Beyond Downloads: The Quest for App Usage in Leading Mobile Games

Introduction

As the mobile application market—the app economy—has matured in the past years, the key performance indicators (KPIs) that app developers and publishers use to measure and benchmark their titles' success have also evolved. In the industry's early days, an app's "momentum" was measured largely in terms of revenues and downloads. While revenue is still the ultimate measurement of success for most commercially developed apps, download-centric metrics have clearly lost much of their initial strategic importance. Download totals and download velocity still matter, but besides such KPIs, the industry has also started paying greater attention to application usage metrics, including, for example, user penetration and user engagement.

There are several reasons why usage-based KPIs are regarded as increasingly critical information, but two in particular stand out. First, when it comes to monetization the old pay-per-download model has made way for in-app purchasing. The latter, incremental monetization model has proven particularly transformative in the single most valuable app category: games. And second, the app economy has also become a much more diverse space than it used to be, with more and more releases that are not meant to generate (at least directly) revenue in the first place. Free apps are being offered from brands to consumers to drive marketing, from employers to employees to mobilize workforces, and from governments to citizens to facilitate digital access to public services.

These trends mean that it is now more important than ever to have intelligence on apps' entire lifecycles. Download metrics indicate essentially how well the app is performing marketing-wise, since they are, after all, about bringing the app to the customer. Usage metrics, meanwhile, tell another side of the story: what happens to the app once it has reached its audience. This post-download performance has more to do with the actual product and how the customer is using it.

Knowing how other titles are performing in terms of usage allows developers and publishers to gain an informed understanding of their competitive position. Moreover, by tracking the wider usage trends in the market, industry players can also spot country-level signals of shifting consumer preferences in earlier stages. Early intelligence on these types of changes helps the app economy's stakeholders react faster and make better decisions in this extremely dynamic marketplace.

Methodology

For this whitepaper, ABI Research has collaborated with Mobidia to demonstrate the value of usage insight. Traditionally, comprehensive and reliable data on app usage have been difficult to come by, but thanks to Mobidia's unparalleled proposition in usage analytics, we have now been able to gain a whole new level of transparency and granularity over the market. Mobidia has provided the data, while ABI Research has brought to the table its analysts' expertise in quantitative analysis and knowledge of the industry.

The analyzed data sets refer to global usage. They have been gathered through Mobidia's My Data Manager application. In essence, this award-winning app serves also as a global consumer research panel, delivering fully anonymized data sets from millions of smartphone and tablet users. The panel is self-selecting by its nature, with each member knowingly opting into it by downloading and installing My Data Manager, which helps them manage their personal data consumption.

Therefore, its composition is, to a certain extent, biased toward consumers who are tech-savvier than the average. However, ABI Research believes that, all things considered, it is the most accurate source of independent usage data available. Although a degree of self-selection bias does exist, it is likely to be "softer" than, for instance, with more incentivized panels, given My Data Manager's ongoing mainstream adoption. Additionally, Mobidia's promotional work with over 20 mobile operators around the world, which involves the operators promoting, featuring, and recommending the app to their subscribers, also helps reach less tech-savvier users. The panel's representativeness is also improving even further, as its scale continues to increase.

At the moment, ABI Research considers the data on Android and iOS smartphones to be statistically significant. In the meantime, the statistical significance of tablet data, while steadily improving, is not quite there yet. The tablet-using members of the panel can already give an insightful view of trends and preferences among early adopters, but since these data points do not yet match the statistical significance of the smartphones, they have been excluded from the analysis provided in this study.

Focus on Gaming

The following analysis will take a dedicated look into games, which, as a segment, are by far the app economy's biggest money maker and the download generator. By the same token, owing to the high consumer demand for new mobile games, games are also the most thoroughly contested app category. One single hit can turn its developer into an astonishing growth story in a matter of months, but, similarly, one expensively developed, but badly received release can also flatten that same growth trajectory almost overnight. In such a hit-driven industry, the battle for the customers' eyeballs and entertainment budgets is fierce and success elusive.

Importantly, it should be highlighted that the presented findings are only a concise snapshot of all available usage data. There is a great amount of actionable insight and intelligence available on other application categories, individual countries, and alternative KPIs. Likewise, the data sets include all app titles that have seen usage within the panel. This study is an invitation to start digging deeper into the data and discovering the evolving dynamics of app usage.

