



GAMING SPOTLIGHT

2021 REVIEW



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GAMING SPOTLIGHT

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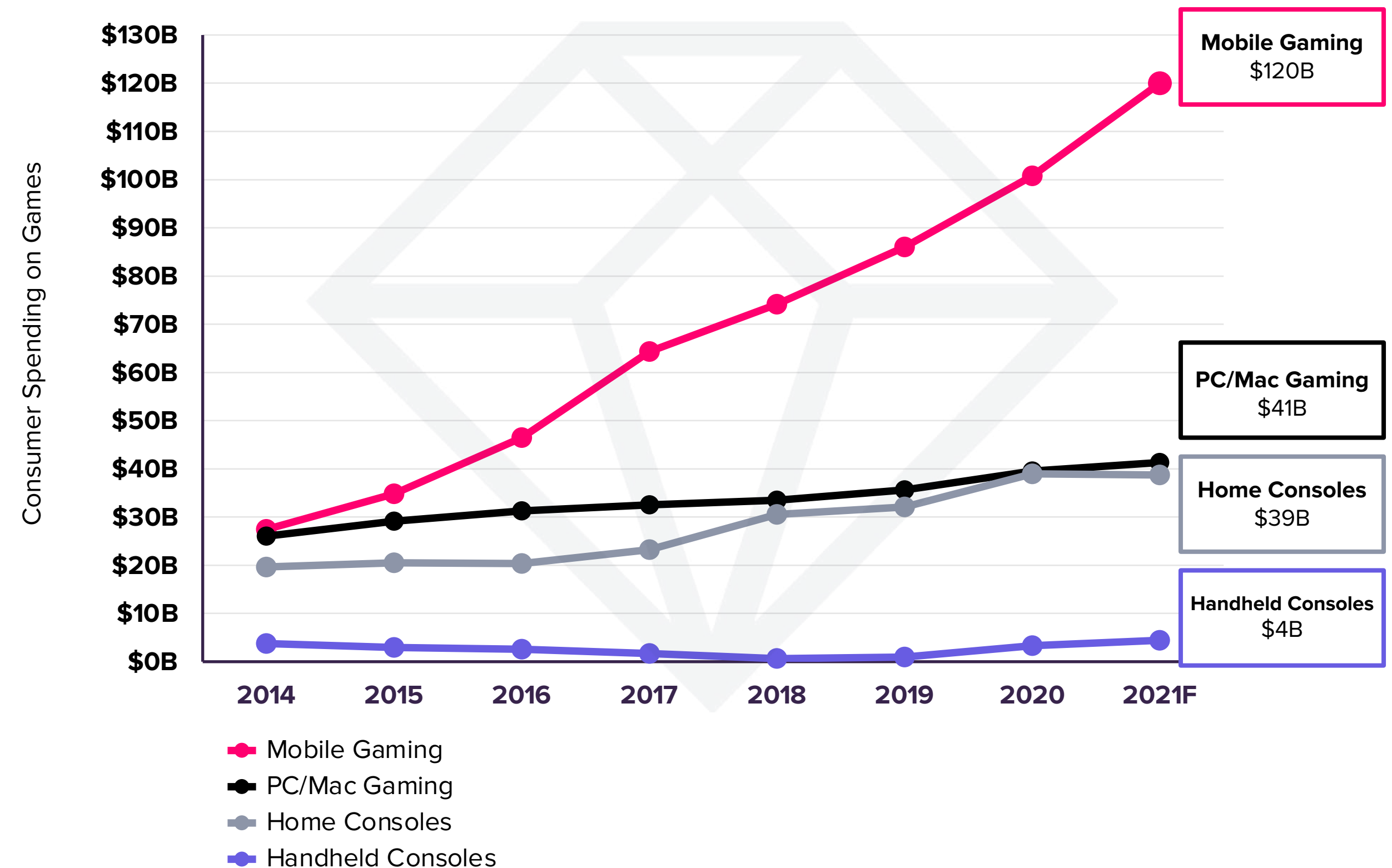
- 2021 Gaming Trends
- US Gamer & Ad Monetization Deep Dive, Q1 2021
- Key Themes & Takeaways

2021 GAMING TRENDS

Amidst Cross-Platform Play, Mobile Gaming is Set to Further Extend Its Global Lead to 2.9x PC/MAC

- **Mobile gaming is now the primary driver of growth for digital games consumption** and is set to extend its global lead to 3.1x home game consoles in 2021. As COVID-19 prompted a surge in game console sales, broader availability of the newly released XBOX Series X/S and PlayStation 5 consoles will also spur gaming growth further in 2021 and beyond.
- **The console and mobile experience is also merging;** mobile devices are now capable of offering console-like graphics and gameplay experiences along with cross-platform competitive and social gaming features. The gaming market at large will benefit from increased engagement.

Worldwide Consumer Spending on Games
by Major Device Group



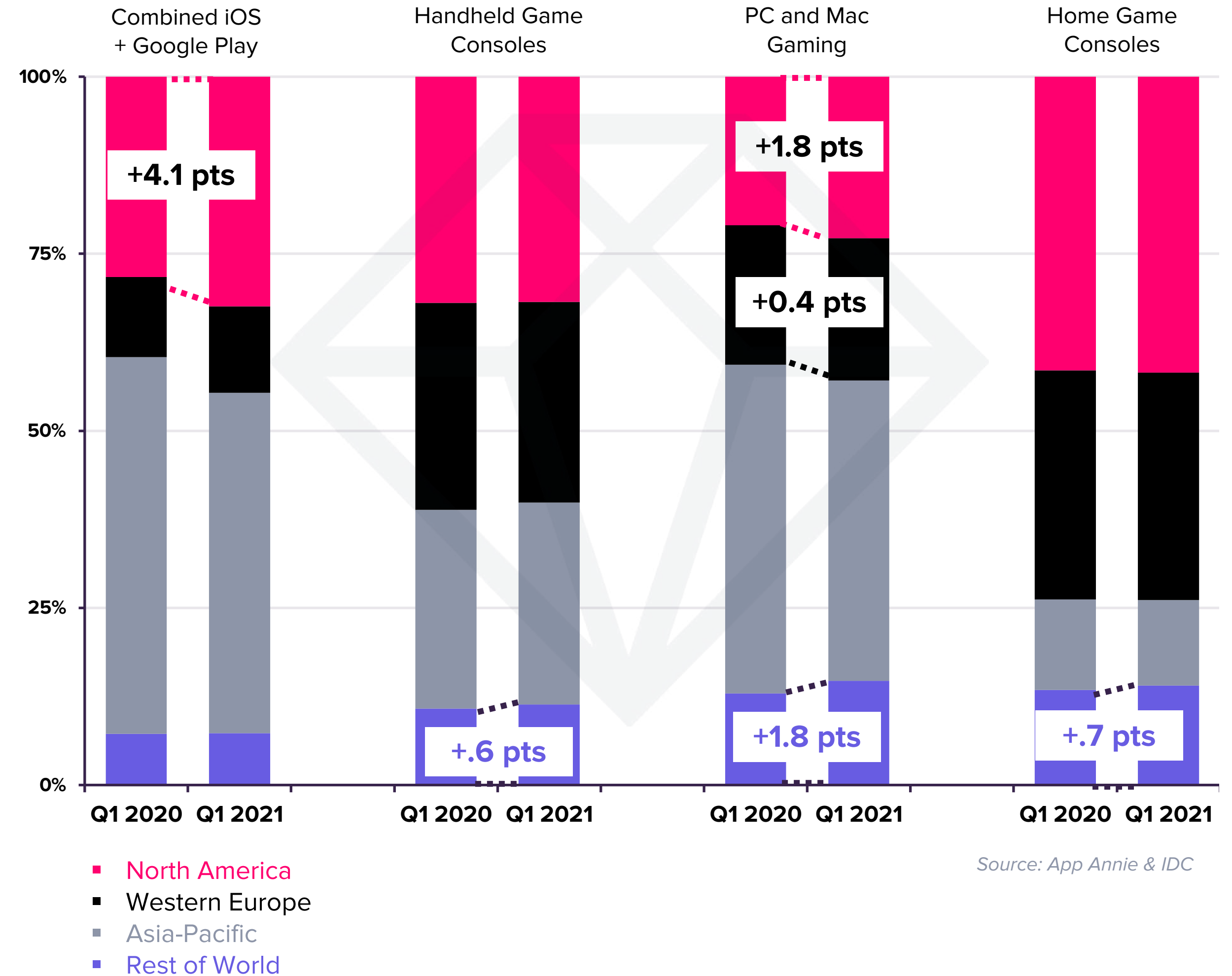
Source: App Annie & IDC

All totals include applicable digital and physical game spending but exclude ad revenue. Mobile gaming includes all app stores (iOS App Store, Google Play and third-party Android stores). Home game console total includes discs, digital games and gaming-related subscription services (Xbox Live, PlayStation Plus and Nintendo Switch Online); handheld consoles are typified by Nintendo 3DS and Switch Lite.

Americas & Europe Saw the Biggest Growth in Mobile Games Spending

- **US and Germany led growth for the gain in market share** for mobile game spending in North America and Western Europe from Q1 2020 to Q1 2021. APAC still makes up around half of mobile gaming spend in Q1 2021, but its market share has levelled as other regions have caught up. Saudi Arabia and Turkey led growth in Rest of World for mobile consumer spend.
- **Nintendo Switch Lite is now exclusively driving spend in handheld game consoles.** 3DS was discontinued globally in September 2020, but its e-shop remains open in most regions.
- **APAC spend in PC/Mac gaming lost 4% market share in 2020** mostly due the closure of internet cafes as a result of the COVID-19 pandemic.
- **There's room for growth in APAC's console market** as PS5 officially launched in China on May 15, 2021 and Xbox Series X/S launched June 10, 2021.









