Executive Summary

Mobile gaming is on the rise and not just in the United States; it’s an international affair! Yet gameplay differs drastically across regions, and history plays a big part in how these different gameplay behaviors play out today.

In this paper we will analyze gaming landscapes, gameplay habits, and gameplay context in the United States, China, and Korea. Through this analysis we will better understand how to create a robust monetization strategy that accounts for the specific trends of each region.

Three themes will be discussed in this paper:

• How differences across markets impact the gaming landscape
• How gameplay and gameplay context differ across markets and what factors may contribute to these differences
• How mobile developers can tailor their acquisition and monetization strategies to each of these markets

Research Objective and Methodology

To better understand consumer attitudes and behaviors and to help identify gaming trends, InMobi conducted a research study among over 1,250 mobile gamers across the U.S., China, and Korea. InMobi recruited respondents via its mobile ad network during Q3 and Q4 of 2013. Results are representative of the mobile gaming populations in each respective market, including all major OS types.

Note: not all percentages add up to 100 due to rounding or participant ability to select multiple responses.

Base: Total = 1292, U.S. n = 616, China n = 343, Korea n = 333
Key Takeaways

• A country’s history and culture impact its gaming landscape. In China and Korea, video game bans and rampant piracy issues disincentivized many developers from creating localized games. In an effort to monetize their games, developers created highly social Massively Multi-player Online games that generated revenue from monthly subscription fees and in-app purchases. This, in turn, has impacted mobile gaming preference and trends in China and Korea to this day.

• Just as gameplay preference varies across markets, gameplay context also varies. While American, Chinese, and Korean gamers all tend to play mobile games as a way to kill time, American gamers are far more likely to prefer challenging games. American gamers are also more likely to play at home than Chinese or Korean gamers, and three times more likely to play games while watching TV. Chinese and Korean gamers are more likely to play while commuting than Americans.

• Mobile game developers should consider creating localized games for the East Asian Market. The demand is clearly present in China where gamers play and intend to download more gaming apps than either Americans or Koreans. The Korean game community is also thriving, generating the most revenue in the Google Play and app stores second to only Japan. Koreans are very comfortable making mobile purchases and are 47% more likely to make frequent in-app purchases than Chinese and Americans.

• The United States game market is maturing. Given the success of in-app purchases in China and Korea, developers should strongly consider implementing more in-app purchase opportunities within games geared towards Americans.

• Gamers’ expectations and behaviors are evolving. Game discovery is no longer limited to word-of-mouth recommendations and browsing featured apps in an app store. Instead, many gamers also discover games via complex mobile gaming platforms, mobile ads, or mobile and online reviews. Gamers also expect better game experiences, including the ads hosted within them. Emerging ad formats keep game experiences premium and are a way to further monetize mobile games.
Introduction

A Brief History of Gaming

In 1940, Edward U. Condon created the first recognized recreational computer game, NIMATRON, and in 1947 Thomas T. Goldsmith, Jr. and Estle Ray Mann filed a United States patent request for a “cathode ray tube amusement device.” Although NIMATRON weighed a ton (literally), and the amusement device was a primitive machine that did not require any computer programming or memory storage, these two developments paved the way for gaming as we recognize it today.

Initially, game research and production was costly; computer hardware and processing fees alone made the mainstream commercialization of video games prohibitive. However, advances in technology allowed for the popularization of video gaming, and in 1972, First Generation consoles were introduced to the mainstream consumer.

Fast forward to 1997, when Nokia introduced the concept of mobile gaming to the masses by pre-installing Snake on its stock phone (Nokia 6110). Immediately, competing phone manufactures followed suit, offering short snack-able games that mobile phone users could play to kill time. Early mobile phone game limitations included small screen sizes, limited processing power, and limited wireless connectivity.

Now, gaming, mobile gaming in particular, is an entirely different beast.
1. Gaming Landscape: How historical differences impact a country's gaming landscape

Newzoo estimates the global game market compound annual growth rate (CAGR) to be 6.7%, with revenues reaching $86.1B by 2016. Mobile gaming growth will fuel global game market growth and is predicted to increase market share by more than 100%. Mobile gaming will account for nearly 28% of the global game market at the expense of handheld and PC gaming revenues\(^1\).