Penetration and Engagement Explained

To get a high-level overview on what the smartphone games with the highest penetration of active users are, the *monthly penetration rate* makes the best yardstick. This metric refers to how many users in Mobidia's panel had used the studied app over the past 4-week evaluation period, with the data being updated on a weekly basis. To calculate this, the total number of the app's monthly active users (MAUs) is divided by the total number of users captured in the panel during the same period. This then results in that app's monthly penetration rate.

While monthly penetration is a good enough definition of which of the customers who have installed the game should be considered its active users, it is an admittedly modest target for many of the leading titles, whose monetization often relies on building up a sufficiently large pool of frequently engaged gamers. The larger this "pool of the engaged," the better the chances for converting free-to-play users to in-app purchasers, which could be said to serve as the foundation of today's mobile gaming industry. In addition, higher penetration rates mean higher advertising income for the titles that involve in-app advertisements.

Therefore, alongside the MAUs, weekly active users (WAUs) are also worth tracking, since their attachment to the title is, by definition, much more intensive than that of the former group. For this purpose, we have distilled the monthly penetration rates to a weekly level. To determine this *weekly penetration rate*, the app's WAU base is divided by all users within the panel. WAUs are users who have launched the app at least once during the weekly evaluation period.

The charts in the following two sections present the data for the 10 mobile games that achieved the highest monthly penetration rates in 2013, shown separately for iPhones and Android smartphones. Besides the monthly penetration, the weekly penetration rates are also presented for the same games.

Moreover, to illustrate the differences between monthly and weekly usage of the apps, their respective *engagement rates* of the covered titles are presented as well. This metric is determined by dividing the number of weekly active users by the number of monthly active users. It is employed widely in the mobile application industry to track an app's performance over time. It has particular significance in gaming, where highly engaged users typically are critical for monetization.

The displayed data refers to the annual averages of the covered apps, calculated over all of the weekly evaluation periods during which each title saw active usage. For Android devices, the first weekly period started on December 30, 2012, and ended on January 5, 2013. The last period to be included in the analysis started on November 10, 2013, and ended on November 16. For iOS devices, the first evaluation period ran from June 16, 2013 through June 22. The final period was the same as with Android.

Penetration and Engagement Rates for iOS

If there is one takeaway to underline with regard to the competitive dimension of the gaming world's app usage, it is that King has hit a usage homerun with Candy Crush Saga. In iPhones, on average, a whopping 14.3% of the panel users opened the app at least once a month during the evaluated 22 weeks. Of these monthly users, 70%—or 10% of the panel's all iPhone members—interacted with the app on a weekly basis.

The developer King has certainly pulled many of the right strings when designing the user experience. The single biggest reason behind the success is possibly the way Candy Crush Saga caps the default number of lives at five, with each expired life being refilled after 30 minutes, unless the customer purchases more lives or receives help from friends. This kind of "usage buffer" keeps the game fresh for longer, thus contributing to long-term engagement. At the same time, it also serves as a clever technique for King to softly convert the most engaged free users to paying users, without alienating the more casual ones by appearing too aggressive.

Apart from the leader, no game penetrated 6% of the panel in terms of monthly iPhone users, although Imangi's Temple Run 2 came close with its share of 5.9%. Moreover, the last four of the Top 10 fell short of the monthly 2% milestone, demonstrating the relatively fragmented landscape that the high supply of quality games has led to in the iOS ecosystem.

There are also clear signs of two distinct groups existing among the leading titles. On one hand, there are games that are, if played in the first place, played strikingly often. Besides Candy Crush Saga, Zynga's Words With Friends Free, along with Supercell's Clash of Clans and Hay Day, also experienced weekly penetration that accounted for two-thirds or more of their monthly penetration rates. Bejeweled Blitz from PopCap can be counted as part of this group, too, despite its slightly lower engagement rate. All five of these games manage to attract their user base to play very often.

Of these games, Words With Friends has a durable concept and an inherent social aspect to maintain engagement. Meanwhile, the two Supercell titles are similarly well-known for their deeply social gameplay. Clash of Clans and Hayday also make interesting examples of cross-device gaming; they are primarily tablet games, but both have proven so engaging that they are also seeing very high usage on smartphones nowadays, as the gamers do not want to leave their farms and tribal settlements untended, even when they are on the move. Many users complement the primary gameplay sessions on the tablet with mobile "check-in" sessions from their smartphones.