Worldwide Consumer Spending Shares on Games
by Region Q1 2020 vs Q1 2021



Games With Real-Time Online Features Dominate Grossing Charts

- Across all major platforms, games with real-time online features such as **PvP (player-versus-player)** indicate an appetite for connection and social experiences exists across the gaming spectrum; in many ways, games helped combat feelings of isolation resulting from the pandemic.
- Cross-play features are becoming increasingly prominent in the top games** — the ability to access the same game progress across devices (whether on mobile or console, for instance) appears to be on the rise, as is playing against players using different platform versions of the same game.
- Genshin Impact* became a global blockbuster across mobile, PC and console in 2020 as a result of a well-executed multi-platform rollout, which prioritized cross-play features such as cross-save and cross-platform online co-op modes — allowing the game to scale rapidly.

Top 10 Worldwide Grossing Mobile, Handheld and PC Games By Platform Q1 2021

Rank	iOS App Store & Google Play	Nintendo Switch Lite	Steam (2020)
1	 ROBLOX Roblox, United States	Super Mario 3D World + Bowser's Fury Nintendo, Japan	Counter-Strike: Global Offensive Valve Corp., US
2	 Genshin Impact miHoYo, China	Monster Hunter Rise Capcom, Japan	Dota 2 Valve Corp., US
3	 Coin Master Moon Active, Israel	Mario Kart 8 Deluxe Nintendo, Japan	Grand Theft Auto V Rockstar Games, US
4	 Pokémon GO Niantic, United States	Animal Crossing: New Horizons Nintendo, Japan	PlayerUnknown's Battlegrounds PUBG Corp., South Korea
5	 Honour of Kings Tencent, China	Super Smash Bros. Ultimate Nintendo, Japan	Cyberpunk 2077 CD Projekt, Poland
6	 PUBG MOBILE Tencent, China	Super Mario Party Nintendo, Japan	Fall Guys: Ultimate Knockout Devolver Digital, US
7	 Candy Crush Saga Activision Blizzard, United States	The Legend of Zelda: Breath of the Wild Nintendo, Japan	Destiny 2 Bungie, US
8	 Homescapes Playrix, Ireland	Pokémon Sword / Shield Nintendo & The Pokémon Company, Japan	Doom Eternal Bethesda Softworks, US
9	 Rise of Kingdoms Lilith, China	Super Mario 3D All-Stars Nintendo, Japan	Red Dead Redemption 2 Rockstar Games, US
10	 Game For Peace Tencent, China	New Super Mario Bros. U Deluxe Nintendo, Japan	Monster Hunter World Capcom, Japan



= Game Has Real-Time Online Features

Source: App Annie & IDC

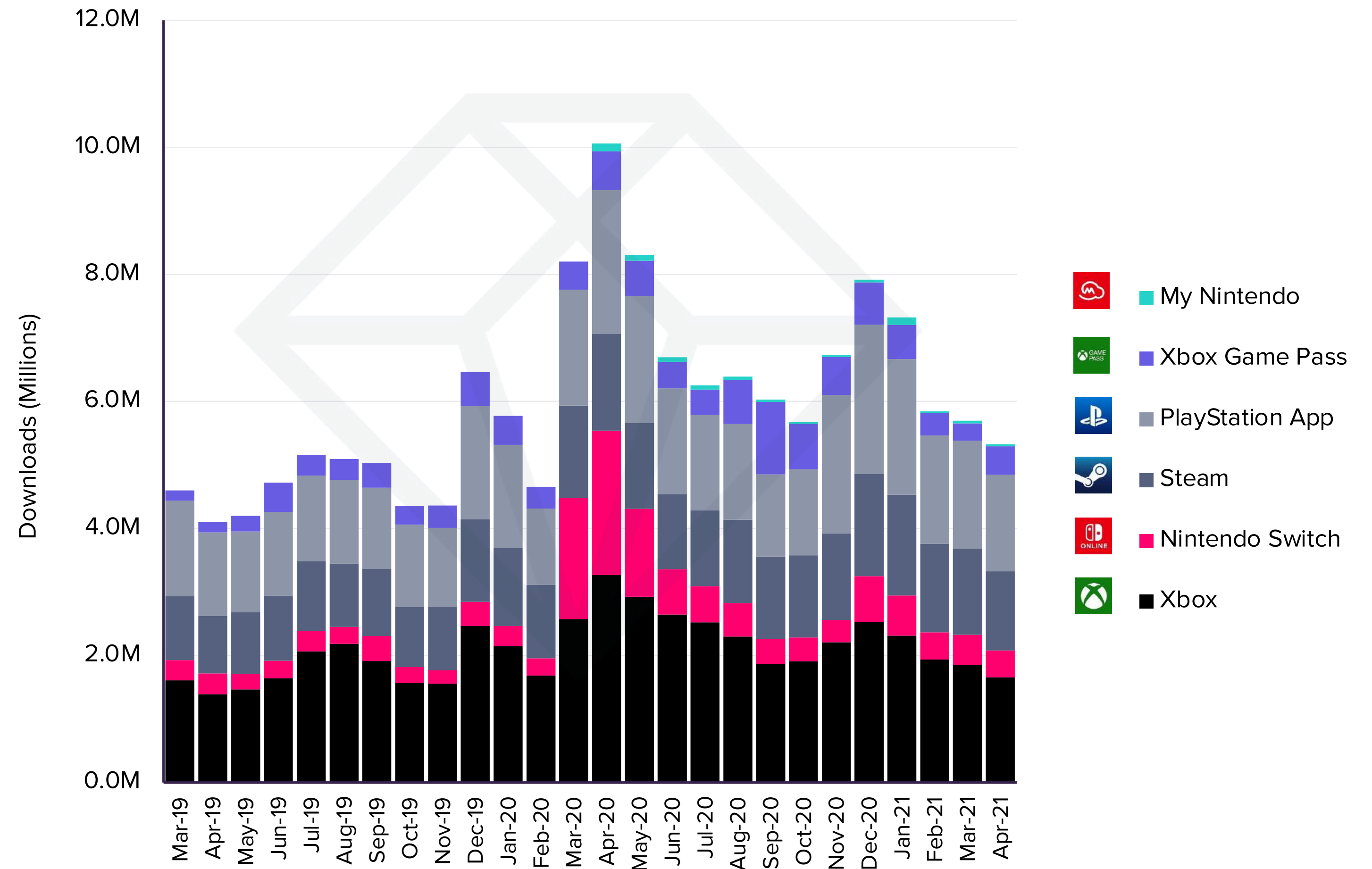
Note: Steam data spans all of 2020 and excludes Q1 2021

Console Companion Apps Are Central to Gaming Experience as Gamers Seek Cross-Platform Play

- In April 2020, a surge in console sales drove the video games market in the US to new heights. During this period, all major platforms' companion apps Xbox, PlayStation App, Nintendo Switch and Steam all experienced downloads spike driven as gamers globally turned to video games to connect with friends and purchase digital content.
- **Console apps bridge the cross-platform experience** by offering social and console connectivity features that allow players to manage their accounts, interact with their friends and, in some cases, play remotely on their phones through cloud streaming.