1 CAGR and Market Share, by Device\(^1\)

<table>
<thead>
<tr>
<th>Device</th>
<th>CAGR</th>
<th>Share</th>
<th>Est rev</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV / Console</td>
<td>3.5%</td>
<td>32.4%</td>
<td>27.9 B</td>
</tr>
<tr>
<td>MMO’s</td>
<td>10.4%</td>
<td>22.7%</td>
<td>19.5 B</td>
</tr>
<tr>
<td>Social</td>
<td>-1.7%</td>
<td>7.3%</td>
<td>5 B</td>
</tr>
<tr>
<td>Handhelds</td>
<td>-15.0%</td>
<td>3.9%</td>
<td>3.4 B</td>
</tr>
<tr>
<td>Computer</td>
<td>-6.4%</td>
<td>5.8%</td>
<td>5.0 B</td>
</tr>
<tr>
<td>Tablet</td>
<td>47.6%</td>
<td>11.6%</td>
<td>10.0 B</td>
</tr>
<tr>
<td>Smartphone</td>
<td>18.8%</td>
<td>16.2%</td>
<td>13.9 B</td>
</tr>
<tr>
<td>Computer</td>
<td>-6.4%</td>
<td>5.8%</td>
<td>5.0 B</td>
</tr>
</tbody>
</table>

We researched the types of video game consoles our mobile gamers were playing. According to our study, American gamers play more non-PC console games than both Chinese and Korean gamers.

1a Alternate Consoles, Non-PC, by country

<table>
<thead>
<tr>
<th>Console Type</th>
<th>American Gamers</th>
<th>Chinese Gamers</th>
<th>Korean Gamers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sony PlayStation, etc</td>
<td>28%</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Nintendo Wii, etc</td>
<td>29%</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Microsoft Xbox, etc</td>
<td>29%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Nintendo 3DS</td>
<td>11%</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>PS Vita</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>14%</td>
<td>13%</td>
<td>13%</td>
</tr>
</tbody>
</table>
However, Chinese gamers are 30% more likely than American gamers to play computer games, but Korean gamers play computer games about as much as Americans do.

### 1b Mobile Gamers Who Play Computer Games, by Country

- **American Gamers**: 43%
- **Chinese Gamers**: 56%
- **Korean Gamers**: 40%

This phenomenon can best be explained by examining how each country's history can impact its own gaming landscape.

#### 1.1 United States

The home of “super-size value meals” and NASCAR, America is known as the country of excess. Americans approach video gaming no differently. According to ESA’s report titled, “2012 Essential Facts About the Computer and Video Game Industry,” 51% of American households own at least one dedicated game console, and those that do usually own an average of two². Similarly, our study found that 77% of American gamers play games on alternate platforms, including PCs, video game consoles, and handheld devices.

### 1.1 American Mobile Gamers Who Play Video Games on Alternate Platforms

- **Computer**: 43%
- **Sony PlayStation, etc.**: 28%
- **Nintendo Wii, etc.**: 29%
- **Microsoft Xbox, etc.**: 29%
- **Nintendo 3DS**: 11%
- **PS Vita**: 4%
- **Other**: 14%
- **None**: 23%

The history of video games can be traced to the United States, where some of the first computer games were created. Early video games were primarily created for computer science research, testing military strategy, or designed as military propaganda. In the 1960s, Ralph Baer introduced the idea of bridging video games to TV screens, and in the 1970s, the first video game console, the Magnavox Odyssey, was born.
The 1980s bred cheaper and more powerful consoles, and video game popularity grew. However, the rise of the personal computer, the over-saturation of the console market, and the infiltration of low-budget poor-quality games ultimately led to the North American Video Game Crash of 1983. America's blockbuster developers fell to ruins.

At the same time, Japan's Nintendo Co. was making large strides in the hardware and game development space. Determined not to make the same mistakes as the American video game industry, Nintendo implemented its SEAL of Quality program and created a chip to prevent unlicensed games from working on its devices. Packaged with its most popular games, such as Super Mario Bros., Nintendo was a huge success in the United States and rivaled Japan's other console super-power at the time, Sega Genesis. It wasn't until 2001, when Microsoft unleashed its Xbox, that the United States became competitive in the video game console space.

The violence in video games has sparked many debates in the United States. In 1993, Senator Joseph Lieberman argued to ban all violent videogames. This led to the formation of the Entertainment Software Rating Board, which imposed suggested age ratings on video game packaging. In 2005, California State Legislature passed a law forbidding the sale of violent video games to minors without parental supervision. However, in 2011 the United States Supreme Court overturned this law. According to the justices, video games are protected under the First Amendment. Unlike China and Korea, whose governments controlled the sale of video game consoles and games, the United States protected the rights of developers and retailers.

The video game industry thrived.

**1.2 China**

In 2000, China's Ministry of Culture issued a ban on consoles and game accessories in an effort to thwart youth mind degeneration. Immediately following the ban, computer gaming spiked, and has since remained China's primary gaming mechanism. Also in response to the ban, Nintendo released the iQue, a lower-quality console-type platform. The following charts show a disproportionately larger percentage of “other” gaming platform owners, as compared to big name console owners. In fact, “other” gaming console owners outnumber even Nintendo or Microsoft Xbox owners.
In September 2013, China lifted her ban on video game consoles and accessories. However, the cost of console and personal computer gaming and limited Internet connectivity will continue to prohibit many gamers from owning a personal gaming console. Until the recent widespread adoption of mobile devices, Internet cafés and arcades were the popular and affordable alternatives to console and PC gaming.