On the other hand, there is a second group for which the nature of engagement is notably more casual. Temple Run 2, for one, engages "only" 47% of its audience on a weekly basis. Subway Surfers (by Kiloo), Despicable Me (Gameloft), Plants vs. Zombies 2 (PopCap), and the free version of Fruit Ninja (Halfbrick) are all titles whose WAU/MAU ratio hovers around or below 50%. These are classic casual games, which mobile consumers normally turn to when they have an idle moment in their lives. They obviously have users who play several times a week, but for the majority, the relationship with the title is more of the every-now-and-then variety.

Chart 1: Monthly Penetration Rates for Leading Smartphone Games on iOS, Worldwide, 2013

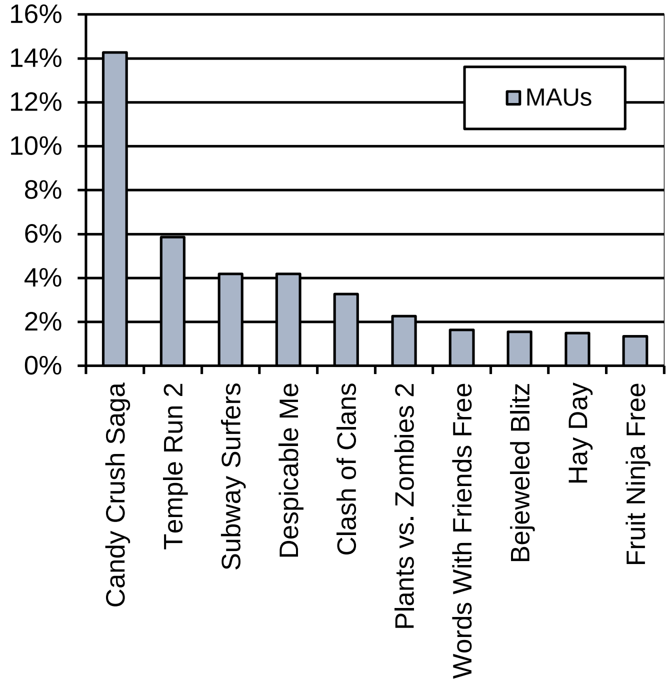


Chart 2: Weekly Penetration Rates for Leading Smartphone Games on iOS, Worldwide, 2013

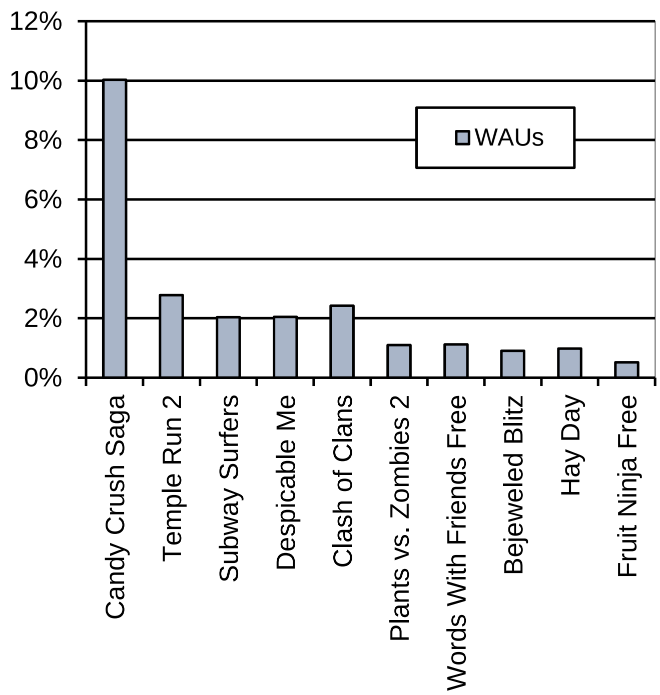
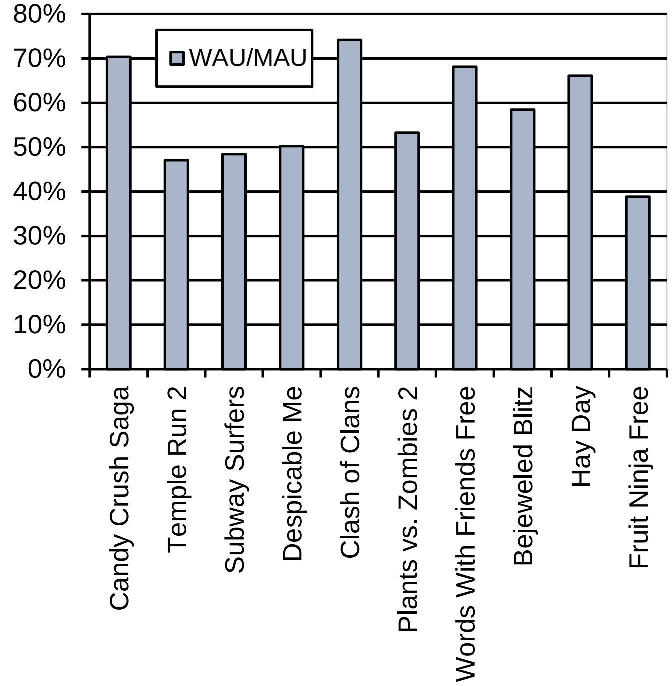