Growth of Game Console Companion Apps

Worldwide, iOS & Google Play Combined

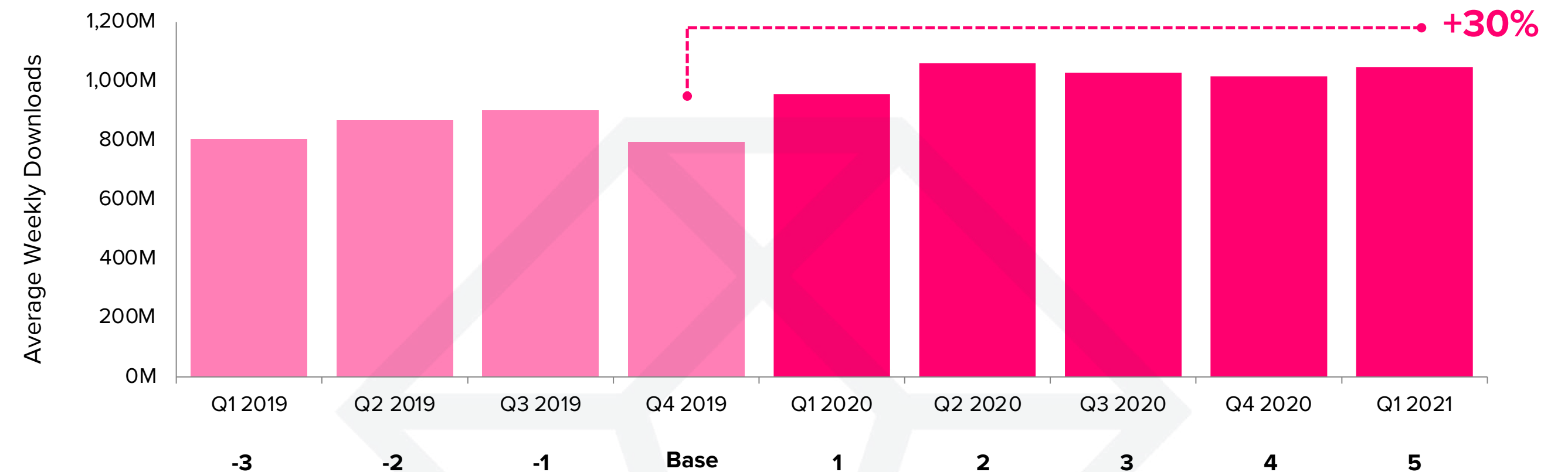


Source: App Annie

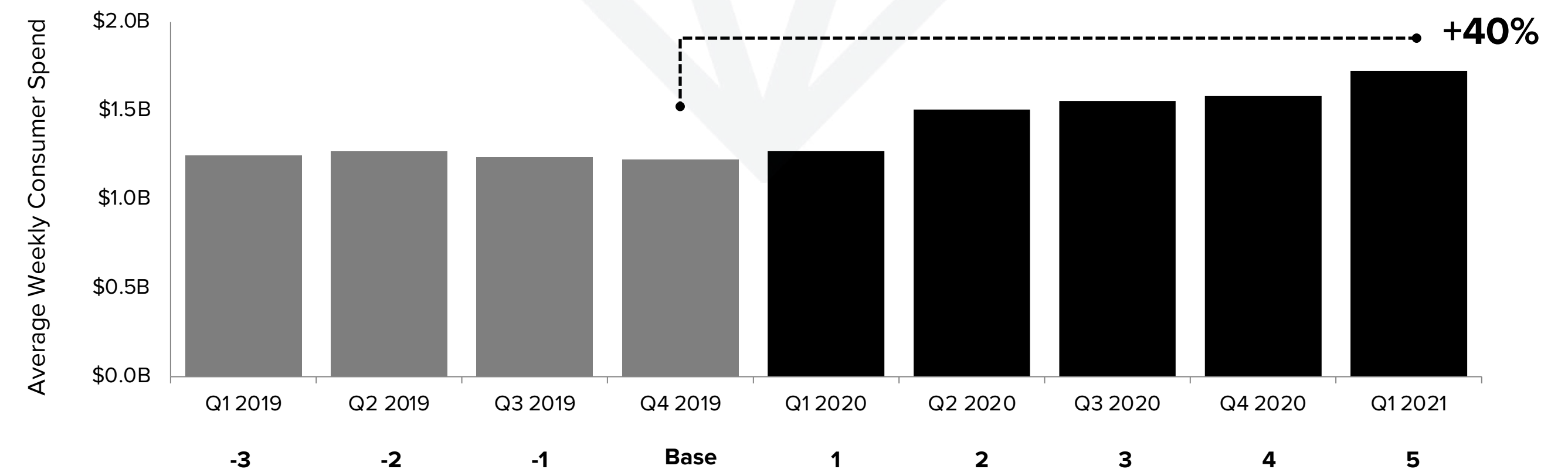
Mobile Gaming Downloads & Consumer Spend Showing No Signs of Slowing Down

- One year into the Covid-19 pandemic, **demand for mobile gaming has remained strong with no sign of slowing down**. Globally, users downloaded 30% more mobile games per week in Q1 2021 than in Q4 2019, clocking in at over 1 billion games per week.
- In Q1 2021, consumers spent \$1.7 billion per week in mobile games, up 40% from pre-pandemic levels.
- Game publishers are increasingly prioritizing mobile as part of their platform of choice to expand their user base. Top grossing games *Lineage M*, *Lords Mobile*, *Roblox* and *PUBG Mobile* **leverage cross-platform experiences which translates to long term engagement and monetization potential**.

Impact on Worldwide Average Weekly Game Downloads
Before & After Covid-19 Pandemic



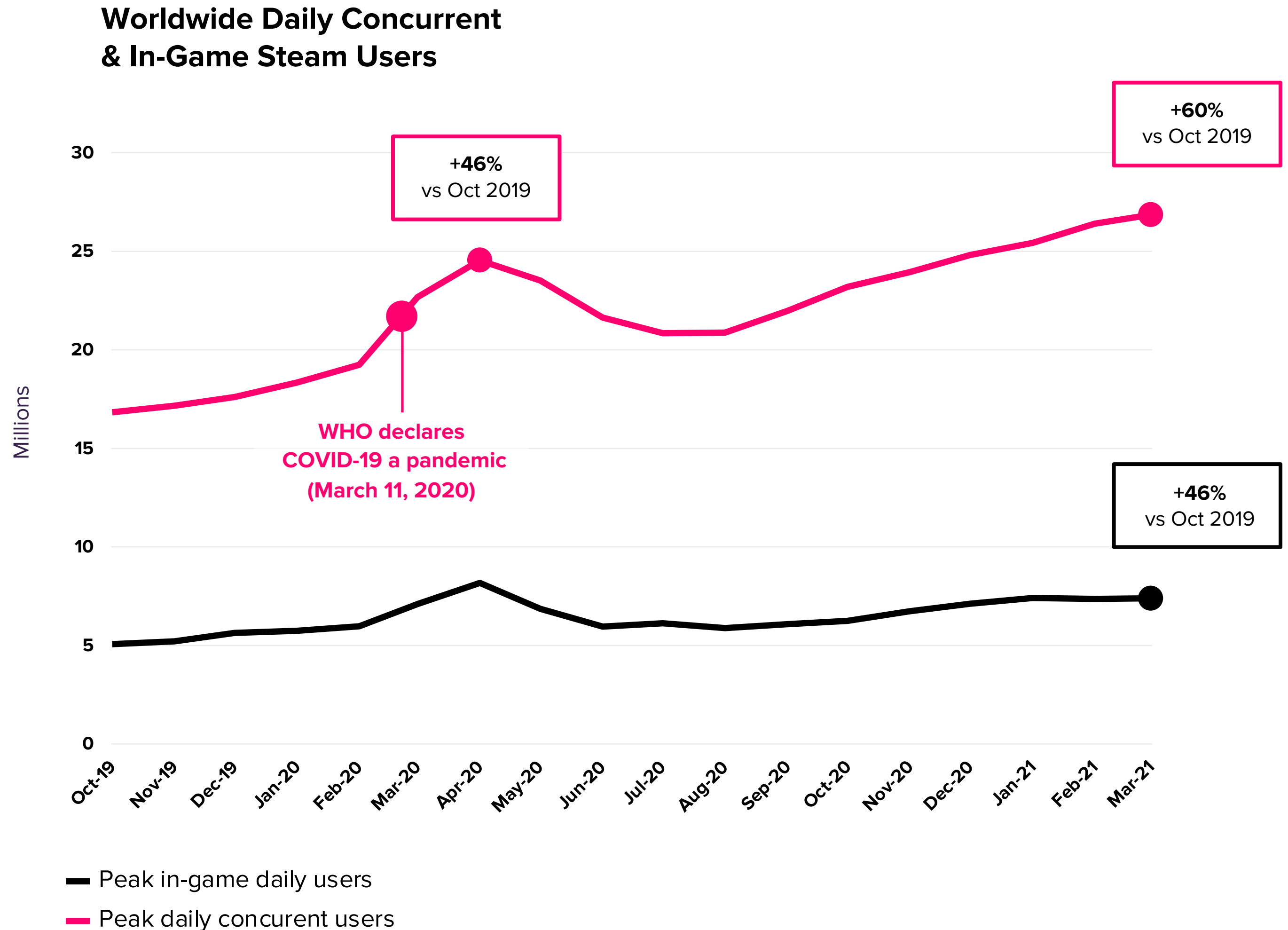
Impact on Worldwide Average Weekly Game Consumer Spend
Before & After Covid-19 Pandemic



Source: App Annie
iOS & Google Play Combined

All Ships Rise with the Tides: PC Gaming Users Reached New Heights on Steam in H1 2021

- From Oct 2019 - April 2020, peak daily concurrent Steam users rose 46% to 24.5M and the number of in-game Steam users rose 61% to 8.2M, consistent with COVID-19 quarantines.
- From Oct 2019 - Mar 2021, the number of in-game daily Steam users rose 46% to 7.4 million and peak daily Steam users rose 60% to 26.85 million, **surpassing peak COVID-19 levels**, an indication the shift to increased gaming may be here to stay.
- *Among Us* leveraged cross-platform play to capture demand and expand its user base. On Steam, *Among Us* skyrocketed from <1,000 concurrent players in Jan 2020 to >400,000 in Sept 2020. *Among Us* was also a breakout game on mobile, including hitting #1 by downloads in the US, South Korea and UK on mobile devices in 2020.