Even with the ban lifted and the socioeconomic advancement of many Chinese gamers, the threat of software piracy continues to deter many developers from producing single-player or localized console games. Instead, developers create complex-level Massively Multi-player Online (MMO) games and generate income through subscription fees or item purchases. In fact, China is the birthplace of developer 5 Minutes’ Happy Farm, a resource collecting game that influenced many of its social network predecessors (e.g. Zynga’s Farmville).
Today, China is the world’s largest mobile market subscriber base. According to eMarketer, China alone is estimated to comprise 30% of the global smartphone market. What does this mean for mobile game developers? China has a 33% smartphone penetration, accounting for 446.8 million smartphone users. America, on the other hand, has a 44% smartphone penetration, accounting for 140 million smartphone users. This means that if only ONE-THIRD of Chinese smartphone users play mobile games, there would be more Chinese mobile gamers than American smartphone owners!

And in China, mobile gaming is spreading like wildfire. Piracy and access to free games makes mobile gaming affordable and accessible to many gamers who otherwise would not have had the opportunity to play videogames. And the newfound ability to monetize gamers by in-app purchases and in-app ads now makes China a desirable market. As more developers become aware of the Chinese mobile goldmine, the popularity of mobile gaming will increase as these developers will clamor to climb the charts.

1.3 Korea

When Korea finally gained her independence from Japan during World War II, government leaders imposed a ban on Japanese cultural imports. While many U.S. households were playing Atari and Nintendo, Korean gamers were congregating at PC Bangs (Internet cafes) and playing highly strategic, highly social MMO games. When the ban on Japanese video games and consoles was lifted in 1998, Korea’s move to console gaming was limited – gamers had already built a strong PC bang community, and the price of video games, consoles, and PCs made private gaming less accessible. Even as Koreans gained access to consoles, developers still didn’t rush to localize games. Similar to China, Korea suffered from rampant piracy and knock-off issues; this, coupled with its large used-game market, made developers less eager to rush into the Korean game market.

1.3 South Korean Mobile Gamers Who Play Video Games on Alternate Platforms

<table>
<thead>
<tr>
<th>Platform</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>40%</td>
</tr>
<tr>
<td>Sony PlayStation</td>
<td>13%</td>
</tr>
<tr>
<td>Nintendo Wii</td>
<td>11%</td>
</tr>
<tr>
<td>Nintendo 3DS</td>
<td>11%</td>
</tr>
<tr>
<td>Microsoft Xbox</td>
<td>7%</td>
</tr>
<tr>
<td>PS Vita</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
</tr>
</tbody>
</table>
Despite this, smartphone penetration in Korea doubled from 2011 to 2013, to reach nearly 80% penetration, and advances in telecom technology made it possible for Koreans to stay connected. Today, Korean gamers see mobile as the affordable alternative to console gaming and less of a “commitment” than PC bang gaming. Given Koreans’ affinity to socialize, mobile still appeals to establishing gaming communities. In fact, 4 of the top 5 grossing games in Korea are made for Kakao, a social messaging platform. And recent advances in technology and graphics make mobile RPG and adventure games possible, which happen to be the preferred mobile game genre of Koreans.

With the penetration of mobile devices, the wide accessibility of mobile connectivity, and the advancements in mobile technology, developers can now reach Korean gamers at scale. In fact, according to App Annie’s 2013 Year in Review report, South Korea surpassed the United States in app revenue, to become second only to Japan in amount of app store revenue generated. Developers need to understand Koreans’ mentalities and behaviors to successfully break into the expanding Korean mobile game market and best monetize their games.

The gaming habits we see today in the U.S., China, and Korea are a result of each country’s unique history. In the U.S., console games thrived since the U.S. government protected the rights of developers and retailers to sell console games (no matter how violent) under the First Amendment. In China video game consoles were banned until 2013 making computer games, especially MMO games, the obvious choice for gamers. Similarly, the ban of Japanese imports also hindered the popularity of console games in Korea. Instead, Korean gamers gathered to play highly social games in Internet cafés. Regardless of their histories, though, it is clear that gamers from all regions are enthusiastic about mobile gaming. Now we’ll discuss how each market plays mobile games today by examining their gameplay patterns, preferences, motivators, and the context in which they play.

Read more about Kakao on pg.24
2. Gameplay and Gameplay Context: How gameplay and gameplay context differ across markets and factors that may contribute to these differences

Before we discuss how monetization strategies vary by country, we need to understand how country-level differences impact gameplay and context. Our research indicates marked differences in demographics, gameplay preference, and gameplay context both across and within the three countries. We can attribute these differences to a number of factors, including smartphone accessibility, country history, and perceived cultural responsibility.

