App Annie NASSCOM GAMING FORUM

Mobile Gaming on the Rise in India

Market Intensifies as Gamer Population Surges

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Table of Contents

Executive Summary	3
Growth of the Indian Mobile Gaming Market	6
Characteristics of India's Mobile Gaming Market	11
Opportunities	16
About App Annie	20

Executive Summary

- India presents a ripe opportunity for local and foreign mobile game publishers and investors, as it is poised for stellar growth in the coming years. Total game revenue in India from local and foreign publishers is forecasted to reach as high as \$1.1 billion by 2020. This forecast is calculated by App Annie and is determined in its sole discretion independent of NASSCOM.
- Growth in the Indian mobile gaming market will be catalyzed by rising adoption of more powerful smartphones, as well as universal implementation of direct carrier billing.
- Indian gamers continue to embrace globally popular titles, with games such as *Candy Crush Saga*, *Clash of Clans* and *Subway Surfers* still dominant across download, revenue and usage rankings.
- Local publishers are enjoying increasing success in simulation, sports and social card games. In particular,
 Teen Patti social card games are seeing noteworthy success and drawing wider attention as publishers look to capitalize.
- Multiplayer and social features are key engagement drivers critical to the success of games in India. Game publishers in this market should draw on these proven game mechanics and incorporate localized and culturally relevant content to grow their user base.

The Technology Behind the Report

App Annie helps companies build better app businesses and is used by 94 of the top 100 publishers across the globe. From competitive benchmarking to international expansion, we deliver the data and insights needed to succeed in the app economy.

The information contained in this report is compiled from <u>App Annie Intelligence</u>, the leading market data solution for the app economy. To see how our app store data for download, revenue, demographic and usage estimates can help guide your critical business decisions, <u>request a demo today</u>.



EVALUATE & ASSESS

Identify market and investment opportunities by validating usage trends by country.



ACQUIRE & GROW

Identify high-performing creatives and keywords to optimize organic and paid user acquisition efforts.



DEVELOP & LAUNCH

Validate your app strategy and roadmap by analyzing the usage and demographic trends of key competitors by country.



ENGAGE & MONETIZE

Monitor active user and revenue growth to identify high performing publishers.



RETAIN & NURTURE

Increase retention and enhance app features based on user feedback and engagement metrics.

App Annie Is the Most Trusted Partner in the App Economy



Over 700,000 registered members rely on App Annie to better understand the app market, their businesses and the opportunities around them.











Growth of the Indian Mobile Gaming Market

India Breaks into Top Five, Fast Becoming a Major Gaming Market





Top Countries by Game Downloads iOS App Store and Google Play, Q2 2016

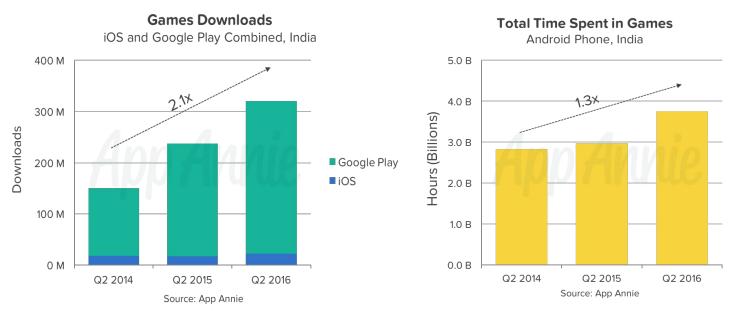
Rank	Category	Rank Change vs. Q2 2015
1	United States	-
2	China	A 2
3	Brazil	▼1
4	Russia	v 1
5	India	^ 2

Source: App Annie

India's mobile app market has drawn plenty of attention this year as it continues to grow at breakneck speeds. Globally, games have been the key driver of mobile app growth, but much of the hype around India has typically centered around its explosive online retail market. That could be about to change: In Q2 2016, India ranked fifth globally by game downloads, jumping two places up the rankings compared to the same quarter in the previous year. It is expected to surpass both Russia and Brazil in the coming years.

