UA. In H1 of 2020, the average day 1 retention rate for e-commerce apps was 25%, with day 7 coming in at 15%, day 14 at 13%, and day 30 at 10%. By H2 2021, these averages have dropped to 19% on day 1, 12% on day 7, 9% on day 14, and 7% on day 30. Despite these numbers, in-app revenue is higher than ever (see below), so even if users aren't sticking around, they are spending big while they're there — but at what cost? Make sure the users you're acquiring are in line with strategy and LTV requirements, and are producing enough ROI/ROAS before churning.

**H1 2020 day 1 retention rate for e-commerce apps**

**H2 2021 day 1 retention rate for e-commerce apps**

At subvertical level in Q4 of 2021, we can see that marketplace performs best for this metric, with retention rates as high as 27% on day 1 and 10% on day 30.

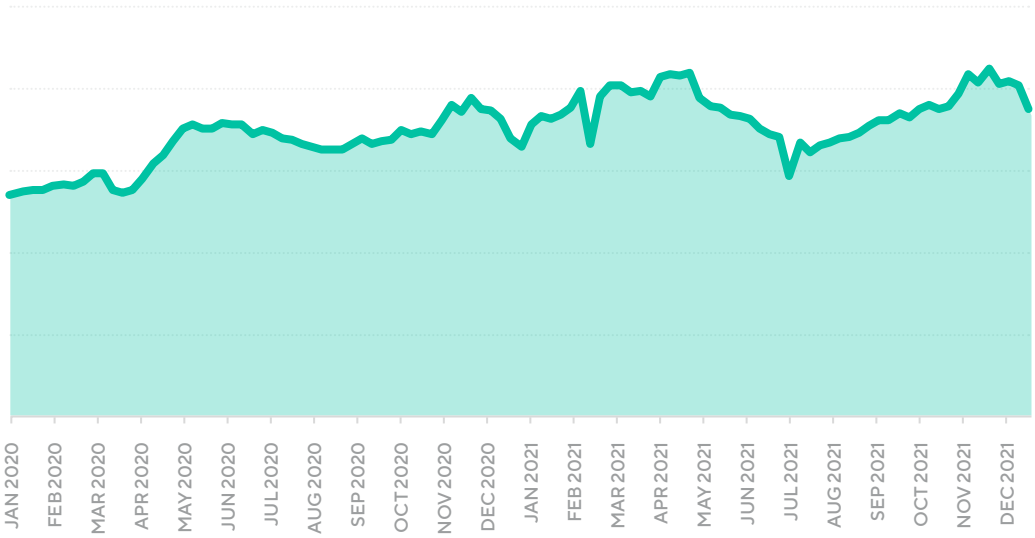
## Global e-commerce retention rates by subvertical Q4 2021



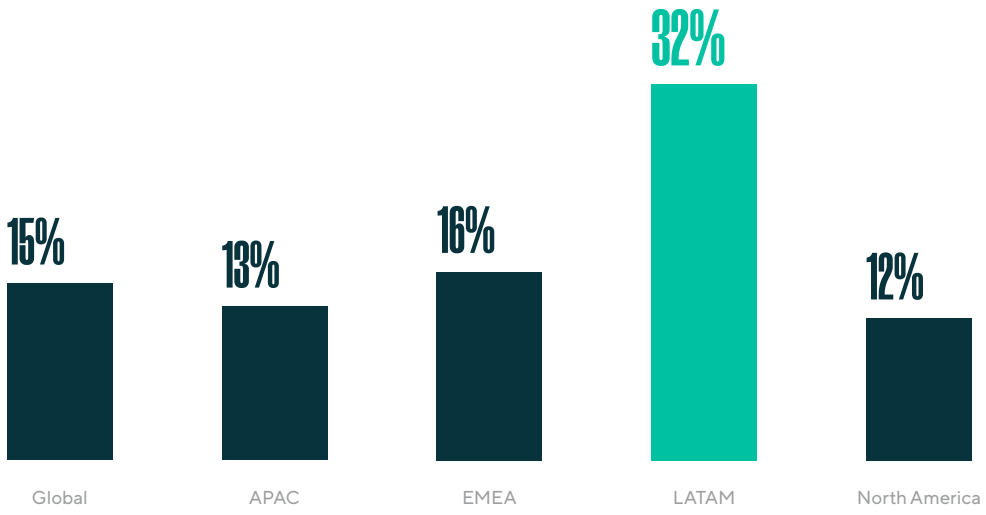
# Sessions and user behavior

Global session numbers for e-commerce apps also grew significantly in 2021, posting a 15% year-over-year increase. While November unsurprisingly performed well above the yearly average (29% higher than the 2020 average and 12% above the 2021 average), April was also impressive, charting the same 12% hike on the rest of the year.

E-commerce app session growth 2020 - 2021 (Global)

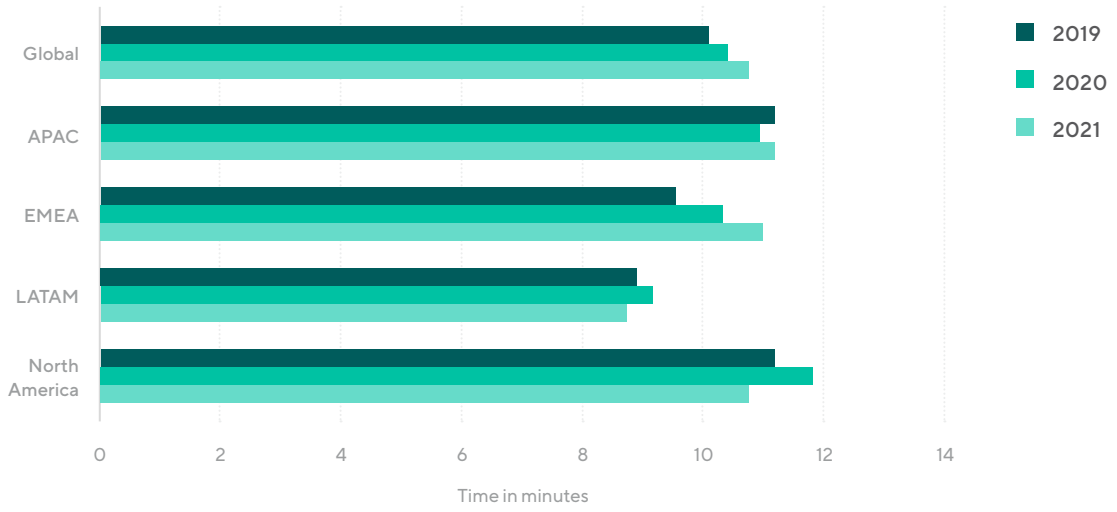


E-commerce app session growth percentages YoY 2020 - 2020



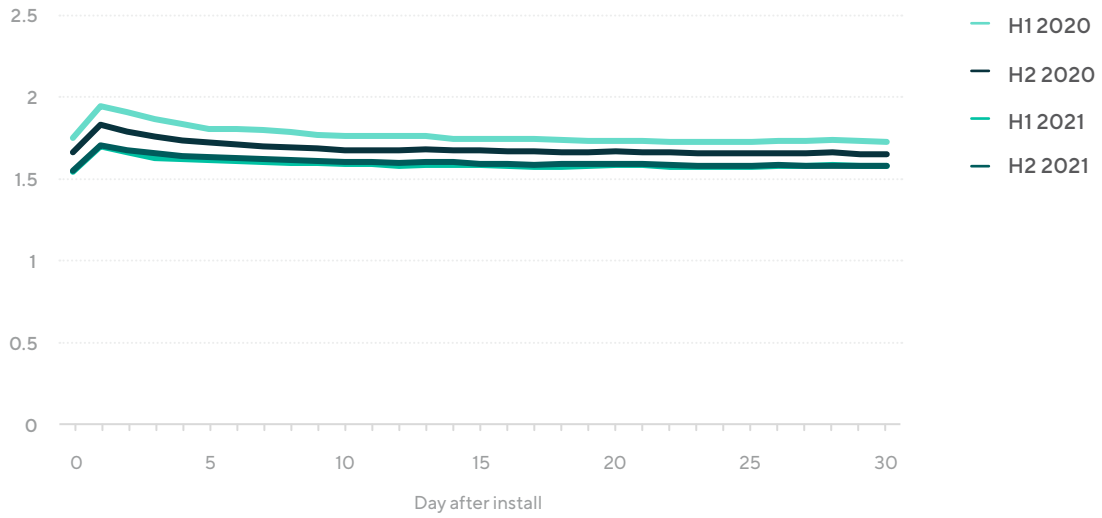

All key regions tracked by Adjust also posted increases in e-commerce app sessions in 2021, with LATAM coming out on top at 32% year-over-year. EMEA followed at 16%, and North America and APAC came in at 13% and 12%, respectively.