2.1 Demographics

2.1a Demographics: Percentage of Mobile Gamers, by Gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>Chinese</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>Korea</td>
<td>66%</td>
<td>34%</td>
</tr>
</tbody>
</table>

2.1b Demographics: Percentage of Mobile Gamers, by Age

<table>
<thead>
<tr>
<th>Age Range</th>
<th>American Gamers</th>
<th>Chinese Gamers</th>
<th>Korean Gamers</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-18</td>
<td>9%</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>19-24</td>
<td>13%</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>25-34</td>
<td>16%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>35-44</td>
<td>23%</td>
<td>26%</td>
<td>42%</td>
</tr>
<tr>
<td>45-54</td>
<td>29%</td>
<td>8%</td>
<td>17%</td>
</tr>
<tr>
<td>65+</td>
<td>1%</td>
<td>2%</td>
<td>9%</td>
</tr>
</tbody>
</table>
It’s interesting to note the differences in gamers’ ages across countries. The United States has more young (15 – 18) and older-aged (45+) gamers than Korea and China. This could be the result of smartphone accessibility and penetration in each country. In China, smartphone penetration is most prevalent among consumers ages 16 - 34, whereas in the United States, consumers ages 45 – 54 comprise a slightly higher percentage of smartphone usage than other age demographics.

Differences in responsibilities, even within each country, could explain why certain age groups are more or less likely to play games. For example, in the United States, while many Millennial gamers are busy caring for their families, establishing themselves in their careers by working later hours, or socializing during their spare time, many gamers of the older generations have more time to play games. In the past, the mature generations spent hours solving crossword puzzles or playing canasta with friends – perhaps mobile gaming is truly replacing traditional games.

In the following section, we will further explore how gameplay context differs across countries.
2.2 Gameplay

As we have learned from analyzing the gaming history of each region, Chinese and Korean gamers started playing social games almost exclusively, while Americans also played console games. This history has created lasting gameplay trends amongst the regions that have translated into the world of mobile gaming. Today Koreans and Chinese continue to prefer social games, like RPG/adventure games, more than Americans do. Despite this, all three regions cite killing time as their number one reason for gaming. However, Americans are much more likely to enjoy challenging games than Chinese or Korean gamers.

2.2.1 Game Apps Played

2.2.2 Game Preference

As we discussed earlier, many developers were hesitant to create localized video games for Korea and China in fear of piracy. To combat piracy, many developers built complex social games, which utilized subscription-based and in-game monetization strategies. Adventure and role playing games (RPG) games provided the perfect canvas for these monetization mechanisms. It is no surprise, then, as developers move to mobile, Korean and Chinese gamers continue to prefer to play adventure and RPG games to all other game genres. In fact, Korean and Chinese gamers are 81% more likely than Americans to prefer adventure and RPG games.

The following graphs depict game genre preference by country.
2.2.2 Mobile Game Genre Preference, by Country

- RPG/Adventure Games
- SIM Games
- Strategy Games
- Casino Games
- Social Games
- Puzzle Games

2.2.2a American Mobile Gamer Genre Preference

- Puzzle Games: 45%
- RPG/Adventure Games: 24%
- Social Games: 24%
- Strategy Games: 23%
- Casino Games: 19%
- SIM Games: 12%

*Americans prefer Puzzle games 93% more than Chinese. Americans prefer Casino games 103% more than Korean and Chinese.*
In addition, since the rise of Kakao as a game discovery platform and the prevalence of in-app purchases, many developers are now incented to create localized puzzle and social games for Koreans. We predict the percentage of puzzle and social gamers in Korea to increase as more mobile games become available via the Kakao platform.

Read more about Kakao on page 24
2.2.3 Gameplay Motivators

It goes without saying that gameplay motivators impact genre preference, context, and behavior. But one thing is universal – half of our respondents across all three countries play mobile games as a means to kill time.

Let's look at gameplay motivators within each region. Nearly the same percentage of Americans cite “quick and simple gameplay” as their reason for playing mobile games as Americans who prefer “very challenging gameplay.” However, 61% more Korean gamers and 45% more Chinese gamers prefer “quick and easy gameplay” to “very challenging gameplay.” American gamers are 39% more likely to enjoy very challenging games than their Korean counterparts.

### 2.2.3a Quick and Simple Gameplay vs. Very Challenging Gameplay, South Korean Mobile Gamers

- **33%** Quick and Simple Gameplay
- **21%** Very Challenging Gameplay

### 2.2.3b Chinese vs. South Korean Mobile Gamers Who Prefer Competitive Gameplay

- **16%** Chinese Gamers
- **25%** South Korean Gamers

### 2.2.3c America vs. South Korean Mobile Gamers Who Prefer Very Challenging Gameplay

- **29%** American Gamers
- **21%** South Korean Gamers
2.3 Gameplay Context

The time and place in which gamers play greatly affects the types of games they play, how often they play, and how long they play. Cultural attitudes towards work, family, and multi-tasking also influence how gamers play across the regions.