Limited access to gaming consoles and PCs has traditionally kept electronic gaming out of reach for the majority of Indian consumers. However, <u>surging adoption</u> of low-cost but powerful smartphones has enabled mobile gaming to take off in a big way and India is well positioned to be the next major gaming market.

Game Downloads Soar With Google Play Leading the Charge in India

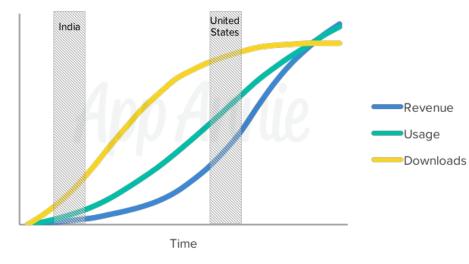


The Indian gaming market is rapidly growing, with the bulk of the growth in both downloads and revenue driven by Google Play, as proliferation of low-cost Android devices across lower-tier Indian cities continues to rise. Between Q2 2014 and Q2 2016, game downloads in India more than doubled, with Google Play generating 13 times more downloads compared to iOS.

Additionally, the overall amount of time Indian users spent in mobile games grew sharply over the past year, and will continue to increase as more Indian mobile users gain access to games.

India's Downloads and Usage Growth Paves Way for Game Monetization

App Market Maturity Model



Source: App Annie

As discussed in App Annie's <u>App Market Maturity Model</u>, the relationship between downloads, usage and revenue are deeply intertwined.

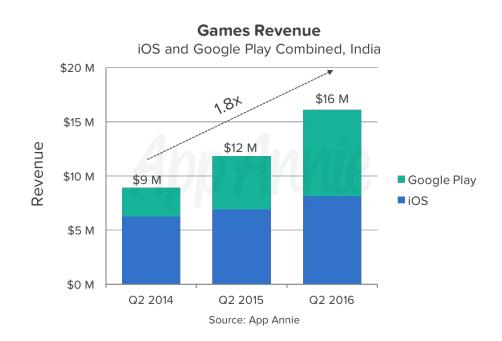
Mature markets like the United States are in the midst of a shift from a download growth phase to one characterized by strong app usage and revenue growth. Meanwhile, emerging markets like India are still experiencing hypergrowth in app downloads, including games. Gaming habits develop gradually as users interact with a subset of favorable game genres and spend more time playing.

At the current stage of growth, game monetization in India has yet to peak, quagmired by existing challenges in infrastructure, payment channels and low spending habits. Nevertheless, improvements in wireless network coverage and affordability of telecommunications services, coupled with continued initiatives to extend direct carrier billing will open up ample opportunities for game publishers to scale their user acquisition and monetization activities in India.

Game Revenue Up 80% as India's Game Spend Increased

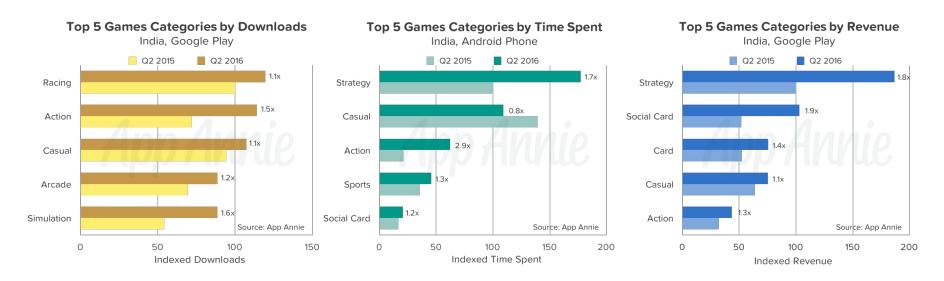
App store revenue from games posted 80% growth between Q2 2014 and Q2 2016. While iOS constitutes less than a tenth of game downloads, iOS gamers contributed around 70% of combined iOS and Google Play store revenue in Q2 2014. This suggests that spending was largely contained within the more premium segment of the market. Google Play revenue grew to match iOS in Q2 2016, as mobile gamers from the majority — Android users — started spending. We expect this trend to continue.