## E-commerce app session lengths 2019 - 2021



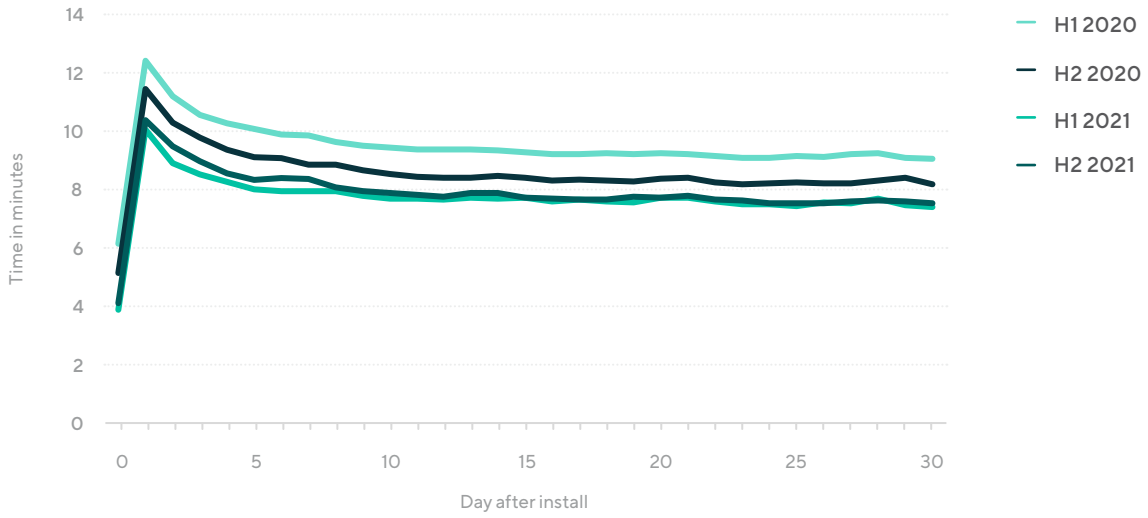

Session lengths globally have also increased year-on-year since 2019 for the e-commerce vertical, growing from 10.07 minutes to 10.42 minutes in 2020 and then reaching 10.75 minutes in 2021. The region with the highest session lengths in 2021 was APAC, averaging 11.18 minutes, followed by EMEA at 10.99 minutes.

## Sessions per user per day (e-commerce) 2020 - 2021



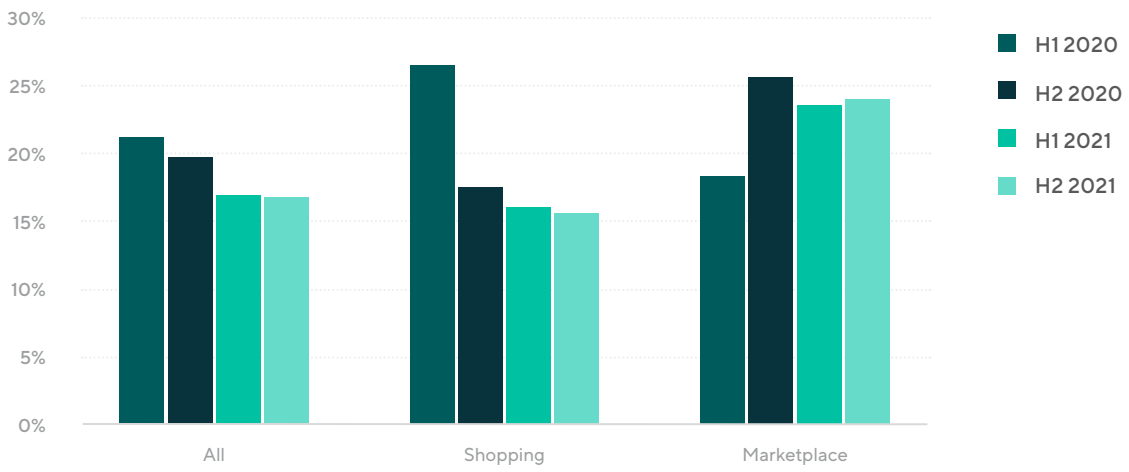

The total number of sessions per user per day dropped overall, demonstrating that while users are having fewer sessions, they are spending more time engaged per session — and according to overall in-app revenue figures, are also spending more. Starting at 1.94 sessions per user per day on day 1 at the beginning of 2020, this figure drops to 1.7 by the end of 2021. For day 30, the number decreases from 1.7 in 2020 to 1.5 in 2021, with H2 2021 up just slightly over H1 2021.

## Time spent in-app (e-commerce) per user per day 2020 - 2021




The total time spent in-app over a 24 hour period has also decreased, despite session lengths being longer. But H2 2021 shows that this is trending upward again. Starting at 12.4 minutes per day in H1 of 2020, this figure decreased to 10.1 minutes by H1 of 2021, and increased to 10.4 minus in by H2 2021.

## Global e-commerce stickiness 2020 - 2021




While stickiness shows a downward trend for e-commerce overall, and for shopping, marketplace is heading in the opposite direction. Starting with a stickiness ratio of 18% at the beginning of 2020, the category pushed this figure up to 24% by the end of 2021, demonstrating its ability to convert DAUs into MAUs. Although the e-commerce vertical is performing extremely well, there is room for improvement in retaining and re-engaging existing users, and Adjust data indicates that the marketplace category is currently doing this best. Apps looking to differentiate themselves in this increasingly competitive space need a solid reattribution and retention strategy that leverages mechanisms like gamification and loyalty programs to push the needle in 2022.

Similarly to fintech, e-commerce in-app revenue has been consistently growing since January of 2020 — posting a 46% increase year-over-year from 2020 to 2021. Overall in-app revenue peaked in May of 2021, and was backed up by another spike in November 2021, during the biggest period of the year for the vertical.

E-commerce in-app revenue January 2020 - December 2021

## Top e-commerce takeaways:

**12%**

**Installs in the e-commerce vertical grew by 12%** year-on-year, with November the top month, at 20% above the yearly average.

**2021.05**

**May 2021** was the biggest year ever tracked by Adjust **for e-commerce in-app revenue.**

**10.75**

**E-commerce session lengths have increased** year-on-year since 2019, growing from 10.07 minutes in 2019 to 10.42 minutes in 2020, and to **10.75 minutes in 2021**.