Chart 3: Engagement Rates for Leading Smartphone Games on iOS, Worldwide, 2013



Penetration and Engagement Rates for Android

The leading titles' penetration rates are, by and large, somewhat higher on Android than on iOS. The exception to this pattern is Candy Crush Saga, whose monthly penetration rate on Android was about two percentage points lower than what was achieved by its iOS version. Nine titles out of the Top 10 have their monthly rates comfortably above 2% of the panel. The most probable explanation for this overall trend is the more intense competition in the iOS application market, which fragments the landscape. Android is still lagging behind iOS when it comes to the release cycle of big-ticket games and, as a consequence, the games that become global hits on the platform face less competition over users' time and attention.

In the Android Top 10, four apps could be identified as high-engagement titles: Candy Crush Saga, Words With Friends Free, Subway Surfers, and Deer Hunter (Glu). All have engagement rates above 60%. Of this group, Deer Hunter, however, was released only toward the end of the evaluation window, so it saw active usage only for 8 evaluation weeks. This obviously props up the engagement rate, as the game has provided more novelty value than the other Top 10 titles. Notably, the two Supercell hits, Clash of Clans and Hay Day, were ported to Android only in October 2013, so their sample sizes were also rather small. For comparison, Clash of Clans got off to an encouraging start upon its release, achieving a monthly average of 1% of all Android smartphone users over the 7 weeks of evaluation. Nearly 80% of these MAUs counted as weekly actives.

Rovio's first iteration of Angry Birds, which on iOS penetrated 1% of the smartphone panel, was still used on 5% of Android handsets on a monthly basis over the year. This is quite remarkable for a title that was launched on Android already back in October 2010. On one hand, this must have to do with the iconic status that the original Angry Birds still enjoys, together with its admittedly compelling user experience. On the other hand, such stability in penetration may well also indicate the comparative softness of the Android app market, which was discussed earlier. In addition, the same franchise's Angry Birds Star Wars made the annual Top 10 with a share of 3.7%.

Chart 4: Monthly Penetration Rates for Leading Smartphone Games on Android, Worldwide, 2013