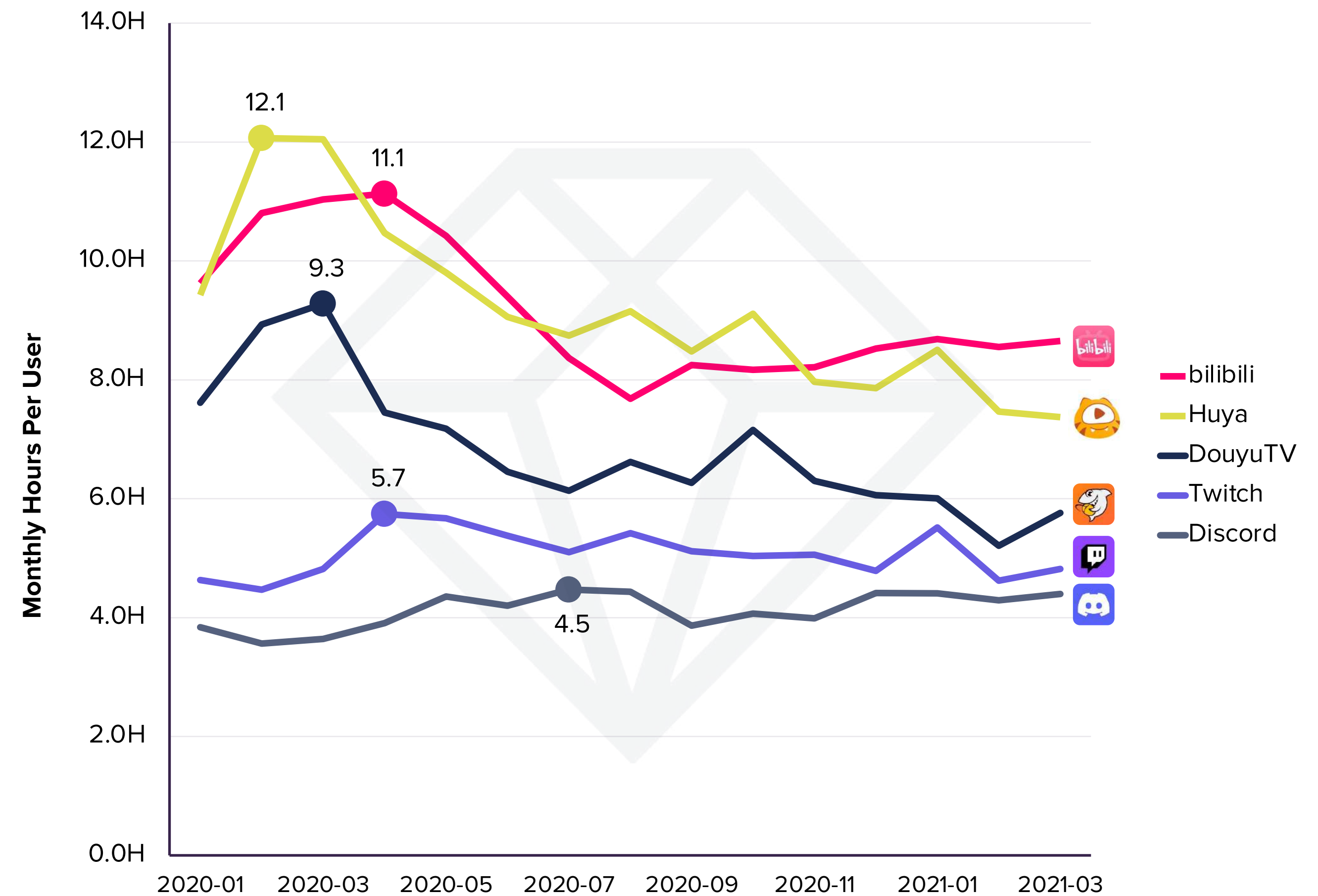


Source: IDC analysis of SteamDB data

Game Livestreaming Saw Increased Engagement and Monetization Amidst High Demand for Livestreaming and Socialization

- In China, game streaming and community apps such as *bilibili*, *Huya* and *DouyuTV* saw average monthly time spent per user peak in Q1 and Q2 2020 as the first wave of COVID-19 forced people inside. **Globally, *Twitch* and *Discord* saw elevated per user engagement well into April 2021, as game livestreaming and social gaming habits grew more ingrained.**
- **The increase in time spent also translated into a monetization boost.** In particular, *Twitch* and *Discord* apps have seen steady growth in consumer spend. In Q1 2021, *Twitch* has reached #8 among non-gaming apps by global consumer spend, after first breaking into top 10 in Q4 2020. *Discord* climbed over 200 ranks from Q4 2019 to #50 in Q1 2021.

Average Monthly Hours Per User in Gaming Focused Live Streaming Apps
Worldwide, Android Phone



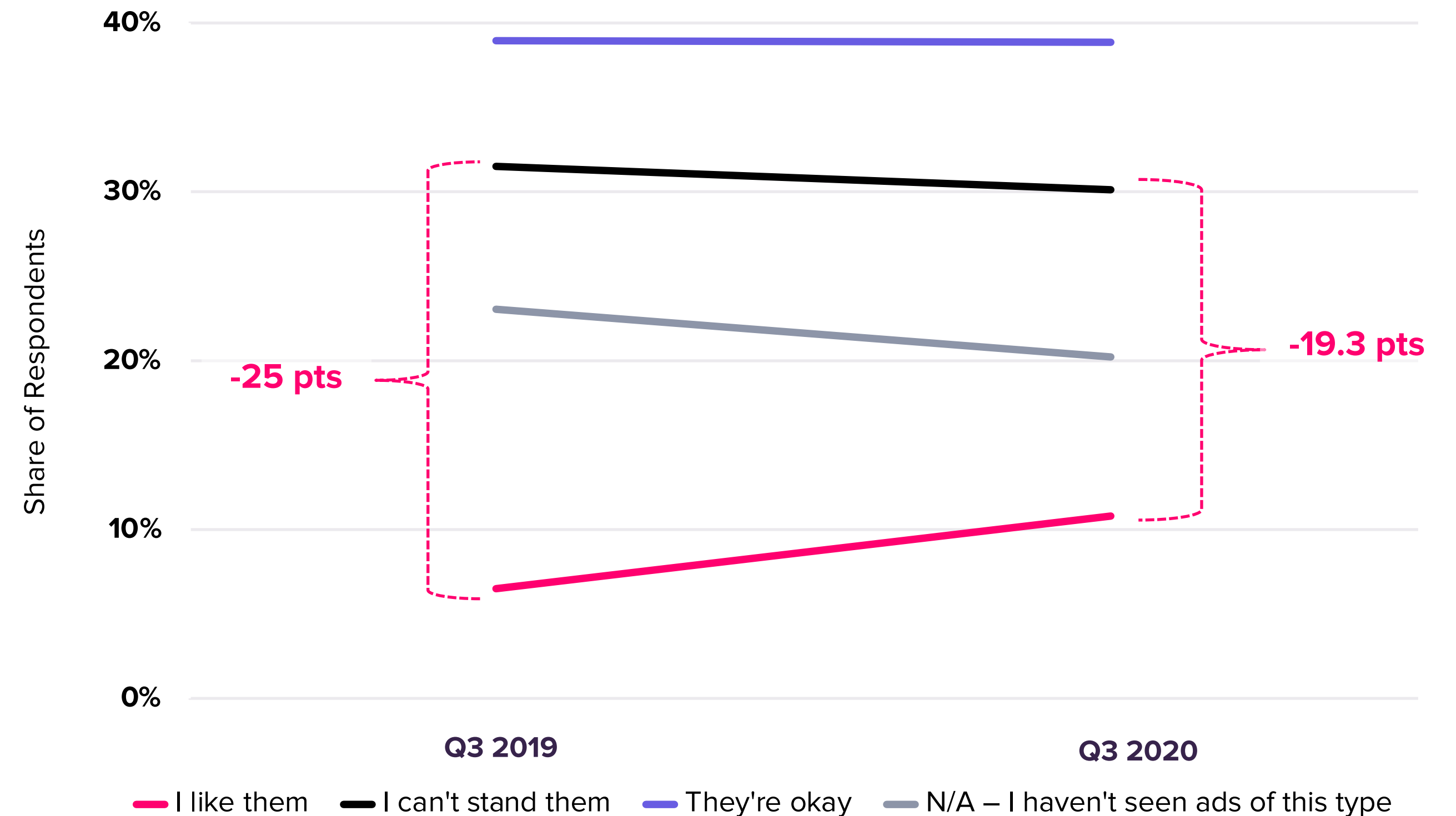
Source: App Annie

AD MONETIZATION + USER PREFERENCES IN MOBILE GAMES

US Gamer Sentiment Towards In-Game Banner Ads Improved In the Past Year, Yet Left Room for Improvement

- 19.3% more US gamers said they “can’t stand” banner ads than said they “liked” them in Q3 2020, but the gap between these sentiments closed (improved) 5.7% between Q3 2019 and Q3 2020.
- Why this sentiment change occurred is open to interpretation: **did the COVID-19 pandemic make more gamers receptive to in-game ads or did game developers/publishers, ad networks and advertisers improved their processes materially in the past year, or did both happen?**
- Almost 80% of mobile gamers reported seeing an in-game banner ad in Q3 2020.

US Mobile Gamer Sentiment Towards Banner Ads, Q3 2019 - Q3 2020



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them?
 [Option selected:] I've seen static banner (picture or text) ads and...