**"The mobile app ecosystem, including the e-commerce vertical, has never been so crowded. We've seen the cost of acquisition skyrocket during COVID-19, and as a consequence, retention has become even more vital. The brands who perform the best are those that understand that personalization alone is not quite enough; they now need to individualize engagement at scale and create "delight" during the user journey."**

Marc-Antoine Hager,
SEA Regional Vice President, Sales, SEA

CleverTap

PART 3

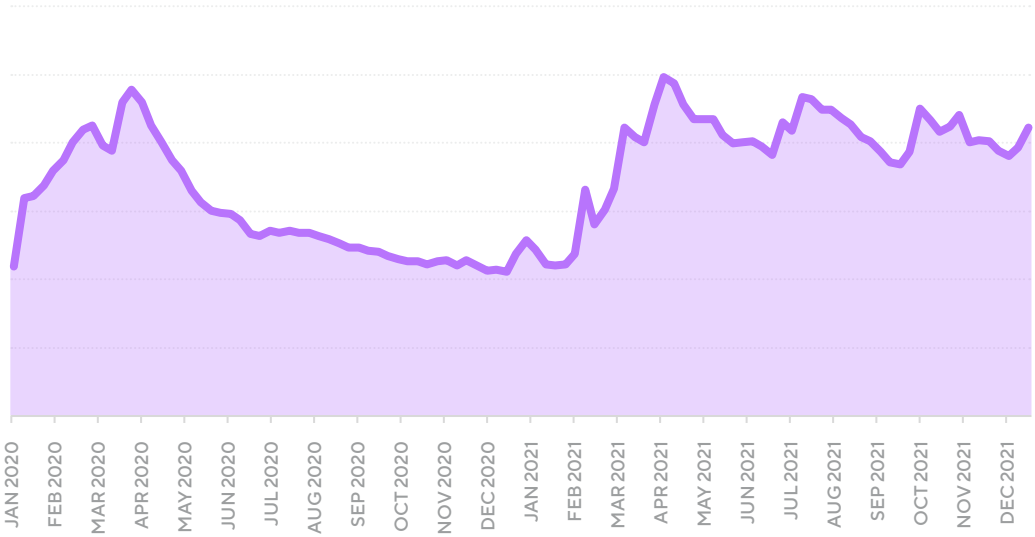
# Gaming

## Installs and finding users

From hyper casual to immersive role-playing games, the way that developers approach marketing, advertising and monetizing their titles differs greatly from subvertical to subvertical. The former might depend on high volumes of installs, cross-promotion to properties in the same publishing suite, and rewarded video, while the latter may focus on a higher lifetime value approach, searching for users that clock huge daily session times, spend big on in-game items, and remain loyal to the single title. Among the biggest revenue drivers in 2021 were titles from both of these categories, and everything in between, demonstrating the versatility of mobile gamers, and how successful the industry is at finding them.

For the gaming vertical overall in 2021, global installs increased by 32% year-over-year. This is especially impressive considering the huge pandemic-fueled growth that we saw in 2020, which was followed by a significant trough. 2021 was able to hit the heights of Q1 2021, and maintain them. Mobile gaming has grown year-over-year for more than a decade now, and appears set to continue soaring — H2 of 2021 outperformed H1 by a further 12%.

Gaming app install growth 2020 - 2021 (Global)

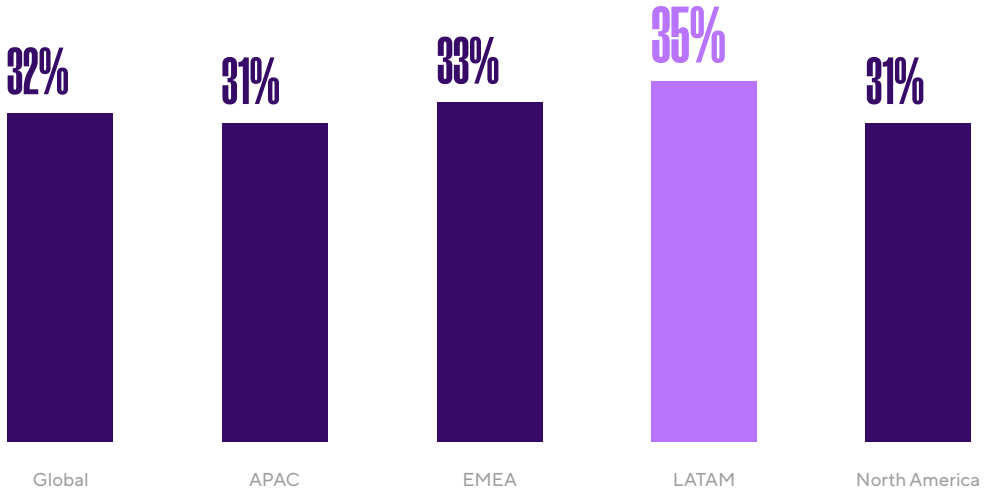


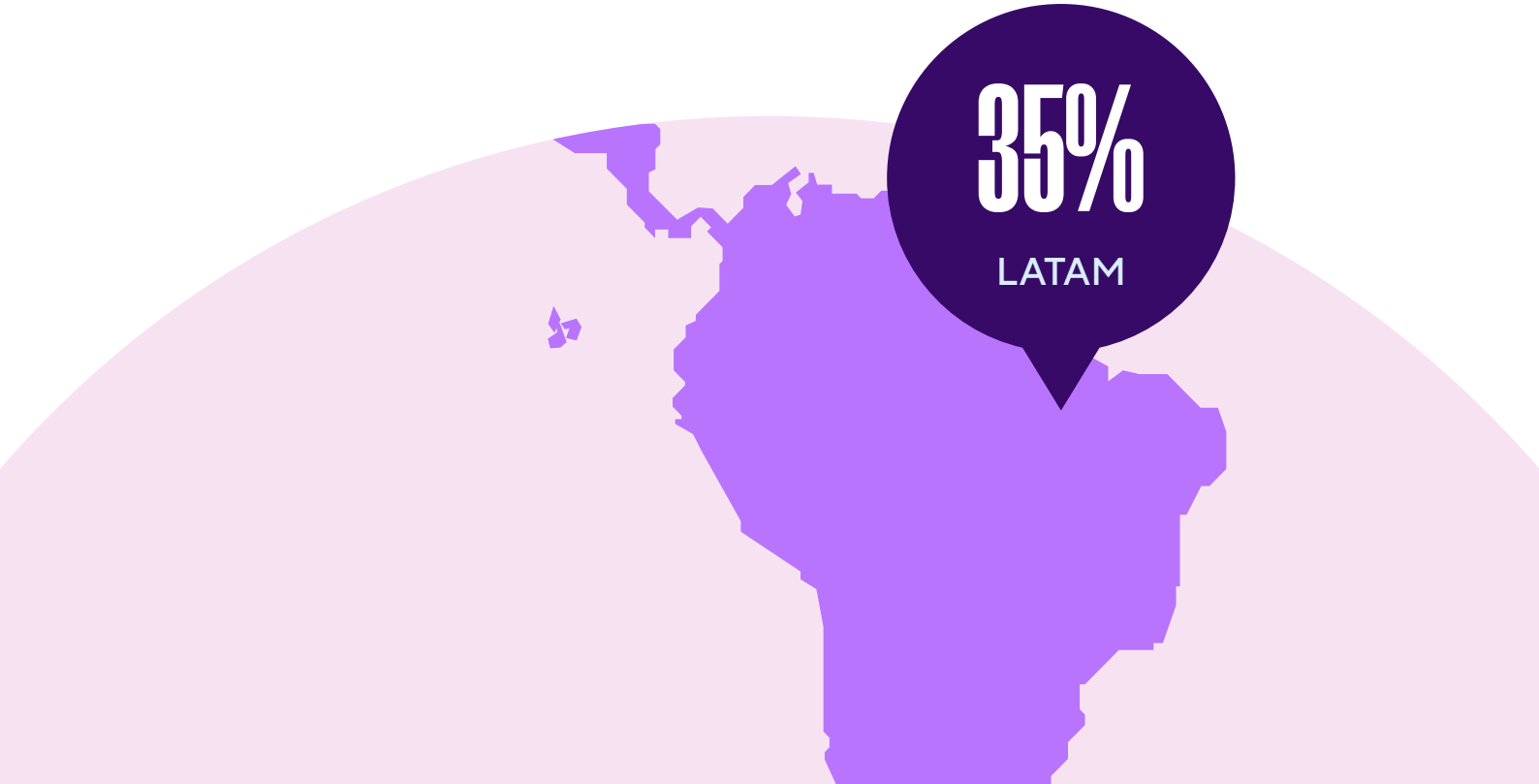

**"2021 was a huge year of growth for Redemption Games, and the mobile gaming industry overall. The ability to correctly attribute every install to a specific channel with Adjust is a crucial element in ensuring our UA campaigns are successful and that we're getting the users we need to stay ahead of the curve."**