2.3.1 Time of Gameplay

While Commuting: Chinese gamers are 112% more likely than American gamers to play games while commuting, and Korean gamers are 46% more likely than American gamers to play while commuting. This is a clear reflection of differences in commute. American gamers are more likely to drive to work or class; both China and Korea have fewer cars per capita than the U.S\(^7\). In addition, Korean gamers-on-the-go enjoy the technologically advanced Seoul Station's LTW of up to 150 mb – that's 3x the connection speed of the U.S.

At Work/ School: Both American and Korean gamers are roughly 47% more likely to play mobile games while at work or at school than Chinese gamers. Chinese high schoolers are twice as likely to play at school as Chinese Millennials are to play at work.

At Home: American gamers are 51% more likely to play mobile games at home than Korean gamers and 30% more than Chinese gamers. We've discussed earlier that Koreans are social gamers – PC bangs are far from obsolete. Also, Koreans are notorious for not only working late hours, but for “mandated socializing” with coworkers until the late evening. Limited wireless connectivity in less gentrified areas and/or differences in home priorities may also affect the percentage of East Asian gamers who play at home.

We also discussed in our demographics section how differences in ages and responsibilities common to each generation could affect differences in gameplay context within each country. We cited the example that while American Millennials are busy caring for their families, working long hours, or socializing during their free time, many mobile consumers of the older generations are playing games. Our data shows that American gamers 45 years and older and American gamers 18 years and younger, who often do not have as many of these responsibilities, are the most likely ages to play mobile games while at home or while watching TV.

While Watching TV: American gamers are 3 times as likely as Chinese or Korean gamers to play mobile games while watching TV. We've just established that American gamers are more likely to play mobile games at home than East Asian gamers. We also know that American mobile consumers watch more TV and are more likely to use their mobile phones while watching TV than Korean mobile users\(^8\). And we've just discussed how age can influence context at home. To further understand this multitasking dichotomy, we can also look at differences in regional TV programming.
Korea is known for her attention-holding dramas. Men and women alike enjoy the aesthetically superior lead characters and the poignant and captivating storylines. And Korean dramas typically play without commercial breaks, so viewers can enjoy upwards of 50 minutes of uninterrupted intense K-drama bliss. In the U.S., however, dedicated TV fans can play their games during commercial breaks. Amusingly, particularly devoted American sports gamers will play on their devices while watching their teams play live, pretending to coach the players on the screen. Less dedicated American TV viewers often stream TV shows in the background while their game playing takes priority, or they will watch while they are waiting for more lives. Also, in many instances, American gamers will entertain themselves playing mobile games while watching shows they didn’t choose – perhaps with a spouse or with their kids.

2.3.1 Context: Time of Gameplay, by Country

<table>
<thead>
<tr>
<th></th>
<th>American Gamers</th>
<th>Chinese Gamers</th>
<th>Korean Gamers</th>
</tr>
</thead>
<tbody>
<tr>
<td>At home</td>
<td>65%</td>
<td>50%</td>
<td>43%</td>
</tr>
<tr>
<td>While commuting</td>
<td>15%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>At work/school</td>
<td>25%</td>
<td>20%</td>
<td>14%</td>
</tr>
<tr>
<td>While waiting for something</td>
<td>57%</td>
<td>52%</td>
<td>49%</td>
</tr>
<tr>
<td>While watching TV</td>
<td>11%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

The fact that two-thirds of American gamers play mobile games at home and more than half of East Asian gamers play mobile games at home could reflect the move to mobile gaming. Mobile may even be replacing console and computer games, specifically casual social computer games. Zynga’s move from Facebook to mobile, Electronic Arts’ new catalogue of mobile games, and Tencent’s and Alibaba’s heavy investments into mobile gaming, suggest this possibility.
2.3.2 Frequency
There is no significant difference in frequency of gameplay across countries – more than ¾ of gamers in all countries play at least once a day.

2.3.2 Context: Frequency of Gameplay, by Country

<table>
<thead>
<tr>
<th></th>
<th>Multiple times per day</th>
<th>Once a day</th>
<th>Few times per week</th>
<th>Once per week or less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamers</td>
<td>60%</td>
<td>18%</td>
<td>15%</td>
<td>8%</td>
</tr>
<tr>
<td>Gamers</td>
<td>57%</td>
<td>21%</td>
<td>18%</td>
<td>4%</td>
</tr>
<tr>
<td>Gamers</td>
<td>59%</td>
<td>22%</td>
<td>12%</td>
<td>7%</td>
</tr>
</tbody>
</table>

2.3.3 Length of Gameplay

2.3.3 Context: Average Gameplay Minutes per Session, by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Minutes per Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>32.7 Mins</td>
</tr>
<tr>
<td>America</td>
<td>31.4 Mins</td>
</tr>
<tr>
<td>Korea</td>
<td>22.6 Mins</td>
</tr>
</tbody>
</table>