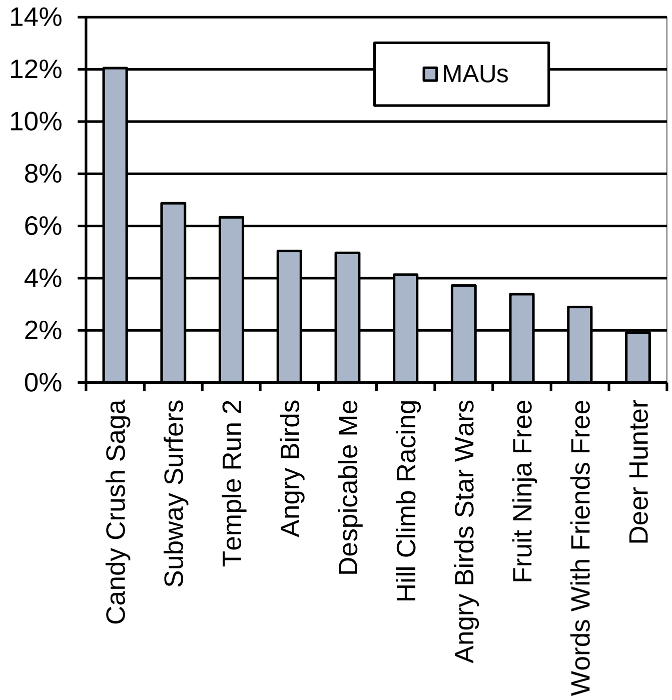


Chart 5: Weekly Penetration Rates for Leading Smartphone Games on Android, Worldwide, 2013

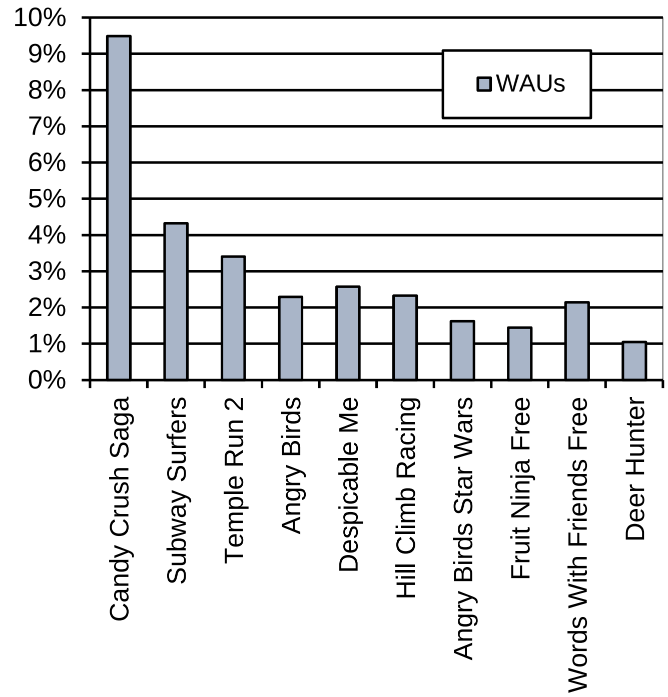
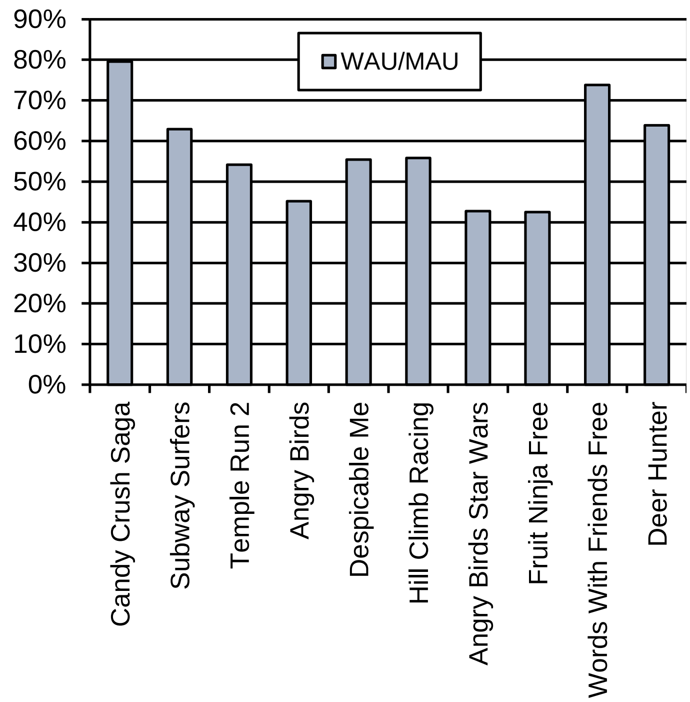


Chart 6: Engagement Rates for Leading Smartphone Games on Android, Worldwide, 2013



Digging Deeper: Weekly Sessions

Next, we dig deeper into the Android usage data and see how the leading titles compare with each other in terms of session count. We have included the five apps that out of the Top 10 had the highest number of weekly sessions per active user over the year. The graph below illustrates how the respective session totals of these overall top engagers evolved through the year of 2013. This gives a more detailed view on the engagement rates that were shown earlier.