Michael Witz,
CEO,

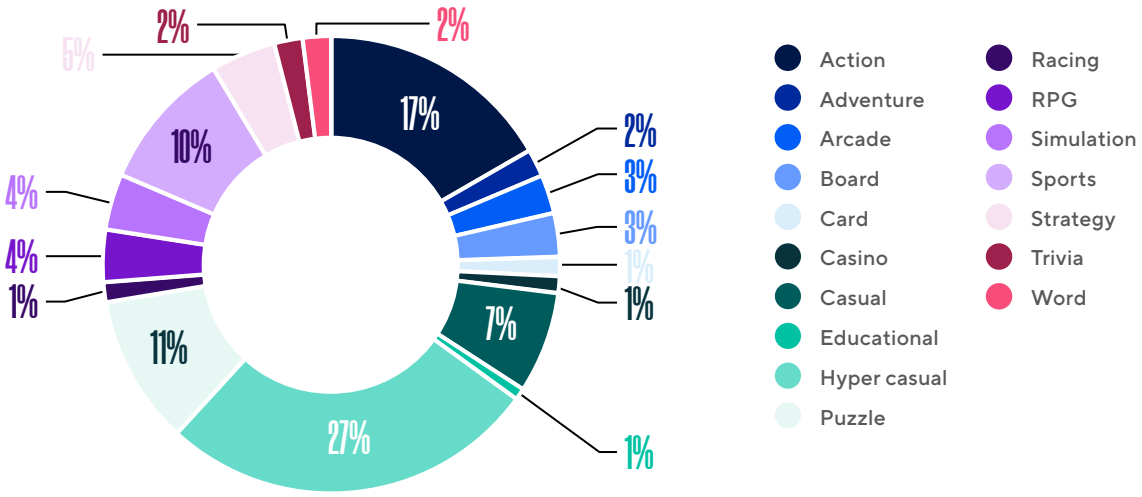
This growth of installs in gaming was also remarkably consistent across multiple key regions, with LATAM and EMEA posting the highest results (35% and 33%), followed by APAC and North America, which both charted year-over-year growth rates of 31%.

Games app install growth percentages YoY 2020 - 2021



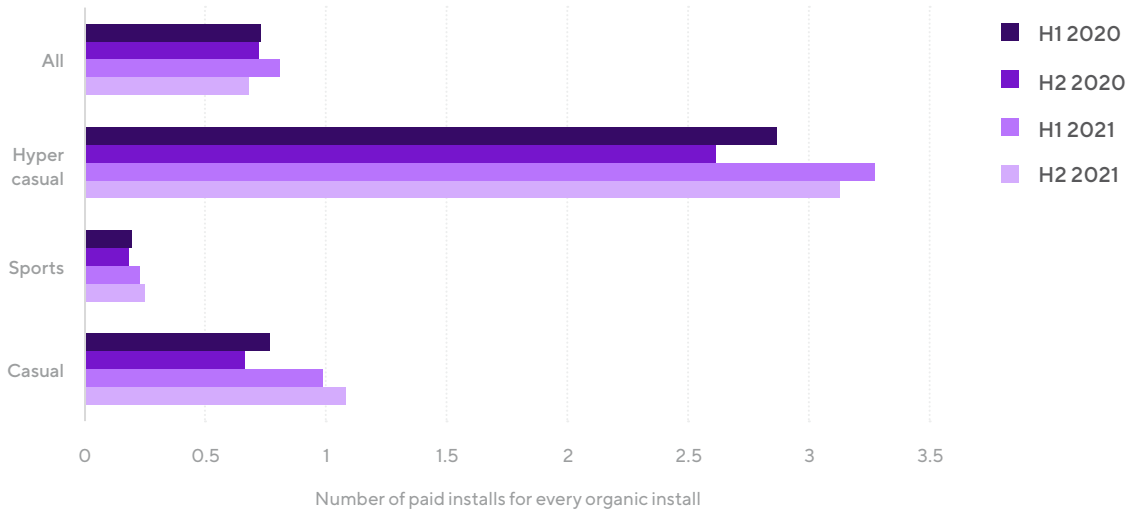



## Gaming app installs by vertical 2020 & 2021



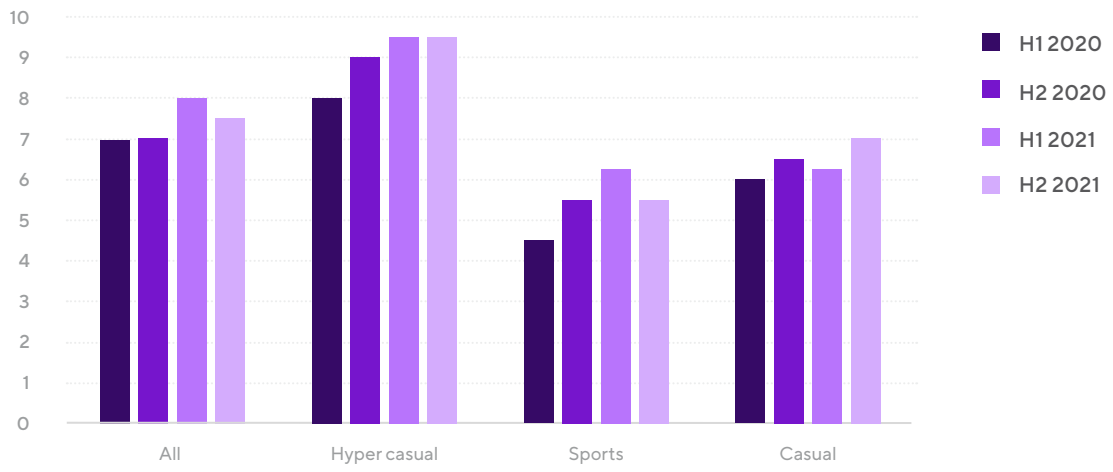

Breaking these installs down by subvertical (according to Adjust data) we can see the gaming categories that were taking up the most of this share, globally. Hyper casual, which characteristically drives extremely high install numbers, was the heaviest player here, accounting for 27% of global gaming installs, followed by action (17%), puzzle (11%), sports (10%), strategy (5%), and simulation (4%). When we look at the same breakdown in terms of sessions (see below), the distribution shifts considerably.

## Global gaming app paid/organic ratio 2020 - 2021



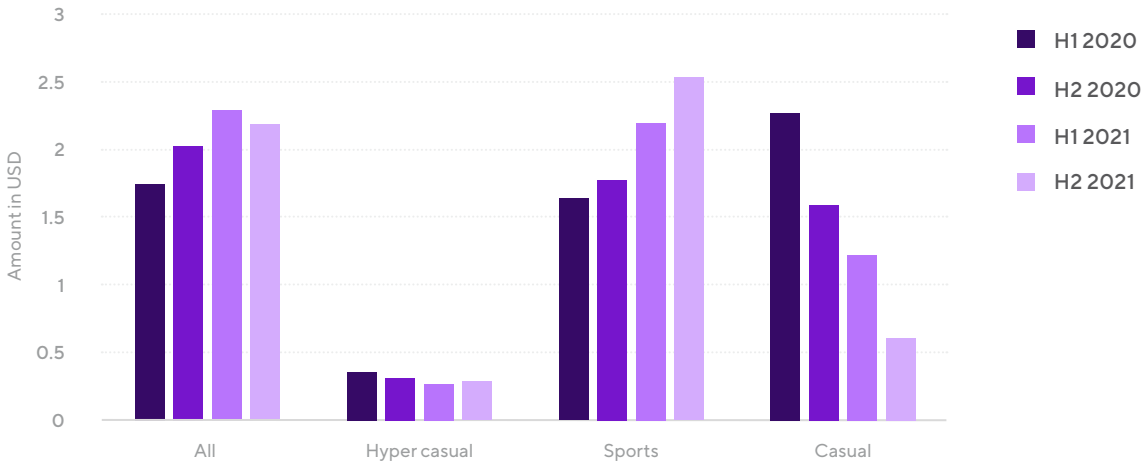

The overall paid/organic ratio for gaming apps increased in 2021, rising from 0.73 at the beginning of 2020, up to 0.81. However, by the end of 2021, it was back down to 0.68. As usual, it's hyper casual that takes the highest share of paid users, with the category reaching a ratio as high as 3.2 in H1 of 2021. Casual games also grew (from 0.77 to 1.08) and sports crept up from 0.19 to 0.24.

