



Japan's Smartphone Surge and Its Impact on the Mobile Marketplace

After years of trailing the world's major markets, smartphone penetration in Japan has taken off — and significantly so, rising from just 15% of the population in 2011 to more than 75% today, according to the Communications and Information Network Association of Japan (see Figure 1).

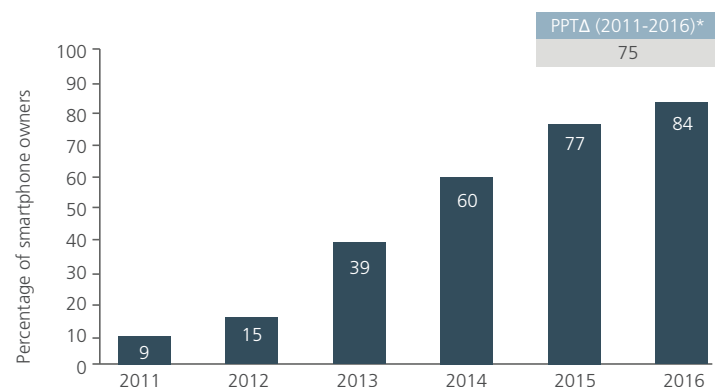
The surge in handheld devices has paved the way for an explosion in mobile application development in recent years, profoundly impacting a number of native industries. For example, news aggregation apps are expected to surpass traditional news outlets in the years ahead, becoming a touchpoint for a broader array of services, including e-commerce, shopping, promotions/coupons and more in the process. Additionally, mobile gaming will gradually replace home video systems as the preferred gaming platform, leading to increased revenues from in-app gaming purchases.

Not surprisingly, this growth in Japan's mobile-device market has piqued the interest of foreign businesses eager to capitalize on the region's newfound application fixation. Having a keen understanding of the nuances that separate Japanese consumers from their global counterparts is essential, however, in order for newcomers to successfully gain entry into this vibrant market. These factors include users' preferences for paid content as well as "freemium" apps with in-app purchasing capability, along with their higher-than-average app engagement relative to users in other regions.

Understanding Japan's mobile evolution

Japan was among the earliest adopters of handheld technology, bringing to market some of the first camera phones, mobile TVs and devices with remote email capability during the early part of the millennium. The country also launched its own high-speed cellular data service well before other regions, albeit utilizing a set of standards that were different from those used in the rest of the world.

Figure 1
Smartphone penetration in Japan, 2011-2016



*Percentage point difference (i.e., from 2011 to 2016, penetration increased 75 percentage points, from 9% in 2011 to 84% in 2016)

Source: Communications and Information Network Association of Japan (CIAJ), L.E.K. analysis

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That reliance on homegrown technologies and platforms, however, ultimately prevented consumers from participating in the global smartphone boom in the years that followed. Thus, while neighboring markets such as Hong Kong, South Korea and Australia led the way in smartphone penetration, the percentage of handheld users in Japan ranked among the lowest in the world at the start of this decade. The introduction of Long-Term Evolution (LTE) mobile data technology in 2010 marked the beginning of Japan's smartphone turnaround. Adopting the universally recognized LTE 4G standard reduced the need for dedicated "feature phones" that relied exclusively on a carrier's own cellular network, while LTE's faster data rates finally gave foreign smartphone makers a long-awaited foothold in the now-burgeoning Japanese market. And in 2014, a shift in regulatory policy paved the way for a surge in Japanese mobile virtual network operators (MVNOs), which are lower-cost carriers that lease data and voice capacity from major telecommunications providers.

With further growth expected in the years ahead, Japan offers a significant opportunity for mobile app developers that can successfully meet the unique demands of the region's customers. Thus, it is imperative that before making their move, businesses determine which industries are likely to benefit the most from Japan's mobile transformation.

Segments that are most likely to be significantly disrupted by the growth of mobile technology include the following.

News services. Compared with countries that enjoy broader-based handheld adoption, Japan has print media subscribership that has remained relatively stable: 43%, compared with just 17% in the U.S., (see Figure 2). That is likely to change, however, with the growth in app usage. By 2017, mobile news apps are expected to reach 44 million consumers, more than a third of the country's population, and to double the number of news apps available in 2014, according to ICT Research. Among Japan's leading news

providers is three-year-old aggregator SmartNews, which compiles a range of articles and employs algorithms to curate and deliver content to readers based on their browsing profiles. Others include SmartNews' chief competitor Gunosy, as well as business-news gatherer NewsPicks. The rise in digital-news consumption is expected to weigh on traditional outlets such as Yomiuri, Asahi and Nihon Keizai, particularly as news aggregation apps grow in popularity.