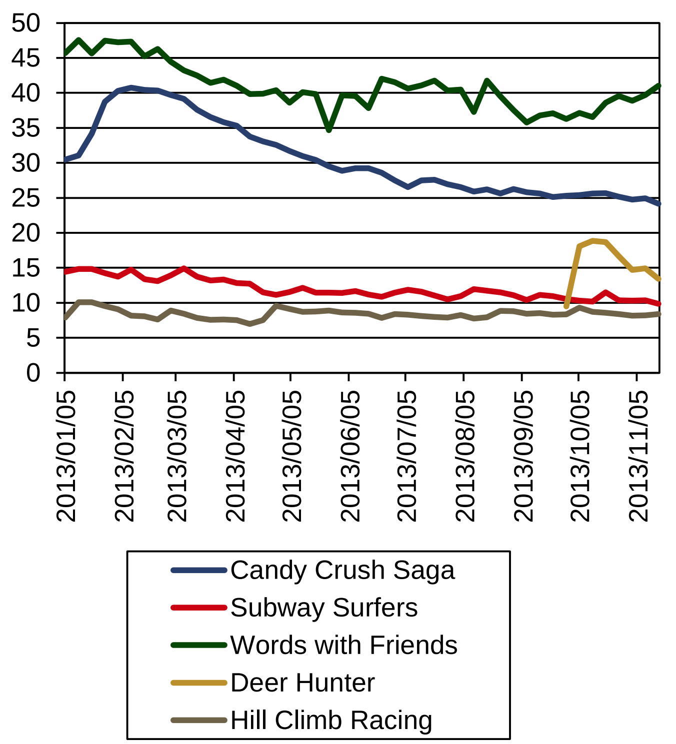
When focusing on the sessions, Words With Friends Free emerges as the most frequently opened app, with an annual average of 40.8 sessions per week. In the global mass market, this is clearly in a league of its own. Certain noteworthy titles outperform Zynga's hit, but they are either country-level phenomena or have much smaller sample sizes. GungHo's Puzzles & Dragons (with an average 102 sessions per user, owing predominantly to its success in Japan), and Clash of Clans (62.9 sessions per user, but over only 7 weeks of evaluation) serve as examples of such outliers. What is even more exceptional about Words With Friends is the fact that after declining to below 35 sessions in mid-2013, it managed to zigzag itself back above 40 in November.

Candy Crush Saga, meanwhile, seems to have peaked in February, when it surpassed the 40-session mark for 4 weeks. Since then, the app's session count has been in a steady decline, falling already below 25 in November. The title's relative share of WAUs, on the other hand, increased through the same period of time, reaching 13% of the panel, so this should not be seen as a source of major concern for King. The game's weekly following is still growing, but it is clear that the later-adopting fans are not nearly as intense as the early adopters.

Of the other titles, Glu's Deer Hunter provides interesting insight on the first weeks of a newly released mobile game. It reached 18 sessions in its first full week of availability and stayed in the same range for another 2 weeks, despite the rapidly growing mindshare in the market. In terms of WAUs, Deer Hunter increased its penetration from 1% in its first full week to 1.4% in the fourth full week.

Within the following month, the game's weekly session average, however, dropped all the way to 13.4 per user. This coincided with a slightly decreasing WAU share, with Deer Hunter closing the evaluation window with 1% of the weekly panel. The span of data for this game is not long enough to draw further conclusions, but these types of changes in such a short period of time tend to happen to games that are boosted by strong novelty value, which then starts wearing off varyingly quickly.