Chinese gamers play the longest sessions

Of mobile gamers, Korean gamers play mobile games for the shortest amount of time, averaging 22.6 minutes per session. They play 30% shorter game sessions than Chinese and American gamers, who average 32.7 min and 31.4 minutes per session, respectively. Chinese and American gamers are also twice as likely as Korean gamers to play mobile games for more than one hour per session.
According to InMobi’s Mobile Media Consumption Study, Chinese mobile users spend more time on mobile than online, and more time on mobile than watching TV, reading magazine and newspapers, and listening to the radio combined, so it’s no surprise that they spend so much time playing mobile games.

As we discussed, Americans gamers are likely to play games while at home or watching TV, so playing long game sessions is easy. And since many Koreans play games while commuting, shorter and simpler game sessions are more likely.

Age and responsibility play a huge part in how often people play games. In the U.S. people ages 45-65 play the most mobile games. In China, people ages 25-34 are the most likely to play games, and Koreans ages 25-44 are the most likely to play games. Both Chinese and Korean gamers prefer RPG/adventure games while Americans prefer puzzle games. 61% of Korean gamers and 45% of Chinese gamers prefer quick and simple gameplay over challenging gameplay. This makes sense since Chinese and Koreans are far more likely to play games while commuting than Americans. Americans are 51% more likely to play games at home than Chinese or Koreans. American gamers are also 3 times more likely to play games while watching TV. Both Chinese and American gamers play games for about the same time per session, but Korean gamers play 30% shorter game sessions than Chinese or Americans. Now that we know the unique gaming patterns of the three regions, it’s time to investigate the best monetization strategies for each market.
3. Monetization Opportunities: How mobile marketers can tailor their acquisition and monetization strategies to each of these countries’ markets

The first decision in a monetization strategy starts with understanding which types of games are popular in which regions. For example, Chinese and Korean gamers are far more likely to prefer RPG/adventure games while Americans prefer puzzle games. Developers must then consider how their demographic discovers games. Americans, Chinese, and Koreans all prefer to download free apps, but how they discover apps differs widely. Developers must also consider how their desired demographic views and makes in-app purchases. Attitudes towards mobile purchases and the reasons users make these purchases are very different, and developers should create purchase experiences that appeal to the specific region they’re marketing. Developers should then utilize in-app advertising to increase revenue and monetize from players who are resistant to paying for downloads or making in-app purchases.

3.1 App Download Intent and Discovery

Let's take a look at how each region downloads and discovers apps.

3.1.1 Average game apps expected to download in the next 30 days, by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Apps</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>7.5</td>
</tr>
<tr>
<td>America</td>
<td>6.2</td>
</tr>
<tr>
<td>Korea</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Chinese players are expected to download the most game apps; 21% more than American and Korean gamers.

In our last section, we noted that Chinese gamers play the most number of games per month. Through our study, we also discovered that Chinese gamers also have the highest download intent, expecting to download 7.5 games in the next 30 days – that’s more than 20% higher than American and Korean download intent.
3.1.2 Paid-app download behavior

Gamers of all three countries exhibit similar paid app download behaviors. About 56% of gamers play all free apps. However, Chinese gamers are 31% more likely than American gamers to play mostly free applications, whereas American gamers are 36% more likely than Chinese gamers to play a healthy mix of both paid and free apps.

3.2 App Discovery

App discovery mechanisms vary by country.

In the United States, browsing app stores and following word of mouth recommendations are the two most popular methods of app discovery. Although there are a few emerging app stores, such as Amazon and Window's Phone stores, Apple's iOS App Store and Google's Play Store dominate the United States download market. One-third of American survey respondents discover game applications via mobile advertisements or other mobile applications and sites, and one-quarter of American respondents discover games through social media. American gamers are not likely to discover apps by perusing online websites and ads or by reading magazines and newspapers.
China suffers from a very fragmented app distribution ecosystem. Although there are several sites that allow for the pirating of iOS games, similar to the U.S., China’s iOS store is still the primary store to download iOS apps in China. Our gaming study shows that two-thirds of Chinese iOS gamers discover apps by browsing the app stores. However, unlike the U.S., where Google Play monopolizes Android game downloads, China has an incredibly fragmented Android game distribution, with more than 500 competing app stores. According to our study, only one-third of Chinese Android gamers discover apps through app stores, and instead rely just as heavily on mobile apps and websites for reviews and recommendations.

**Multi-channel Marketing**

Developers need to leverage multiple channels to reach their gamers. Mobile advertising, social media, and grassroots campaigns can complement organic app discovery. Also, new distribution platforms can enable developers to easily publish their applications to multiple app stores.