Communications. Falling data prices have led to an increase in mobile-messaging apps, which help users offset the cost of cross-carrier texting, emailing and voice calling. For example, LINE Corporation, the Tokyo-based subsidiary of Korea's Naver Corporation, offers a mobile-messaging app that allows users to make free calls and send messages regardless of their mobile network provider. (The LINE app is currently the largest of its kind, with around 70% of the Japanese market share.) According to L.E.K. Consulting, nearly all (95%) of Japan's smartphone owners utilized communication apps in 2015.

Additionally, Japan's users have shown a preference for private communication over Facebook, Twitter and other social media sites. Roughly two-thirds of Japanese consumers use communication apps primarily for data calling, instant messaging and email correspondence, rather than for traditional voice dialing. Because the Japanese tend to be more reserved in conversation, many have gravitated toward messaging apps that feature emoticons and stickers that can be used in place of text to convey one's feelings. For example, companies such as LINE offer a wide range of expressive stickers, many specifically reflecting aspects of Japanese culture. Stickers and emojis have become so popular that LINE estimates users send approximately 2.4 billion on a daily basis.

Gaming. Given Japan's robust video-gaming culture, it's no surprise that gaming apps have figured prominently in the country's mobile resurgence. In the past year, revenue from iOS-based mobile games surpassed 320 billion JPY, a year-over-year increase of nearly 40%;

by comparison, sales of Google's Android-based apps remained flat over this period, at 277 billion JPY (see Figure 3). Combined mobile-gaming app sales totaled 715 billion JPY in 2015, roughly 60% of all gaming revenue, making Japan the world's most profitable country for mobile gaming, ahead of China, Korea and the U.S. Notably, according to Flurry Analytics, Japanese women use gaming apps 35% longer than their male counterparts, have a 42% higher weekly retention rate and spend an estimated 31% more on in-app game purchases.

Figure 2
Benchmarking snapshot of key news media statistics

Country	Subscribe to print news (%)		Use phone for news at least 1x/week (%)		Share news via email / social media (2015, %)
	1996	2014	2013	2015	
	58	43	19	33	14
	39	26	NA	51.4	21
	22	17	28	44	32
	33	23	29	42	19

Source: Source: Reuters Institute for the Study of Journalism at University of Oxford, World Press Trends 2014, OECD, DCM Report by digieco research

There is still significant share gain left for smartphone news content in Japan relative to other geographies.

The Japanese news consumer prefers private news consumption to public.

Indeed, the breadth of Japan's smartphone expansion has prompted observers to project a wholesale reshaping of the country's gaming industry as users move away from lengthier at-home video and online gaming sessions in favor of on-the-go handheld gaming.

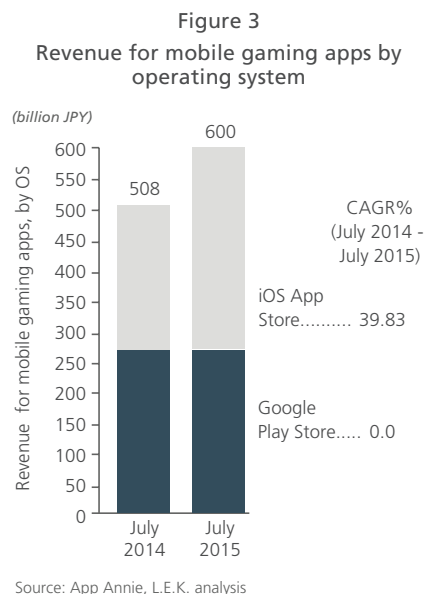
App monetization in Japan

Another distinguishing characteristic is Japanese consumers' preferences for paid digital content. According to data from Google's Our Mobile Planet tool, Japanese smartphone owners had an average of 18 paid apps per device in 2014, which is more than users in the U.S. (eight), the U.K. (six) and China (two) combined (see Figure 4). Leading paid-app categories include gaming (13%), music (10%) and app upgrades (8%). All told, Japan's app market leads the globe with an estimated 81% of mobile revenues derived from app-store purchases.

Meanwhile in-app purchasing (IAP) — the ability for users to buy add-on content such as gaming currency, upgrades or subscriptions within the app itself — continues to rise. In contrast to Western markets, Japan has experienced tremendous success with no-cost apps using IAPs for monetization. In 2014, the freemium-with-IAP model accounted for 94% of all app-generated revenues in the country. LINE estimates that over a third (34%) of its customers make in-app purchases of LINE stickers and related content, and more than two-thirds are repeat IAP users.

Additionally, successful game developers have been able to capitalize on customers' preference for IAPs by carefully researching user behavior and subsequently designing games with dynamic IAPs in mind. For instance, users are more likely to stick with games that are challenging but not excessively so, which encourages the purchase of in-app bonus features that allow users to remain competitive.