High-end Android smartphones are also increasingly popular, challenging Apple's longstanding dominance in the premium segment. This will in turn contribute toward Google Play's growing app spend. While absolute revenue remains relatively small, the launch of Google Play prepaid vouchers and the lowering of the minimum price tier for apps and in-app purchases from Rs 50 to Rs 10 (US\$ 0.15) in 2015 should continue to incentivize publishers to launch games in India.



Characteristics of India's Mobile Gaming Market

Strategy and Social Card Games Drive Monetization



Download growth between Q2 2015 and Q2 2016 can be observed across nearly all gaming categories on Google Play in India, as its emerging user base continues experimenting with different types of games. However, Q2 2016 highlighted a shift in India's gaming behavior, with a significant increase in time spent in immersive strategy games versus casual games compared to the same quarter in the previous year.

While convincing users to spend money on games remains a challenge in India, two categories stand out for solid improvements in monetization: strategy and social card games. The latter has been able to ride on the success of mobile adaptations of traditional Teen Patti card games.

Strong Western Influence in India's Gaming Market



Top Games by Downloads, India

iOS App Store and Google Play Combined, Q2 2016

Ran	k	Арр	Company	Genre	Company HG
1		Candy Crush Saga	Activision Blizzard	Casual	United States
2		Subway Surfers	Kiloo	Arcade	Denmark
3		Temple Run 2	lmangi	Action	United States
4		Train Simulator 2016	Timuz	Simulation	India
5		Doodle Army 2 : Mini Militia	Appsomniacs	Action	United States
6		My Talking Tom	Outfit7	Casual	Cyprus
7		Racing in Car	Fast Free Games	Racing	Turkey
8	- 10	Traffic Rider	Soner Kara	Racing	Turkey
9	3	Hill Climb Racing	Fingersoft	Racing	Finland
10	1	Clash of Clans	Supercell	Strategy	Finland
			Source: App Annie		

In India, games popular globally monopolized the top ranks by downloads in Q2 2016, with mainstream favorite Candy Crush Saga comfortably securing the top spot. Endless runner games are also a favorite among Indian gamers, with fast-paced, arcade-style action games such as <u>Subway Surfers</u> and Temple Run 2 generating healthy download volumes as a result of their easy learning curves and high entertainment value.

The strong performance of global publishers has not completely dampened opportunities for Indian publishers to break into the top download charts. One example of a successful locally published game is <u>Train Simulator</u> 2016, which reached #4 in the ranks. Released in March 2016 by Timuz, the game features an endless runner mechanism mixed with familiar themes and settings from India's railway network, which is one of the most extensive in the world. Other games by Timuz have also gained traction, with Bike Racing Mania peaking at #1 in Google Play daily downloads in early April. Between Q2 2015 to Q2 2016, the combined number of iOS and Google Play downloads in India across all games published by Timuz grew approximately 20x.

With demand for games rising rapidly in India, there will be plenty of opportunities for overseas publishers to invest and acquire new users alongside local studios.

Social And Multiplayer Predicate Usage Success Local Publishers Fill Unmet Gaming Gaps by Tapping Into Local Pastimes

As previously highlighted, time spent in games in India is also showing rapid growth. Strategy games dominate, with *Clash of Clans* and *Clash Royale* ranking in the top three in Android phone games by time spent. Both titles, along with *Candy Crush Saga*, have developed a sizable base of active users in India, and leverage heavily on multiplayer and social functionalities as key retention hooks.

Social elements are crucial, but Indian game publishers have also succeeded in tapping into Indian cultural habits and activities to create hit games. Teen Patti is an Indian version of a three-card social game traditionally enjoyed as a social activity, but is now frequently played on smartphones as well. Octro's *Teen Patti* is currently the most popular variant, but new Teen Patti titles continue to emerge.