Game distribution is more fragmented in Korea than in the U.S., but less so than in China. Android games reign supreme in Korea – Samsung and LG dominate the smartphone market, making iOS relatively obsolete. In fact, Korea generates the most revenue in the Google Play Store, second only to Japan\(^\text{12}\). Despite this, Google Play does not have a monopoly on the Korean Android app market. Smartphone companies, such as Samsung and local carriers like SK Telecom, also create and curate their own app stores.

More interestingly, many Koreans discover games through Kakao’s game platform. Kakao began as a mobile chat application that allowed users to make free calls or send free messages to other users. The chat application accrued more than 100 million users, and the company leveraged its application’s massive social network to create a mobile gaming platform. Using Kakao’s platform, players are able to invite their friends to download games, play games with their friends, and make in-app purchases, among other capabilities. Kakao’s business model has proven so successful that as of this publication, 9 of the top 10 grossing games on both Google Play and Apple Appstore games in Korea are games made for the Kakao platform\(^9\).

Following in Kakao’s footsteps, China’s Tencent is building a similar game platform model using its messaging application WeChat.

**Data Driven Optimization & Mobile Advertising**

Agnostic of where a game is distributed, one key to running a successful user acquisition campaign is to continually optimize marketing strategy. Developers should leverage data collected by advanced ad-tracking technologies, which track post-click conversions across multiple ad networks. Another metric to consider is user lifetime value, or the amount of money a player is expected to spend over the life of the app. Using these metrics, developers can make informed decisions on optimizing their campaigns on both the ad creative and user-targeting levels.
3.3 In-app Purchases

Developers can utilize in-app purchases (IAP) to generate game revenue. Types of IAP vary across games, but many serve similar purposes. Common casual game IAPs include, extra lives/ energy, continuation of gameplay after “death”, boosters, and hints. King.com’s Candy Crush Saga leverages many of these purchases, including special candy pieces that help beat levels, additional moves after failing a level, and extra gameplay tokens. Common mid-core game IAPs include extra lives/ energy, increased resources, and upgraded character abilities. For example, Supercell’s Clash of Clans players can purchase gems, which can be exchanged for resources, such as dark elixirs, or for upgrading building structures.

3.3.1 In-app Purchase Frequency

Mobile commerce is already a mature industry in Korea; many mobile users are already comfortable making mobile purchases. According to our Mobile Media Consumption study, Korean mobile users are 21% more likely than American consumers to make virtual goods purchases on their mobile device. Similarly, Korean mobile gamers are 30% more likely than American gamers to pay for in-game purchases. Korean gamers are also 24% more likely than Chinese gamers to make in-game purchases, even though in general, Chinese consumers are as comfortable as Korean consumers making virtual purchases. Korean gamers are 47% more likely than both American and Chinese gamers to make frequent in-app purchases.

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>At least once</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gamers (Korean)</td>
<td>13%</td>
<td>17%</td>
<td>26%</td>
<td>44%</td>
</tr>
<tr>
<td>Gamers (Chinese)</td>
<td>9%</td>
<td>21%</td>
<td>15%</td>
<td>55%</td>
</tr>
<tr>
<td>Gamers (American)</td>
<td>9%</td>
<td>16%</td>
<td>18%</td>
<td>57%</td>
</tr>
</tbody>
</table>
3.3.2 In-app Purchase Types/ Motivators

The reasons and types of in-app purchases vary across gamers in each country. Differences in gameplay, gameplay motivators, and gameplay context influence the types of purchases made by gamers of each country.

![Chart: In-App Purchase Motivators, by Country]

As the chart illustrates, Korean gamers are most likely to make in-app purchases to beat tough levels. This comes as no surprise, as Koreans prefer quick and simple gameplay 61% more than very challenging gameplay. When given the opportunity, Koreans would rather advance through levels quickly and easily than spend time tackling challenging levels. Conversely, many American gamers prefer games that are very challenging – American gamers are 69% more likely than Korean gamers to make in-app purchases to unlock new levels, and Korean gamers are 60% more likely than American gamers to make in-app purchases to beat tough levels.

![Chart: In-App Purchase Motivators, American Mobile Gamers vs. Korean Mobile Gamers]

Enjoying Challenging Gameplay | In-App Purchases to Unlock New Level | In-App Purchases to Beat Tough Level
---|---|---
American Gamers | 29% | 22% | 23%
Korean Gamers | 21% | 13% | 28%
As we discussed earlier, in order to combat piracy in the East, many developers designed complex RPG and adventure games laden with in-app purchase opportunities, and many of these traditional Chinese and Korean games continue to be popular on mobile devices. Today, many East Asian gamers prefer RPG and adventure games to other genres, and they are much more likely than American gamers to prefer these genres. As a whole, they are 20% more likely to make in-app purchases to unlock or upgrade characters and resources than American gamers. American gamers are equally likely as East Asian RPG and adventure gamers to unlock and upgrade abilities or resources or to purchase virtual currency. However, whereas American RPG and adventure gamers are more interested in unlocking new levels, Korean and Chinese gamers are more interested in making "other purchases", such as "gacha", additional lives, or extra play time.
In fact, Chinese and Korean gamers in general are more than twice as likely as American gamers to make “other purchases”. For example, Korean puzzle gamers and Chinese casual social gamers are very likely to make “other purchases”, which could include additional play time or gift boxes.