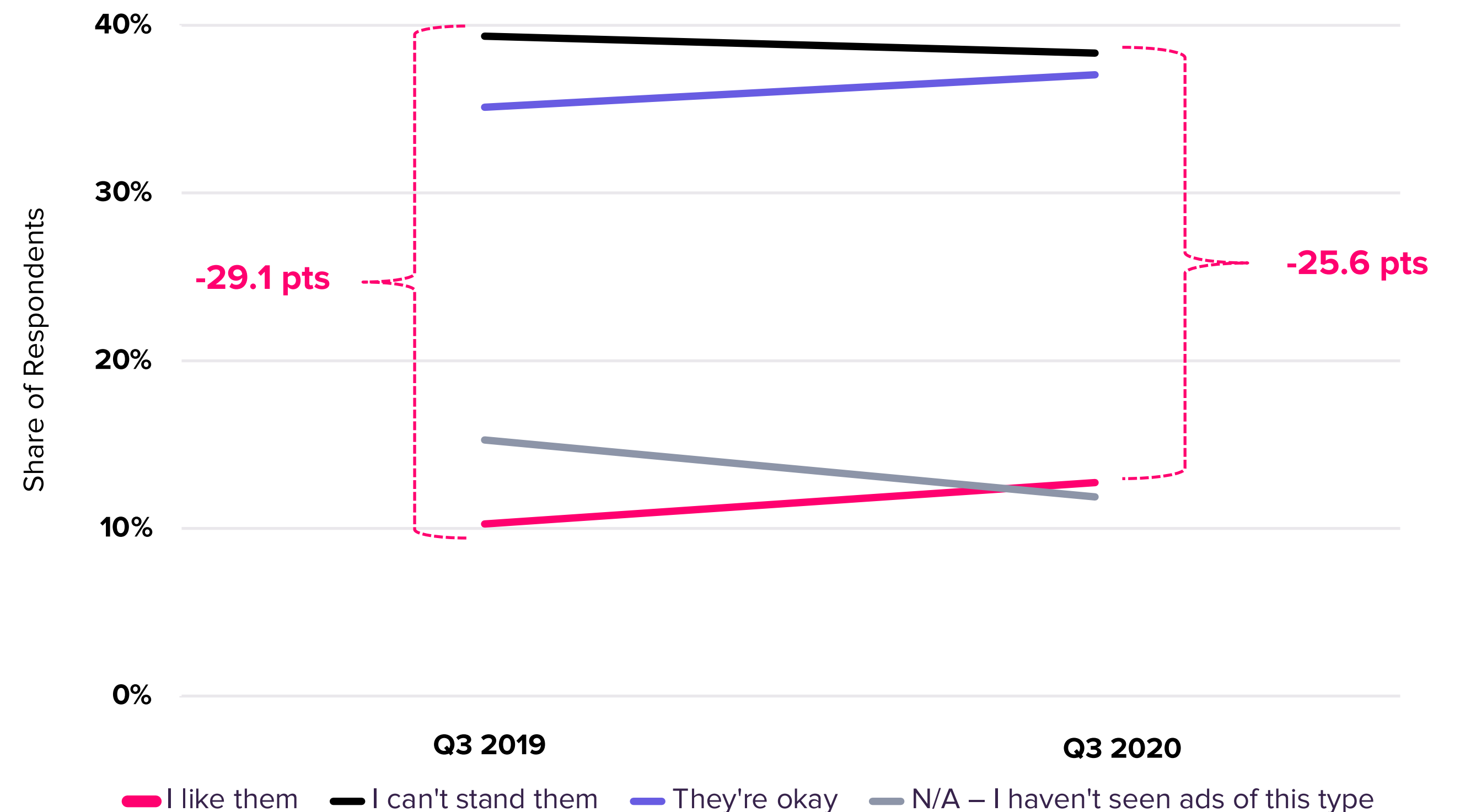
Q3 2020 n=3,322

Source: IDC's Q3 2019 and 3Q 2020 US Gamer Surveys

In-Game Video Ads Were the Most Divisive Format but US Gamer Sentiment Towards Them Improved

- In Q3 2020, 38% of US gamers said they “can’t stand” video ads compared to 13% said they “liked” them in Q3 2020. However, the gap between these sentiments also closed (improved) 3.5 percentage points between Q3 2019 and Q3 2020.
- **Video ads had the highest presence of all formats** (banner ads, video ads, rewarded video and playable ads): about 88% of mobile gamers reported seeing an ad of this type in a game they played in Q3 2020.
- **Video ads had the highest negative sentiment among the four in-game ad formats considered** which could be due to their full screen nature and lacking a direct value exchange like playable and rewarded ads.

US Mobile Gamer Sentiment Towards Video Ads,
Q3 2019 - Q3 2020



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them?
[Option selected:] I've seen video ads and...

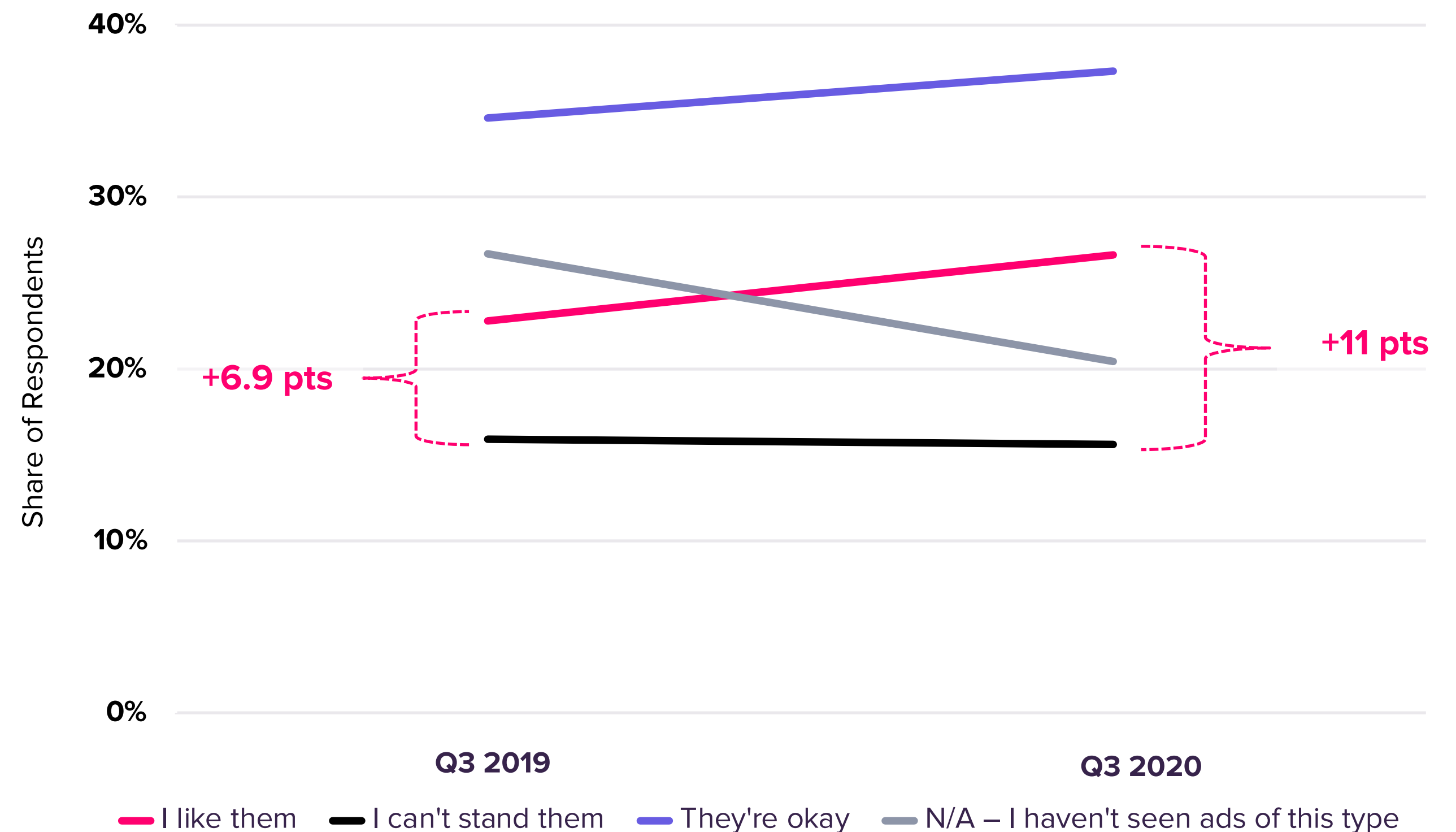
Q3 2020 n=3,322

Source: IDC's Q3 2019 and 3Q 2020 US Gamer Surveys

More US Gamers Liked Rewarded Video Ads than Disliked Them and this Gap Widened in the Past Year

- 11% more US gamers said they “liked” rewarded video ads than said they “can’t stand” them in Q3 2020, **indicating users are willing to part with their attention if it benefits their gameplay.**
- The share of gamers that saw a rewarded video ad in the past year rose the most among ad formats (6.3%), implying **in-game rewarded video ads have relative momentum as a format.**
- Rewarded video ads had the highest positive sentiment among all ad types with 27% of gamers reporting they “like them” in Q3 2020, which could be due to the direct value exchange with a user.

US Mobile Gamer Sentiment Towards Rewarded Video Ads, Q3 2019 - Q3 2020



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them?
 [Option selected:] I've seen rewarded video ads (that I get virtual currency or items for watching) and...