Chart 7: Weekly Sessions per User on Android Smartphones, Worldwide, 2013



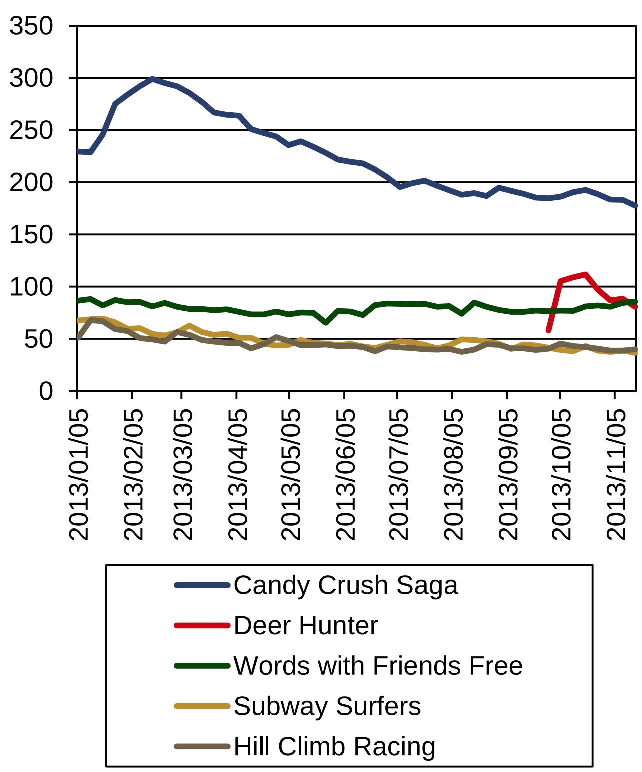
Digging Deeper: Weekly Minutes

Another KPI that can be used to distill the activity of WAUs in greater detail is the weekly minute count. This metric paints a somewhat different picture than the session count in the sense that it reduces the impact of short sessions and bumps up the significance of the lengthier ones. To cite an example from a typical use case for mobile gaming, the daily commute, the session count puts the spotlight on the apps that people play while waiting for a train at the station. The minute count, in turn, shifts it onto the titles they are likelier to play while traveling on that train.

When it comes to weekly minutes per user, Candy Crush Saga has no equal in the covered Top 10, having recorded an annual average of 225 minutes over 2013. The trend is clearly downward, largely following the same trajectory as with the sessions, and presumably for the same reasons, but even still, the game closed the final evaluation week in November with 177 minutes clocked per each WAU. That is a whole quarter-hour more than Words With Friends, Subway Surfers, and Hill Climb Racing combined!

Again, there are titles with even more outstanding numbers, yet they have less mainstream, or less global, footprints. Puzzles & Dragons, for instance, has a weekly average of 420 minutes per user, but few of these users are outside of Japan, where, in 2013 on average, it penetrated 16.8% of the panel's monthly actives and 14% of its weekly actives. These compare to global figures of 0.8% and 0.6%, respectively. LINE's Pokopang is another example of a domestic title that is hugely popular in Japan, commanding 8.2% of last year's MAUs and 6.3% of the WAUs, against the respective shares of 0.5% and 0.3% globally.

Chart 8: Weekly Minutes per User on Android Smartphones, Worldwide, 2013



Conclusions and Key Findings

- The top games on Android smartphones experience somewhat higher penetration rates than the top games on iPhones. This is most likely due to the fact that the iOS app market is still more competitive, with a greater supply of blockbuster-caliber games than that of Android.

- The smartphone users who play the leading games at least once a month tend to do so, surprisingly often, also on a weekly basis. For some titles, the weekly-versus-monthly engagement rate can be as high as 80%. For the Top 50 of the mobile games, as a whole, it is about 55%, for both Android and iOS.

- The comparison of engagement rates indicates that among the leading gaming apps, there are, by and large, two groups of titles. The games in the first group, if played at all, are played remarkably frequently. The second group's titles, in the meantime, clearly draw a more casual sort of engagement from their use base.

- Worldwide, King's Candy Crush Saga was, by most standards, the most popular smartphone game of 2013. Its penetration of both weekly and monthly active users was head and shoulders above the rest, and the game's weekly actives clocked, on average, nearly 4 hours per week playing it.

- However, when it comes to the average number of weekly sessions, there is no globally popular game that could match Zynga's Words With Friends. The game's free version recorded an average of over 40 sessions per week in 2013, demonstrating the customer base's habit of playing it in short but numerous bursts.

- Japan, which, by some measures, is already the world's largest app market, seems to live up to its reputation as a challenging space for foreign developers. Domestic hits like GungHo's Puzzles & Dragons, and LINE's Pokopang, dominate the local market, while seeing relatively little traction elsewhere in the world.

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Published January 29, 2014
Updated January 31, 2014

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