In July 2016, as part of its long-awaited Japanese rollout, Pokémon Co. (one-third of which is owned by Nintendo) and Niantic Inc. (co-creators of the wildly popular Pokémon Go augmented reality game), announced a partnership with McDonald's Holdings, making the fast-food giant's 3,000 Japan-based restaurants key locations for Pokémon gamers. The app, with over 17 million downloads in Japan as of September 2016, represents a watershed moment in the augmented reality genre, which has massive potential to drive real-world user behavior. As an example, on a September day in Tokyo, multiple police officers had to corral a stampede of hundreds



of players who swarmed the streets in an effort to capture a rare Pokémon that appeared in the middle of a busy roadway. Developer Niantic has confirmed plans to add additional sponsored locations for Pokémon Go, partnering with businesses seeking to drive additional foot traffic into their stores. With the immense quantity of user location data collected by the app, opportunities for data monetization abound.

Based on current trends, revenue from in-app advertising in Japan is expected to surpass that from web-based ads on both mobile devices and PCs within three years, according to new research from mobile analytics provider App Annie in conjunction with market and analysis company International Data Corporation. Strong customer engagement has been key to IAP ad monetization in Japan, with engagement rates for news apps SmartNews and Gunosy estimated in the 50%

range (on par with Facebook's global monthly utilization rate, for example). Unlike traditional banner-style advertising, in-app ads tend to blend in better with the native content, and are therefore less distracting to the user.

Though comprising a smaller share of the monetization pie, revenue from paid downloads was nonetheless substantially higher than that from freemium apps on a per-purchase basis. Between 2012 and 2014, Japan topped all comers with \$5.32 in revenue per download, roughly 2.5 times the U.S. download revenue in this period, according to App Annie's Distimo analytics service.

Keys to success

With more Japanese consumers owning smartphones than ever before, demand for mobile applications is likely to remain robust for an extended period. As we have seen, gaming has been a particularly fluid market; in the past year alone, half of the country's top 10 gaming apps were replaced by newer titles, a trend that is expected to continue into the coming year. Apps must continue to evolve post-launch to sustain high levels of user engagement. For example, the developer of Pokémon Go plans to add player-vs-player battles, live events and more Pokémon options to keep users engaged. Mobile-gaming profitability will likely outpace other segments, attracting additional nongaming developers like Google and LINE in the process.

Despite the impressive growth, however, gaining access to Japan's fertile mobile market can be challenging for outside participants. Among the country's top-grossing gaming apps, only a handful are produced by foreign developers, among them EU-based Supercell (Clash of Clans) and King (Candy Crush Saga), as well as Palo Alto's Machine Zone (Game of War).

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Hence, it is essential that prospective market entrants focus on critical success factors including the following actions:

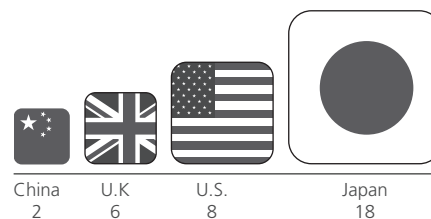
- Leveraging smartphone applications' vast data-collection potential and ability to drive real-world user behavior in lieu of other monetization methods (e.g., Pokémon Go's partnership with McDonald's)
- Identifying and capitalizing on sectors that are evolving due to the rapid expansion in mobile-application usage
- Catering to the unique needs of Japanese consumers regarding use of messaging apps and willingness to pay for content
- Developing apps that drive user engagement by targeting lucrative subsegments of the market

In addition to requiring major carriers to sell bandwidth to discount MVNOs, new government regulations calling for the unlocking of SIM cards from mobile carriers underscore Japan's intention to stay competitive on a global level. These and other liberalization efforts bode well for the future of Japan's mobile industry, and underscore the massive potential for mobile applications in Japan. Nonetheless, foreign entrants should be prepared for the occasional hiccup: Despite Japan being one co-creator's

home market, fears of server overloads prompted the makers of Pokémon Go to hold off releasing the game in Japan until late July, weeks after the app first debuted in the U.S. and elsewhere — much to the chagrin of Japanese users.

Indeed, the potential for strong growth exists in numerous categories, including “lifestyle” applications such as music, weather, entertainment and shopping. For prospective newcomers, then, the ability to offer unique, multifunctional apps tailored to the specifics of Japan's distinctive mobile market is key to achieving success in this potent marketplace.

Figure 4
Paid apps downloaded per smartphone user, by country, 2013



Source: Google our Mobile Planet, L.E.K. analysis



About the Author

Ray Fujii is a Partner and the Representative Director of L.E.K. Consulting's Japan practice. He has more than 16 years of experience directing consulting engagements focused on corporate strategy development, mergers and acquisitions, operational and organizational issues, and performance improvement. Ray has advised a diverse range of clients across a broad range of industries that include pharmaceuticals, medical technologies, diagnostics, consumer products, financial sponsors and manufacturing.

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