Gaming app partners per app 2020 - 2021 (Global)



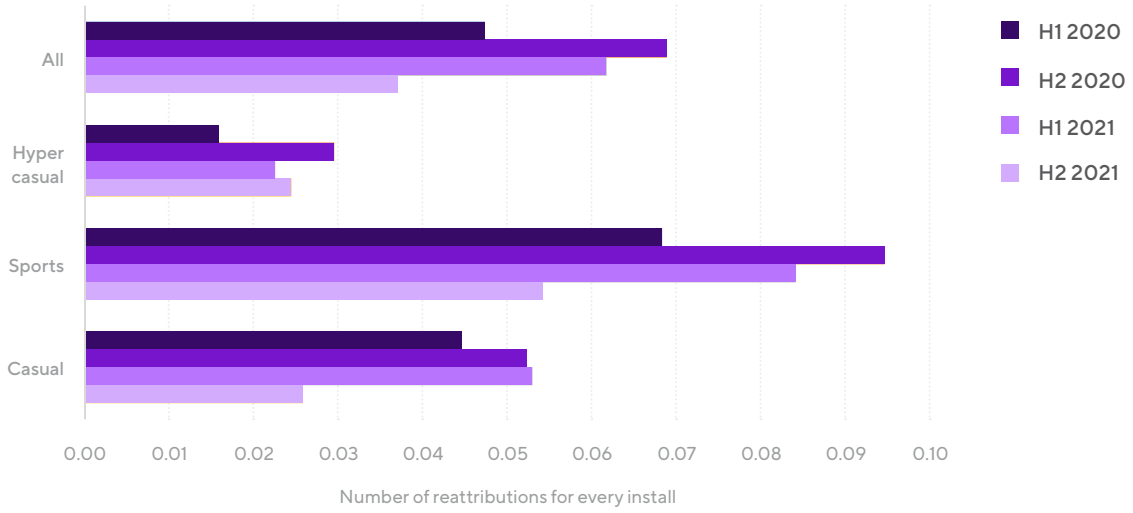

Gaming apps also started working with a record number of partners in 2021, as overall competition and paid activity throughout the vertical and its many categories increased across the board. Starting with an average of 7 partners per app in 2020, this increased to 8 in the first half of 2021. Logically, it's hyper casuals (with their high dependence on ads and paid installs) that work with the most partners, starting at 8 in 2020 and finishing 2021 with an impressive 9.5 partners per app.

## Global gaming app eCPI 2020 - 2021



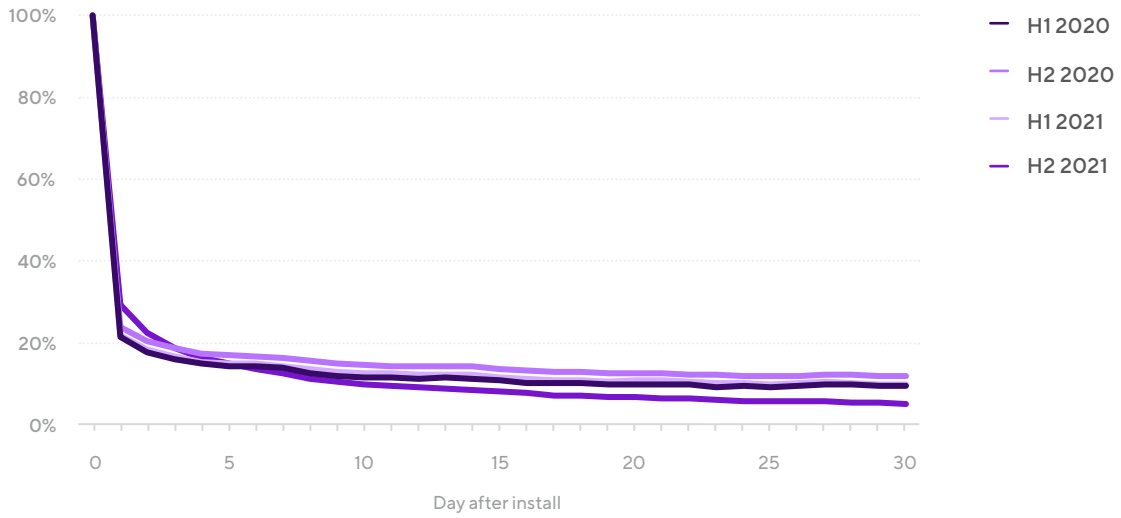

The cost per install increased overall in 2021 as well, but the trajectory looked different for each subvertical. Starting at a median $1.74 per install for the average gaming app at the beginning of 2020, 2021 closed with a median of $2.18. This price decreased for hyper casual, however, which started the 24-month period at $0.35 and finished at $0.28. Sports apps saw perhaps the most drastic rise, kicking off at $1.64 per install and finishing at $2.52.

## Global gaming app reattribution share 2020 - 2021




Reattributions were low for the gaming vertical overall in 2021, suggesting that amped up UA campaigns favored new users and fresh installs. Although reattributions have historically never been high for gaming (and are naturally incredibly low for hyper casuals), the decrease from ~ 0.05 to ~0.04 is still worth noting.

Global gaming app retention rates 2020 - 2021

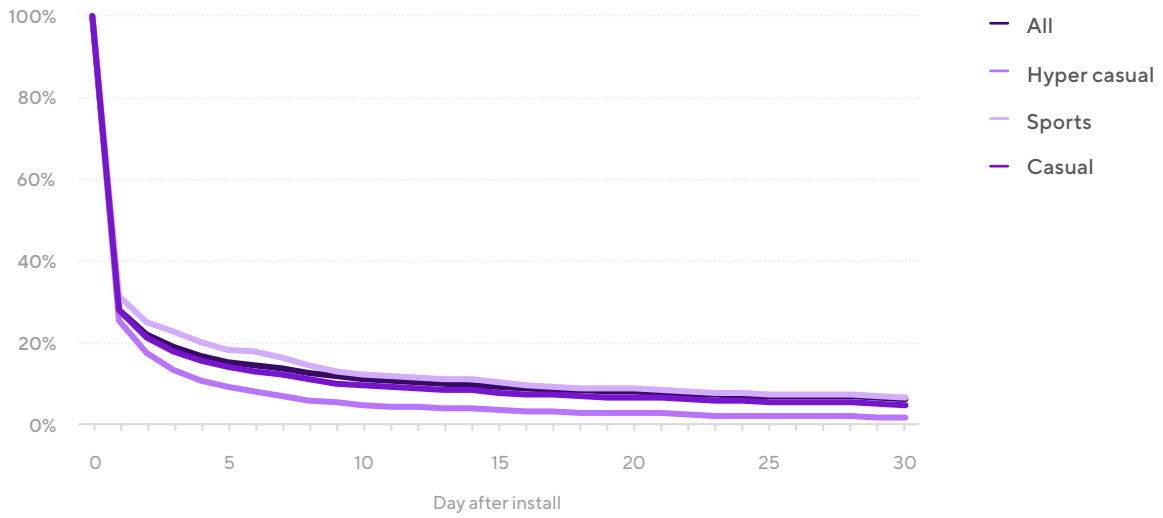



With this increase in paid installs and the rising eCPI cost, retention is an important metric to focus on, and while H2 2021 is up on H1 2020, it's the end of 2020 and the first half of 2021 that performed best. Day 7 retention for H1 2020 sat at 12%, and the median for all of 2021 increased to 14%. For day 14, we've seen an increase from 8% to 13%, and for day 30, the number has jumped from 5% to 9%. Overall, it looks like the vertical's costly users are sticking around. With H1 2021 as the standout period, revisiting channels, strategies, and partners from this time frame could be worthwhile.