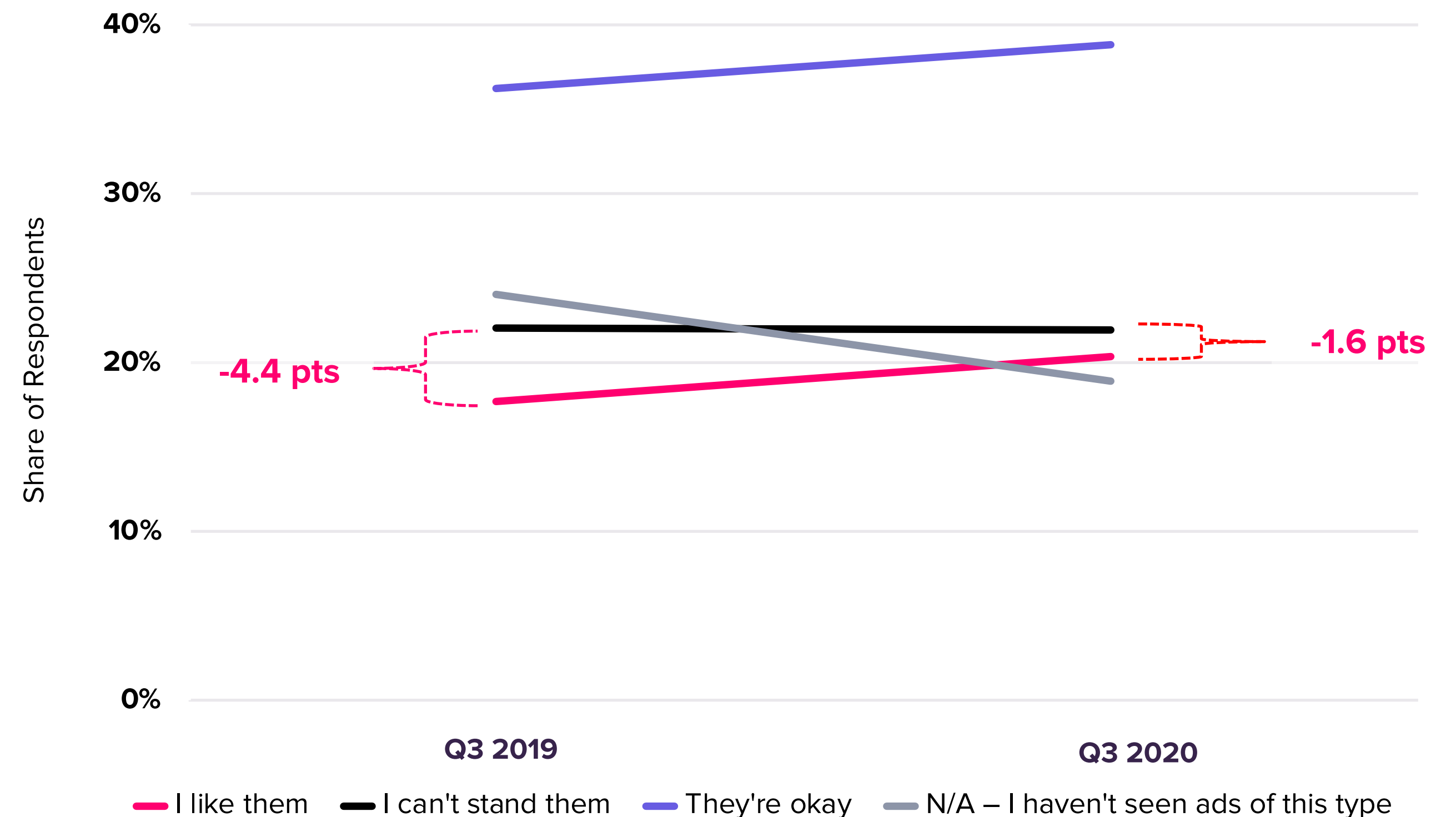
Q3 2020 n=3,322

Source: IDC's Q3 2019 and 3Q 2020 US Gamer Surveys

Playable Ads Neared Break Even On Being “Liked” by US Gamers

- Playable ads had the smallest gap between “I can’t stand them” and “I like them” among all ad types, indicating that **playable ads could be effective at balancing user acquisition objectives without disrupting the gamer’s experience.**
- Playable ads had the second highest “like” share at 20%, behind rewarded video ads’ 27%.
- **The value exchange is immediate in both playable and rewarded video ad formats, which probably accounts for their relative popularity.** Rewarded video ads reward gamers with items like in-game currency, whereas playable ads are designed to let a user test the game before downloading.

US Mobile Gamer Sentiment Towards Playable Ads, Q3 2019-Q3 2020



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them?
 [Option selected:] I've seen playable ads (that allow me to demo another game or app) and...

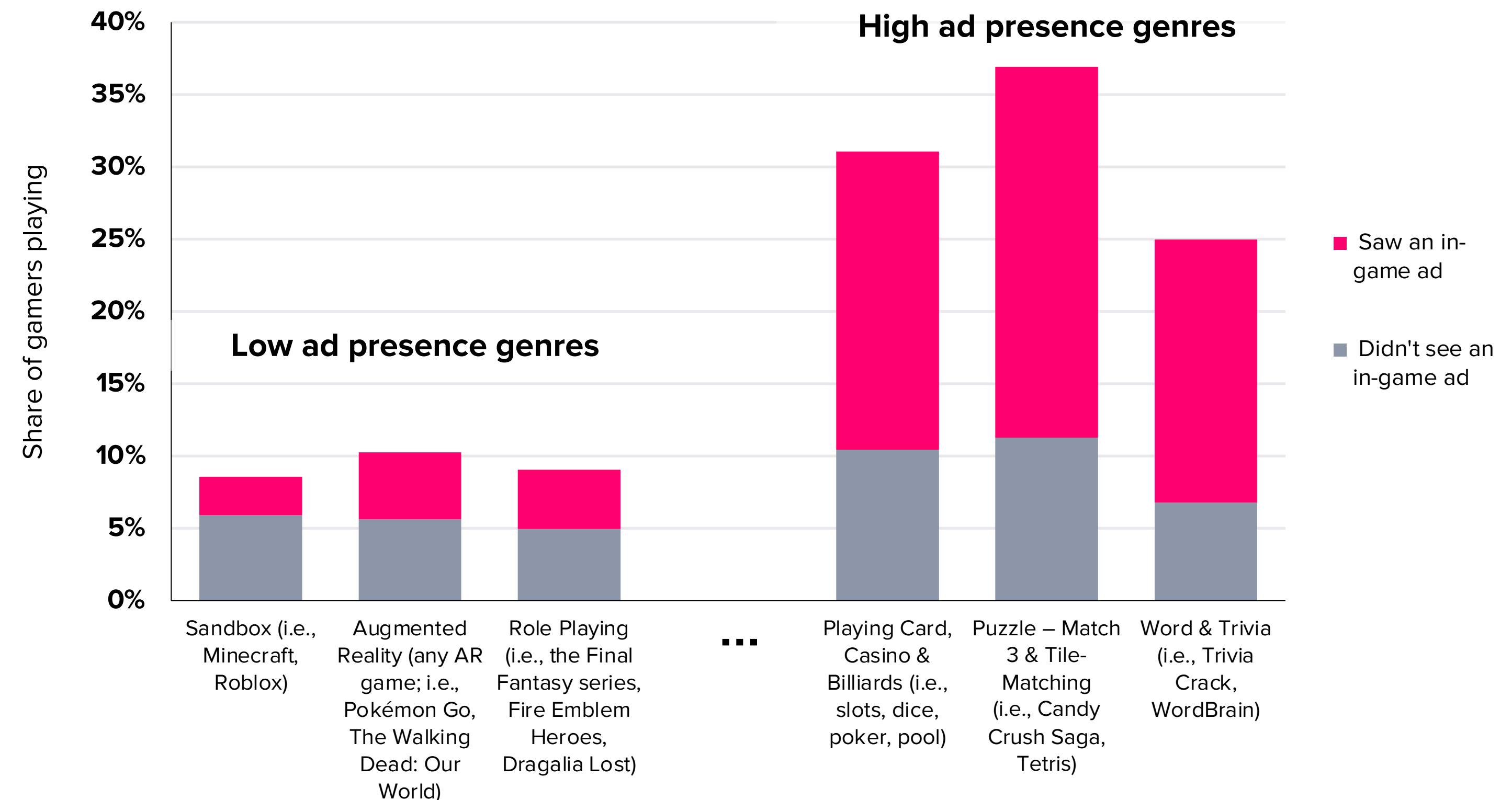
Q3 2020 n=3,322

Source: IDC's Q3 2019 and 3Q 2020 US Gamer Surveys

In-Game Ads Were More Often Seen In Some Genres Than Others In the US in Q3 2020

- Gamers report some gaming genres had higher rates of ad inclusion than others.
- Of the 27 genre options in the survey, two groups of three genres had particularly low and high reported in-game ad viewing rates; 41% of the gamers who played a game in the low ad presence group at right reported seeing in-game ads in Q3 2020, and 69% of gamers in the high ad presence group at right saw in-game ads. **The high ad presence genres also reported about 3x as many gamers were playing them — which could be an inherent value proposition that attracts advertisers.**
- The Sandbox genre came in lowest, with 31% of gamers seeing an ad in the genre; the word & trivia genre was highest at 73% ad presence.

US Mobile Game Genres Played, Cut by Low & High In-Game Ad Viewing Rates, Q3 2020



Q: What genre / type of games have you played on [your primary smartphone or tablet] in the past three months? [And:] In which of the genre(s) that you played a game in recent months on this mobile device did you see an in-game ad?