Despite being the <u>most popular sport</u> in India, the cricket mobile game genre has yet to really take off. Local publisher <u>Nextwave Multimedia</u> has attempted to capitalize on the lack of quality cricket games and successfully brought the experience to the mobile platform. Released in July 2015, <u>World Cricket Championship 2</u> quickly entered the top 10 and saw substantial gains in active user base over its predecessor, <u>World Cricket Championship</u>.



Top Games by Time Spent, IndiaAndroid Phone. Q2 2016

Ranl	k	Арр	Company	Genre	Company HQ
1	1	Clash of Clans	Supercell	Strategy	Finland
2		Candy Crush Saga	Activision Blizzard	Casual	United States
3	1	Clash Royale	Supercell	Strategy	Finland
4		Doodle Army 2 : Mini Militia	Appsomniacs	Action	United States
5	80DA	Candy Crush Soda Saga	Activision Blizzard	Casual	United States
6	7	Hay Day	Supercell	Casual	Finland
7	50	8 Ball Pool	Miniclip	Sports	Switzerland
8	Patti	Teen Patti	Octro	Social Card	India
9	100	Subway Surfers	Kiloo	Arcade	Denmark
10		World Cricket Championship 2	Nextwave Multimedia	Sports	India

Source: App Annie

Cultural Awareness Also Helps Indian Publishers Generate Revenue Success





Top Games by Revenue, India

iOS App Store and Google Play Combined, Q2 2016

Rank		Арр	Company	Genre	Company HQ
1		Clash of Clans	Supercell	Strategy	Finland
2		Candy Crush Saga	Activision Blizzard	Casual	United States
3		Clash of Kings	Elex Technology	Strategy	China
4	Patti	Teen Patti	Octro	Social Card	India
5	8	Clash Royale	Supercell	Strategy	Finland
6	TEN PATTI	Ultimate Teen Patti	Play Games24x7	Social Card	India
7	****	Zynga Poker	Zynga	Casino	United States
8	34 PATTI	Teen Patti Gold	Moonfrog	Social Card	India
9		Mobile Strike	MZ	Strategy	United States
10	13	8 Ball Pool	Miniclip	Sports	Switzerland

Source: App Annie

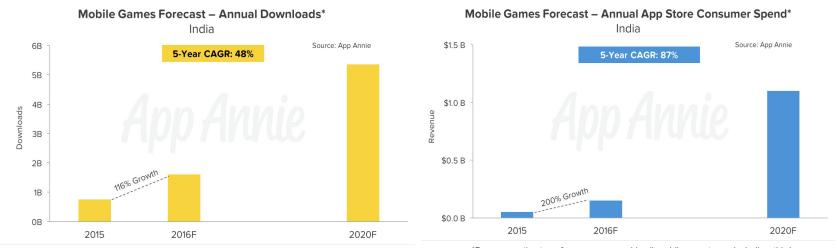
With Indian users spending so much time in strategy games, it is unsurprising that 4 of the top 10 games by revenue in Q2 2016 were leading strategy titles. It is worth noting, however, that many local publishers are monetizing relatively well with Teen Patti games.

As previously highlighted, Teen Patti in India is more of a social experience rather than a gambling activity. So even in the absence of a stake and the chance of a real-money return, players return to these games to interact with friends and family. Teen Patti games generate revenue via gifting, which is a common feature among the top revenue-generating games in India. Spending virtual chips to send gifts such as flowers and rings enhances the experience for gamers and subsequently increases engagement.

Understanding these unique cultural dynamics will help both local and foreign publishers achieve greater success in the Indian market.

Opportunities

Indian Mobile Gaming Market is Set for Rapid Growth



*Downloads Forecast of all mobile app stores, including third-party Android stores.

*Revenue estimates of consumer spend in all mobile app stores, including third-party Android stores.

Looking ahead, App Annie forecasts accelerated growth in the Indian mobile app market, with ample opportunity for both local and foreign publishers. We project app store downloads for all games — foreign and domestic — in India to more than double to 1.6 billion in 2016, and reach 5.3 billion by 2020. Adoption of smartphones by the expanding middle class will continue to be a significant growth driver, as handset vendors intensify their focus on lower-tier cities.