**14%** day 7 retention rate for 2021

H1 2020 day 30 retention rate **10%**

Global gaming app retention rates by subvertical Q4 2021



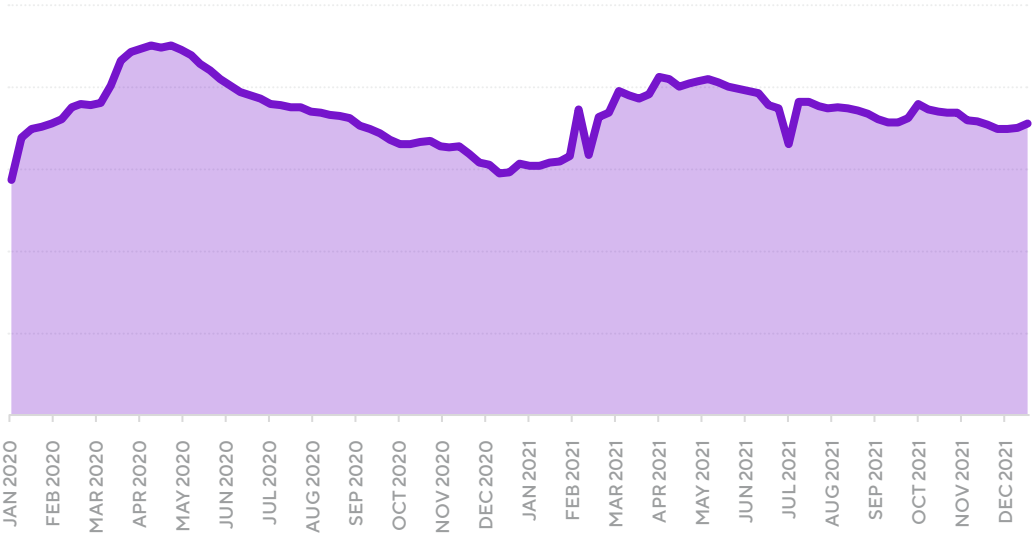

At subvertical level, hyper casual follows its usual high-churn trend, with retention rates in Q4 much lower than the average for gaming apps overall. Day 1 retention for hyper casuals is 25% (compared to 28% for gaming overall and 31% for sports), day 3 sits at 13% (compared to 18% and 22%), day 14 at 3.8% (compared to 9.6% and 11.1%) and day 30 is just 1.6%, compared to 6.2% and 6.6%. This doesn't necessarily mean that a user is lost, however, as hyper casual studios cleverly deploy cross promotion tactics, driving users to other apps in their publishing suites around the time that users are most likely to churn. While lower-churn verticals will rely on this approach less, it's a mechanism to leverage if you've got more than one app in your suite.

**Tip: Cross-promotion allows for deterministic targeting and measuring of users on iOS using the Identifier for Vendors (IDFV) — well worth considering in the post-IDFA UA ecosystem.**

# Sessions and user behavior

Global sessions in the gaming vertical didn't soar as high as installs, or as high as they have in previous years — jumping by only 2% in 2021. However, if we look at this growth in relation to user patterns around the first lockdowns in 2020 (where sessions increased by 52% compared to 2019), apps, developers, and marketers have done an incredible job at maintaining this dramatic, unprecedented jump. If we were to remove Q1 of 2020 from the data set, and compare the average of Q2 - Q3 2020 to the average of 2021, growth climbs toward 15-20% — and numbers are now almost at par with pandemic growth.

Gaming app session growth 2020 - 2021 (Global)



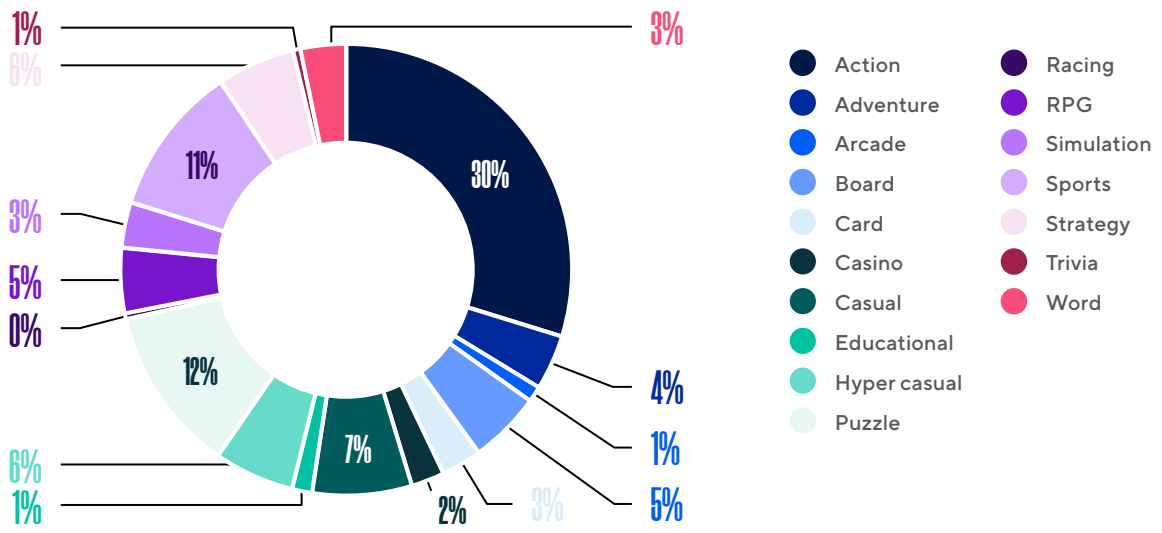
**Regionally speaking, North America saw the biggest boost in sessions, charting a 12% increase year-over-year.**

**"The past 12 months of operating in a post-ATT environment have only reinforced the importance of optimizing advertising campaigns for the highest value users in order to achieve ROAS goals. This requires creating ad experiences that reflect the core value prop of your mobile app, while optimizing campaigns with a data-first approach - something the gaming vertical does very well."**

Dennis Mink,
SVP Marketing,

LIFTOFF

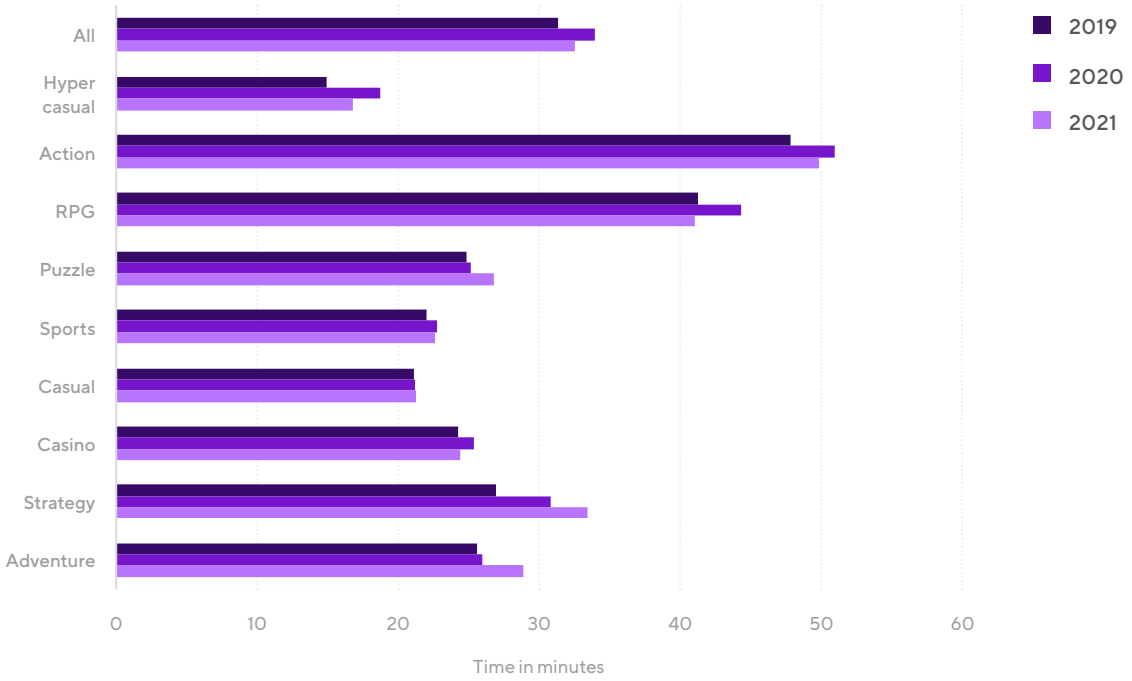
Gaming app sessions by vertical 2020 & 2021