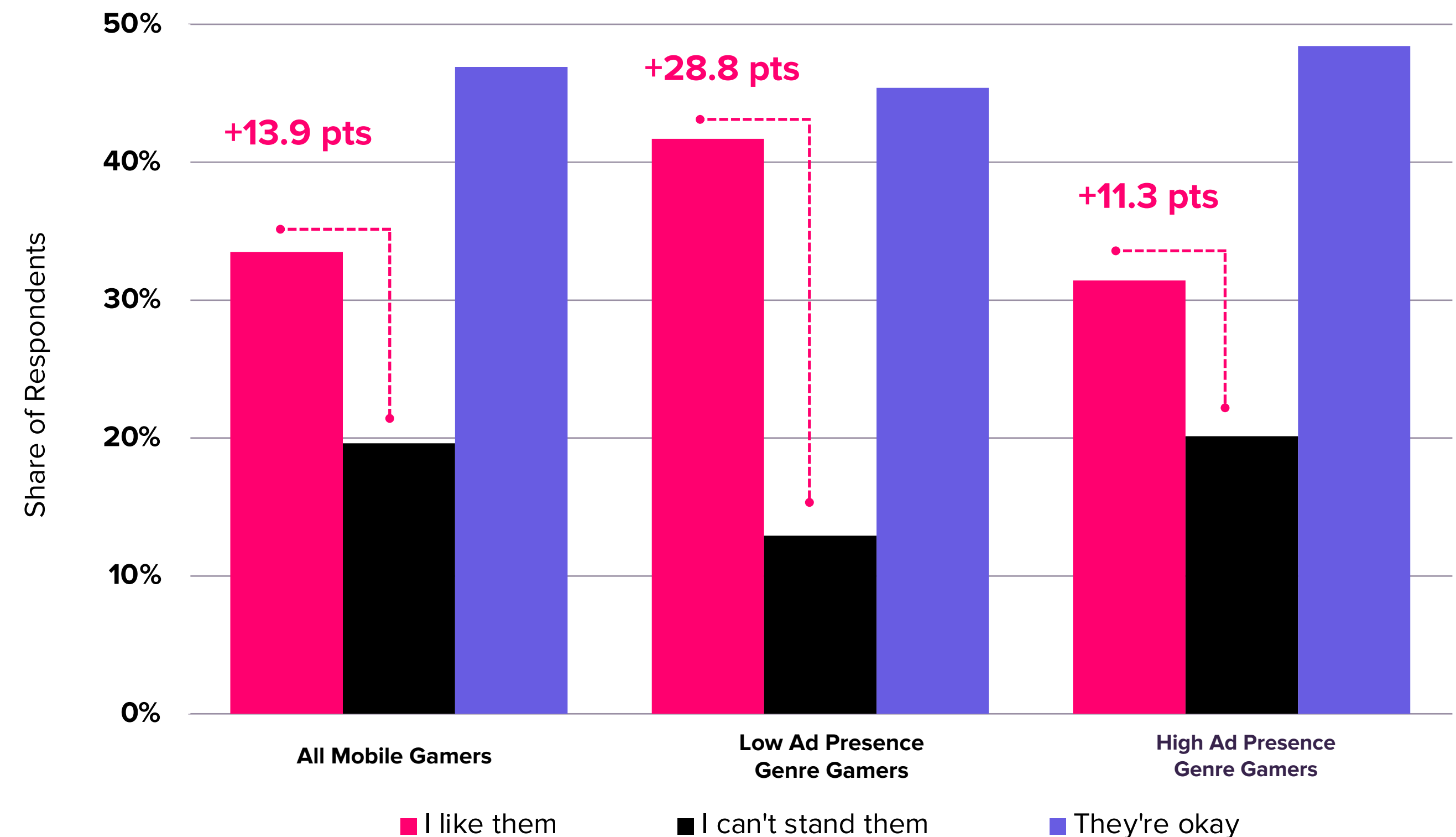
Q3 2020 $n=3,916$

Source: IDC's 3Q 2020 US Gamer Surveys

Ad Viewing Rates and A More Positive Sentiment Towards Ads Correlated Inversely In the US in Q3 2020

- Gamers in the three low ad presence genres had a much higher net positive opinion of rewarded video ads (+17.5%) than gamers in the three genres that reported higher ad saturation.
- Rewarded video ads still had a net positive sentiment even among gamers in the high ad presence genres, but it was lower (by 2.6%) than the overall gamer sample.
- **This indicates that gamers who see more ads tend to have a more negative opinion of them, and ad oversaturation may be contributing to higher churn rates.**

US Gamer Sentiment Towards Rewarded Video Ads, Cut By Viewers In Grouped Genres, Q3 2020



Q: What genre / type of games have you played on [your primary smartphone or tablet] in the past three months? [And:] In which of the genre(s) that you played a game in recent months on this mobile device did you see an in-game ad? [Option selected:] I've seen rewarded video ads (that I get virtual currency or items for watching) and...

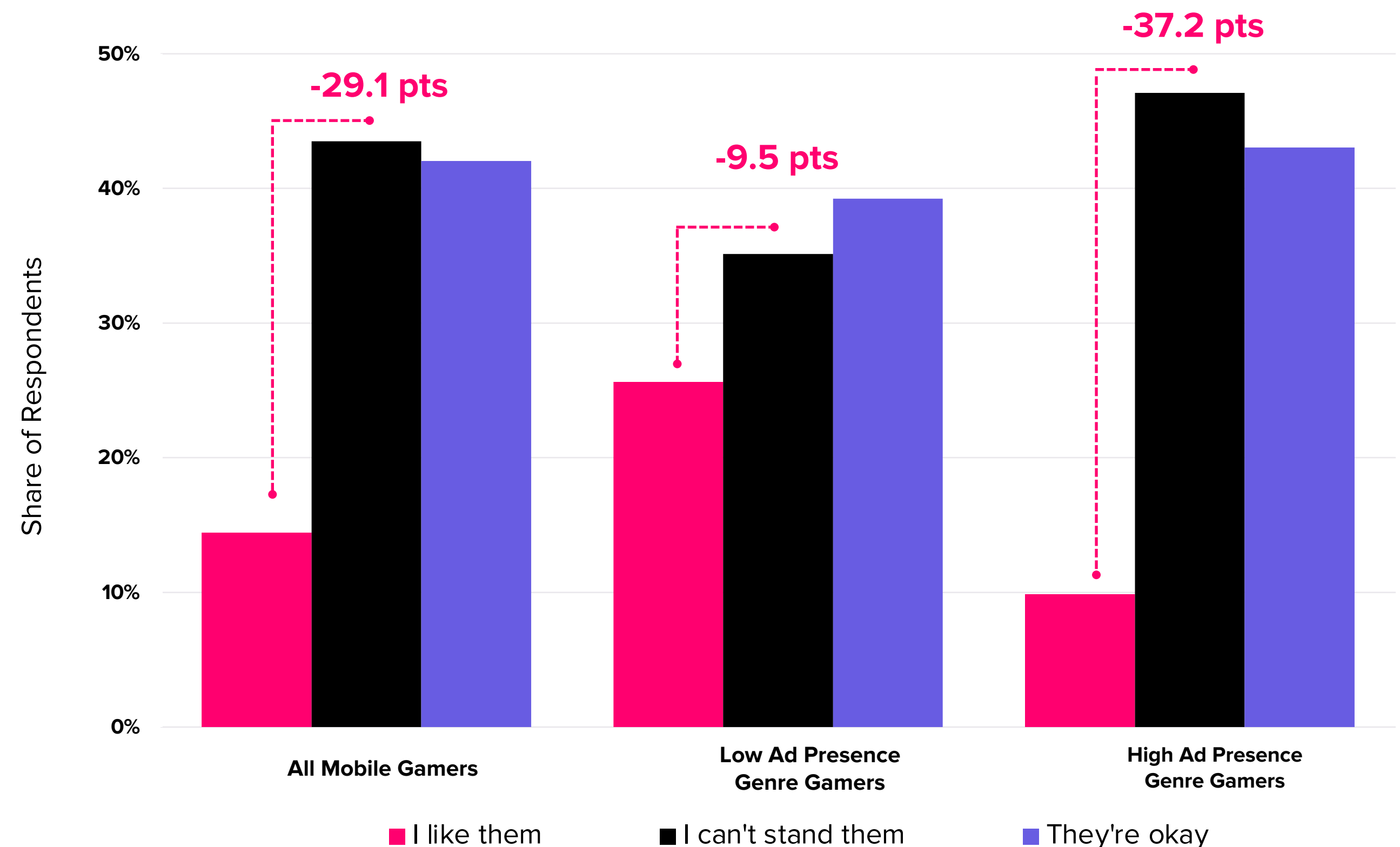
Q3 2020 n=3,487

Source: IDC's 3Q 2020 US Gamer Survey; The results shown above include only respondents that saw rewarded video ads.

...And This Sentiment Gap Was Especially Wide in the Case of Video Ads

- The difference between liking and disliking video ads was much starker for this format between the low and high ad saturation genres — **with many gamers finding a high saturation of video ads frustrating (the net sentiment gap among gamers in the low and high ad presence genres was 27.7% in the US in 3Q 2020).**
- This indicates some mobile games are oversaturated with video ads — a format without an immediate value exchange for viewers, and potentially taking over the gameplay compared to a banner ad (that often take up a modest portion of the game screen).
- **The upshot is that rewarded video ads represented the clearest bright spot in the mobile in-game ad marketplace (from gamers' perspective), followed by playable ads.**

US Gamer Sentiment Towards Video Ads,
Cut By Viewers In Grouped Genres, Q3 2020



Q: What genre / type of games have you played on [your primary smartphone or tablet] in the past three months? [And:] In which of the genre(s) that you played a game in recent months on this mobile device did you see an in-game ad? [Option selected:] I've seen video ads and...