As economic prospects improve for India's large, youthful population, India's gaming market is poised to soar as well. Gamers are exploring global hits, and downloads and usage are exploding across many categories. Engaged gamers are already spending more time in games and paying for game content. We expect game revenue to grow at a CAGR of 87% to reach as high as \$1.1 billion by 2020. This forecast is calculated by App Annie and is determined in its sole discretion independent of NASSCOM.

Learn from Cultural Traditions and Incorporate Social Elements for Success

The anytime, anywhere nature of mobile gaming has enabled it to become a key platform in India for both online and offline social interactions. *Candy Crush*'s nationwide popularity in India was predominantly driven by young women. It has sustained its popularity by becoming an outlet for competition as players strive to outscore their friends.

As previously highlighted, Teen Patti mobile games have also enjoyed a measure of success through their social elements. These games have helped players cross both the physical divide as well as the generation gap, allowing a time-honored tradition to live on through mobile, even beyond the Diwali festive period. Octro has been very successful in engaging all segments of the Indian community by releasing versions of its Teen Patti games in Hindi, Marathi and Gujarati. They have also effectively leveraged mobile advertising to acquire new users, utilizing video ads that showcased lively interactions between friends and family. In fact, these games rose to take the #1 and #4 ranks for the highest share of Vungle's Android phone ad impressions for the week of June 19 to June 25, 2016 in India.





Octro's successful video ads emphasize the social aspects of its Teen Patti games. Monitored via App Annie Intelligence.

Several Mainstream Trends Remain Untapped

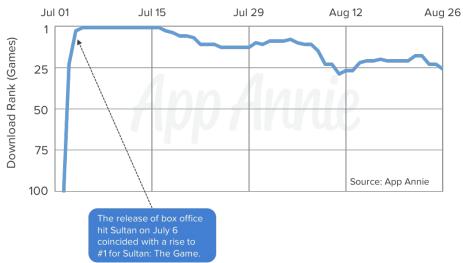
Localizing games for emerging markets is not just about language. Each country has unique tastes and preferences, and India is no exception.

We have seen examples of celebrity themed-games that achieved phenomenal success globally, though this type of success has yet to truly be replicated in India despite the popularity of Bollywood. There are indications that this model could work, with publishers such as Robosoft releasing titles like *Dhoom:3 The Game* and *Fan: The Game* which broke into the top 10 game rankings by downloads in India. It managed to surpass this achievement with *Sultan: The Game*, which was adapted from the fourth-biggest Hindi film of all time. The game maintained its leadership in India's download rankings for roughly two weeks after the movie was launched.

The incredible popularity of cricket also creates opportunities for Indian publishers. Games like *World Cricket Championship 2* have found success despite the absence of licensed teams and players. Improvements in this area as well as leveraging athlete endorsements could boost the popularity of cricket as well as other sports games.



Download Rank History - Sultan: The Game Google Play, India, July 1—August 26, 2016



About App Annie

App Annie delivers the most trusted app data and insights for your business to succeed in the global app economy. Over 700,000 registered members rely on App Annie to better understand the app market, their businesses and the opportunities around them. The company is headquartered in San Francisco with 450 employees across 15 global offices. App Annie has received \$157 million in financing from investors such as e.Ventures, Greenspring Associates, Greycroft Partners, IDG Capital Partners, Institutional Venture Partners and Sequoia Capital. For more information, please visit www.appannie.com.

Report methodology and updates are available here.

About NASSCOM Gaming Forum

NASSCOM® is India's premier trade body and chamber of commerce for the IT industry, and the NASSCOM Gaming Forum was set up ten years ago to provide a common platform to share best practices and knowledge to developers and businesses within the Indian gaming industry, especially the burgeoning indie game dev community. NGF is today the de-facto industry body for games in India.

NASSCOM is a global trade body with more than 1800 members, which include both Indian and multinational companies that have a presence in India. NASSCOM's membership base constitutes over 95% of the industry revenues in India and employs over 3 million professionals.