The distribution of these sessions across categories/subverticals shows that volume of installs doesn't always correlate directly to number of sessions. Hyper casual, which made up 27% of install volume (and still demonstrated impressive growth in sessions in 2021) accounted for only 6% of total sessions. It's action that takes the biggest piece of the pie at 30%, followed by puzzle (12%), sports (11%), and strategy (6%).

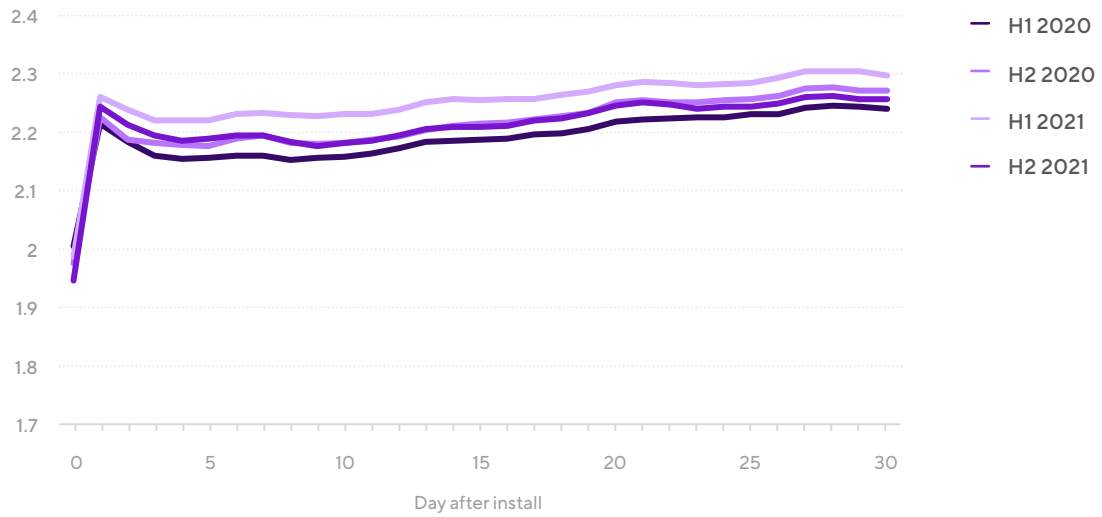
**At subvertical level, hyper casual sessions were noteworthy, reporting a 6% jump.**

## Gaming app session lengths 2019 - 2021 (Global)




Overall, session lengths dropped slightly in 2021 compared to 2020, but have increased in many subverticals. Session lengths also increased in all subverticals in 2021 compared to 2019, showing that while a slightly backward step occurred overall, growth is still trending upward, and pandemic and lockdown-related boosts and declines are slowly being ironed out. Adventure, strategy, and puzzle games are the three subverticals that posted the biggest growth in average session lengths from 2020 to 2021. Adventure increased from 25.99 minutes per session to 28.88, strategy jumped from 30.86 to 33.45, and puzzle from 25.16 minutes to 26.81.

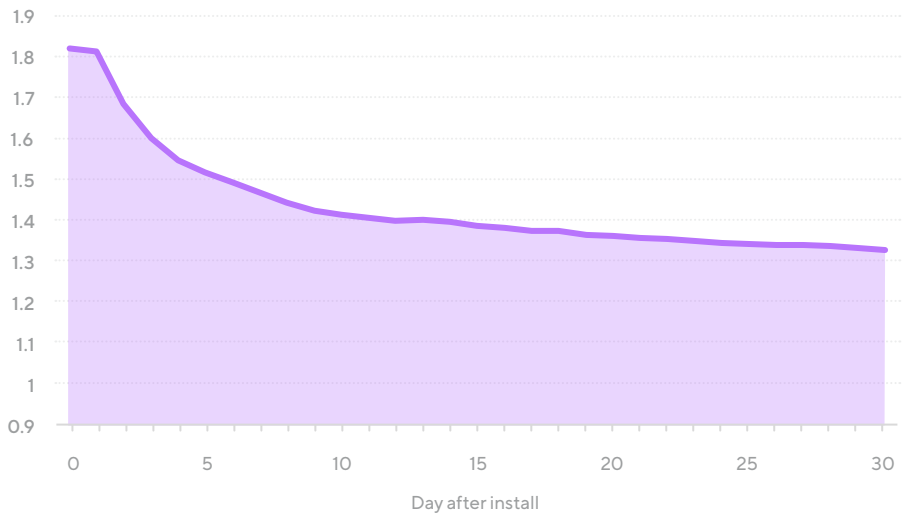
Sessions per user per day (gaming) 2020 - 2021




The number of sessions that gaming users are having per day has also increased overall in 2021 compared to 2020, with H1 of 2021 the period in which the most sessions took place. At the beginning of 2020, day 1 sessions sat at 2.21 per user per day, day 14 at 2.18 and day 30 at 2.24. H1 of 2021 saw day 1 increase to 2.26, day 14 to 2.25, and day 30 to 2.29. With day 30 rates consistently higher than day 1 rates, gaming is posting exceptionally well retained users, demonstrating how skilled UA teams in this vertical are at finding, targeting, acquiring, and retaining their users.

This is, of course, not the case for hyper casual however, which trends downward. The key for marketers in this category is to identify churn points to ensure maximum ROI is achieved before a user drops off. At this churn point, marketers can either cross-promote users to other properties, encourage them to increase their LTV via mechanisms like rewarded video, or implement strategies like difficulty tuning to try and squeeze a few more days out of the journey.

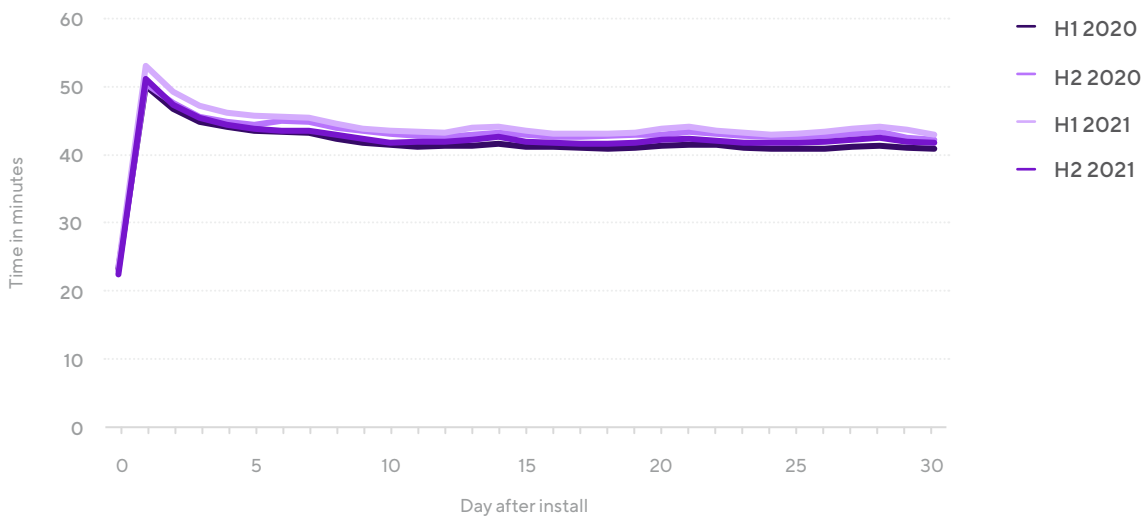
### Sessions per user per day (hyper casual) Q4 2021