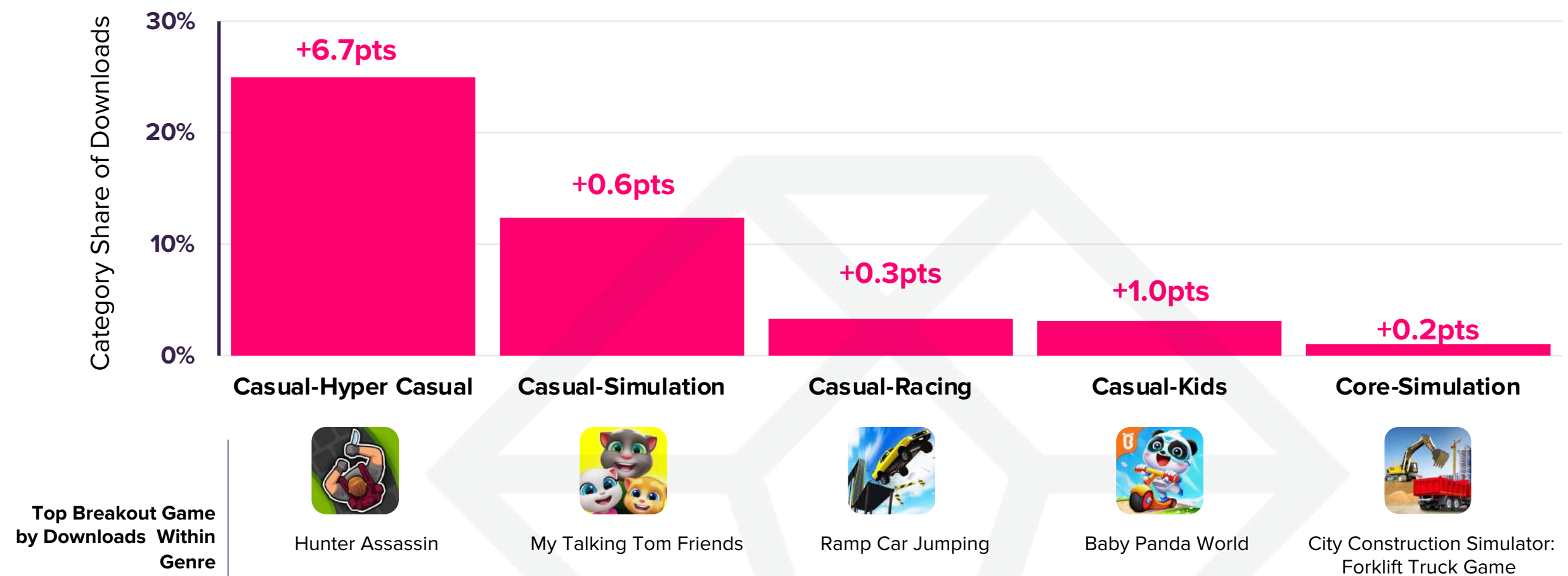
Q3 2020 n=3,487

Source: IDC's 3Q 2020 US Gamer Survey; The results above include only respondents that reported seeing video ads.

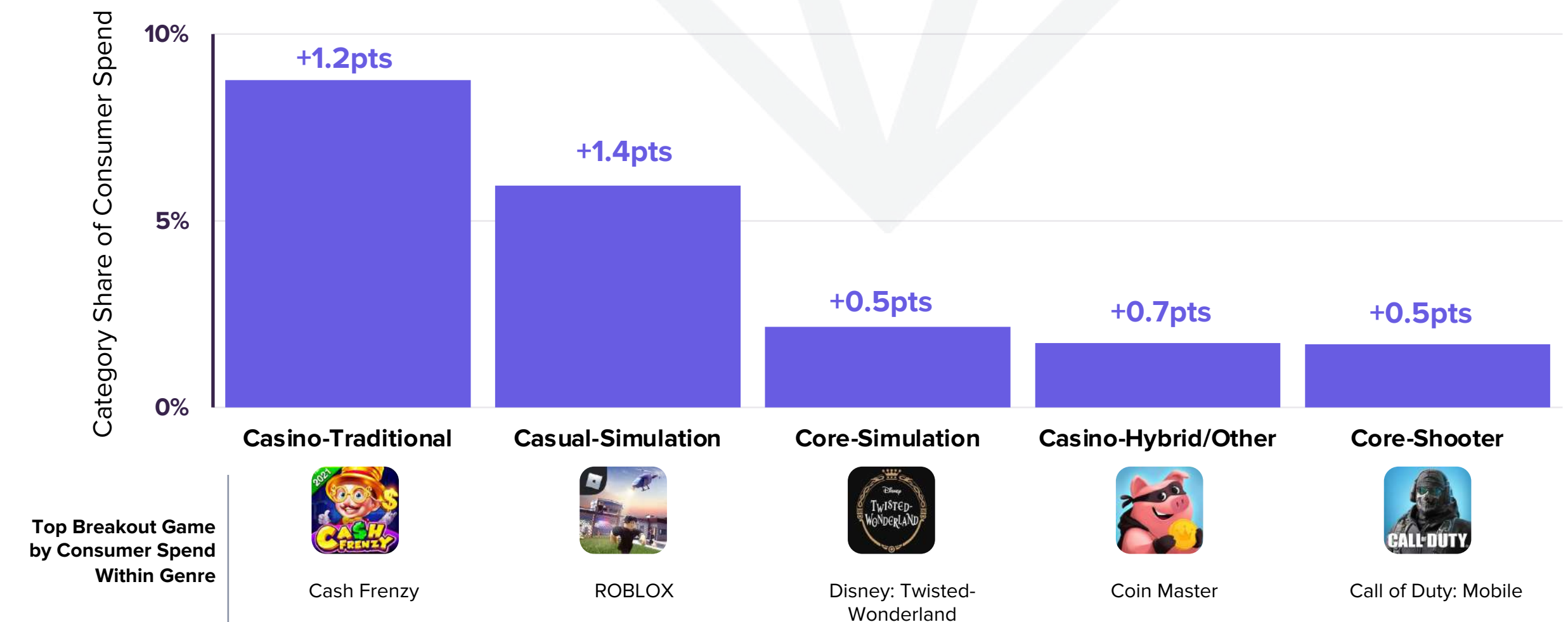
Appetite for Easy-to-Play Hyper-casual & Simulation Games Surged Last Year

- While consumers are stuck indoors, the gaming subgenres that saw the greatest growth in market share by downloads during this time were Hyper-casual (+6.7pts), Kids (+1.0pts), Simulation (+0.6pts), and Racing (+0.3pts) — **games tuned for the casual audience and designed for shorter sessions.**
- Rewarded and playable ads have the highest net opinion, among US gamers at least, and should be considered in the game experience.
- Roblox* topped the rankings of breakout games in 2020 by consumer spend, as the game provides deep social and online features. **Social, online PvP play and cross-platform capabilities are poised for strong adoption in 2021.**

Top 5 Game Genres By Growth in Downloads Share
2020 vs 2019



Top 5 Game Genres By Growth in Consumer Spend Share
2020 vs 2019



Source: App Annie | Note: 2020 vs 2019

KEY THEMES + TAKEAWAYS

2021: GAMING SPOTLIGHT

Key Themes & Takeaways

- Mobile is now the primary driver of growth for digital games consumption, increasingly becoming the world's preferred form of gaming, and **central to a robust cross-platform experience**.
- The top two grossing games on mobile Q1 2021, *ROBLOX* and *Genshin Impact* featured cross-play features, demonstrating that **cross-platform connectivity and the ability to share progress and play across different platforms aren't just novelties, they may prove essential for long term growth**.
- As consumers are spending more time at home and finding new ways to connect with others, **we expect cross-platform games to continue gain relative ground versus mobile-only games** — a trend that should allow more console-quality experiences to be available in the pockets of every smartphone owner.

2021: GAMING SPOTLIGHT

Key Themes & Takeaways (Continued)

- A year into the COVID-19 pandemic, **demand for mobile gaming has remained strong with no sign of slowing down.** Users are downloading 30% more mobile games per week in Q1 2021 than in Q4 2019 and spending 40% more compared to Q4 2019.
- Sentiment towards in-game mobile ads improved in Q3 2020 compared to Q3 2019, according to a survey of US gamers in Q3 2020. Not all ad formats were equally regarded, however. **Rewarded video and playable ads were gamers' preferred ad format in the US.**
- Oversaturation could become a significant problem for games that monetize through ads. **In the US, consumer opinion of in-game ads is much better among gamers that see fewer of them.** There's a sentiment disparity by ad type as well. Ads that leverage an immediate value exchange tend to skew more positively than those that don't – especially video ads.

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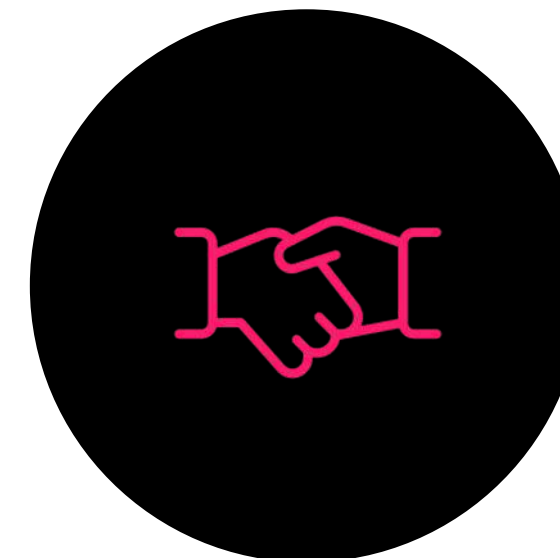
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More than **1,100 analysts** located in over **50 countries**, with **49% in emerging markets**

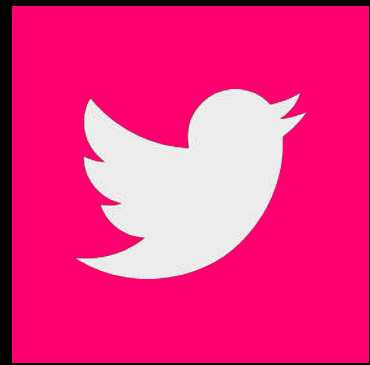
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IDC's [Gaming and eSports service](#) advises video game development studios, publishers, distributors, retailers, hardware system and peripheral manufacturers, and related brands and advertisers about the video game industry from a global and regional perspective.



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