**53.3**

minutes spent in-app in 2021 - up from 50.3 in 2020

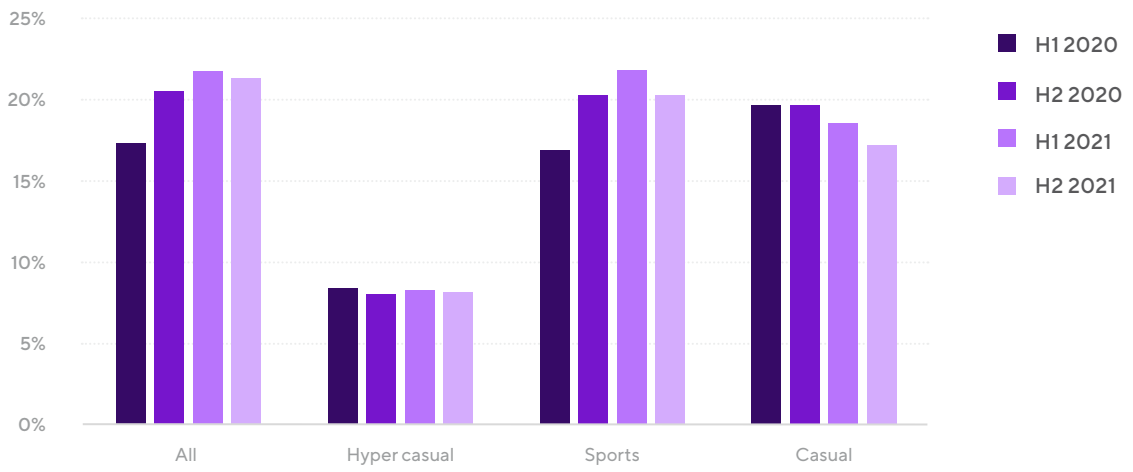
Time spent in-app (gaming) per user per day 2020 - 2021




The total time spent in app per user over a 24 hour period also increased in 2021, reaching its peak in the first half of the year. Day 1 total time in app increased from 50.3 minutes to 53.3 minutes, day 3 from 44.9 to 47.2, day 7 from 43.3 to 45.5, day 14 from 41.7 to 44.2, and day 30 from 41.1 to 43.0. Users are expensive to acquire, but session lengths and frequency are both increasing, creating more moments to monetize these loyal users.

Stickiness of users is another metric that increased for the gaming vertical in 2021, though it dropped slightly in the second half of the year. Hyper casual users are the least sticky, averaging 8% over the entire 24-month period tracked. The average for all gaming apps started at 17%, reached 22% by H1 2021, and finished the year at 21%.

### Global gaming app stickiness 2020 - 2021

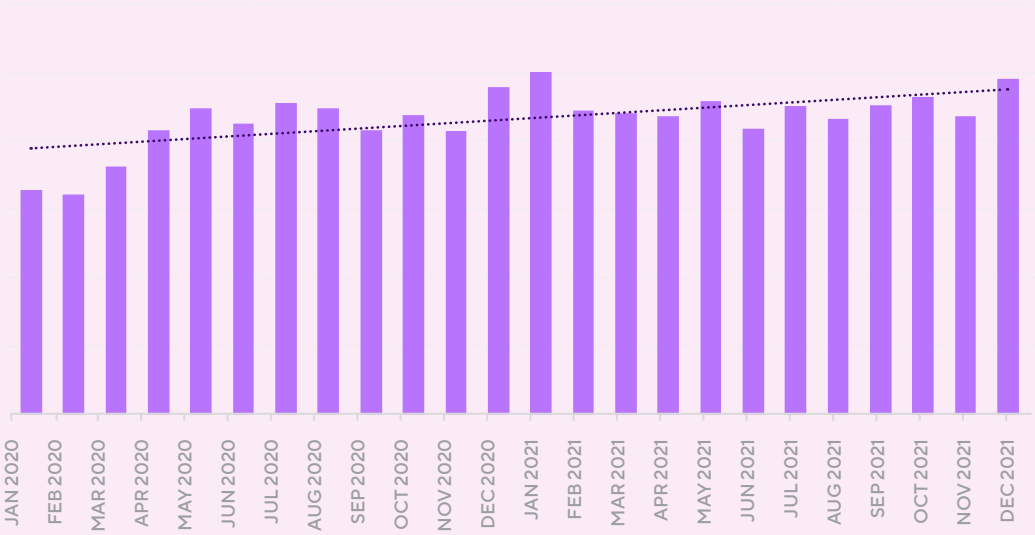



Following a very similar trend to installs, global in-app revenue for gaming apps remained relatively consistent from January 2020 to December 2021. January 2021 set a record for in-app revenue for the vertical, with December 2021 coming in as the second-highest.

**The average for all gaming apps finished the year with a stickiness ratio of**

**21%**

Gaming in-app revenue January 2020 - December 2021




## Top gaming takeaways:

**32%**

**Global installs of gaming apps** increased **32%** year-over-year in 2021, with H2 outperforming H1 by a further 12%.

**30%**

Hyper casual makes up the highest share of installs (27%), while **action accounts for** the largest proportion of sessions (**30%**).

**2021.01**

Session lengths, sessions per user per day, and time spent in-app all increased in 2021, and **January accounted for the highest in-app revenue** month ever recorded by Adjust.

# Conclusion

**The mobile app industry has faced immense challenges in the past 24 months, from the COVID-19 pandemic to the user privacy shakeup and changes to UA on iOS. Despite this, the increased need for apps in markets all over the world, coupled with an immense UA drive across many verticals, has resulted in an unprecedented number of users downloading and engaging with mobile apps on a daily basis.**

Adjust data demonstrates the impressive growth in installs, sessions, and post-install activity, showing that highly engaged users are coming to the fintech, e-commerce, and gaming verticals in droves.

While many key metrics are pointing in the right direction, retention is lagging somewhat, indicating the importance of ensuring that as much attention is given to retention strategically as to UA. Marketers and developers are paying more than ever for users, making it crucial that LTV and retention are integrated as part of an overall UA effort. Even if some segments deliver high-churn users that generate enough revenue to prove ROI or turn profitable, acquiring loyal, high LTV users is also essential as part of a long-term marketing strategy. By drilling down into your data, you can identify key moments to serve content to users to keep them coming back.

As we continue moving into a post-IDFA — and somewhat post-pandemic — world, the needs and habits of users will find new ways to grow and shift. If the mobile app marketing industry has proven anything over the past 24 months, it's that it will remain agile and maintain excellence in meeting users wherever they are. It's the highly skilled, data-driven UA teams that develop clever SKAdNetwork strategies, work to improve retention, and continue to find, attribute, and measure new and existing audiences that will distinguish themselves from the competition.

ADJUST

## ABOUT ADJUST

Adjust is the mobile marketing analytics platform trusted by growth-driven marketers around the world, with solutions for measuring and optimizing campaigns and protecting user data. Adjust powers thousands of apps with built-in intelligence and automation, backed by responsive global customer support.

In 2021, Adjust was acquired by AppLovin, a leading marketing software company providing developers with a powerful, integrated set of solutions to grow their mobile apps.

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