More interestingly, Chinese and Korean gamers are more than three times as likely as American gamers to not remember what types of in-app purchases they make. This may simply be a reflection of Korea's and China’s quick adoption of mCommerce. Whereas Americans may be more prudent with their in-app purchases, many Korean and Chinese consumers embrace the mobile market.

Korean and Chinese gamers were much more likely to not remember why they made in-app game purchases.
3.4 In-App Advertising

In-app advertising has enabled developers to monetize many types of gamers, particularly low-spending users. Consumer research on our network demonstrates that mobile advertising is effective in all three countries.

Ad Receptivity is highest among Chinese and Korean mobile consumers – more than three-quarters of respondents cite that mobile advertising has introduced them to something new, and more than half of respondents purchase goods via their devices as a direct response to a mobile ad. Chinese and Korean mobile consumers are also more than twice as likely as American consumers to download applications after seeing mobile advertisements.

Developers should leverage the data they have about their gamers to provide relevant and impactful ad experiences. Today, the availability of user lifetime value (LTV) data takes ad targeting to another level. Utilizing LTV data, developers can weigh gamer experience against revenue goals by:

1. **Identifying new users**: Developers can choose to maintain an ad-free experiences within the first few app launches so new and potentially loyal users will not be turned away from the game.
2. **Segmenting high-paying users from low-paying users**: Developers can choose to maintain ad-free experiences for high-paying users, while monetizing low or non-paying users.
3. **Understanding where and when to place ads**: Ad placement and timing impacts both gamer experience and ad performance. Developers can leverage LTV data to minimize game disruption and maximize ad impact.

Developers can choose from a broad range of in-app advertising creatives. Many casual games can run successful standard or rich banner campaigns without interrupting gameplay. However, game developers may prefer to serve interstitial ads, which can often generate higher revenues than standard banner ads.

Furthermore, recent advancements in technology have made in-game premium ad experiences possible. Specifically, the emergence of native and customizable ad formats, as well as the proliferation of other creative ad solutions such as app galleries and value-exchange ads, has redefined mobile advertising.
Native ad: Less intrusive than standard banner or skyscraper ads, native ads are integrated wholly and seamlessly into the game experience. Native ads mimic game form and function.

Customized ad: Similar to native ads, customized ads are integrated into the game experience. However, contrary to native ads, customized ads share game aesthetic but not necessarily function.

Value exchange ad: Users opt-in to interact with ads in exchange for tangible benefits. An example of a value exchange ad is an incentivized video ad – users opt-in to watch a video in exchange for a predefined benefit.
Though players of all countries enjoy playing many different mobile games, Chinese gamers tend to play the most game apps and to have the highest intent to download games. Mobile gamers of each country have different methods for app discovery, and user acquisition strategies should take into account these nuances. One common theme across all countries is that most gamers prefer to play free games; this makes in-app purchases incredibly valuable, and developers should include in-app purchases specific to their gamers' tastes. Another effective way developers can monetize their games is to introduce ads into their apps. Advancements in ad technology have made sophisticated and rich ad experiences possible.
Recommendations

1. **Develop and market games specific to gamers of their target country:** Mobile developers must understand the typical gaming consumers specific to each country. For example, Chinese and Korean gamers prefer RPG and adventure games, whereas Americans prefer puzzle games. In addition, gamers who prefer the same game genres share similar reasons for gameplay (e.g. strategy gamers play because they enjoy the challenge and casino gamers play primarily to kill time).

2. **Understand app discovery/ distribution specific to each target country:** Each country has varying app distribution ecosystems; nevertheless, developers should take a multi-channel distribution approach, leveraging both organic app store and word of mouth downloads, as well as utilizing mobile, online, and social marketing. In particular, since China has a particularly fragmented ecosystem, developers must partner with established developers and large app platforms in addition to being featured in app stores and running ads. In Korea, the Kakao platform acts as a primary app download discovery epicenter. In fact, developers should monitor the emergence of chat applications as mobile gaming platforms and may even want to incorporate them into their distribution strategies.

3. **Utilize the free-to-play game model:** Mobile game developers looking to break into East Asian mobile game markets should create free-to-play game models with in-game purchases. The threat of software piracy continues to deter many developers from producing single-player or localized games. Also, charging for a download usually comes at the expense of scale. An alternative to charging for app downloads is to generate income through subscription fees or in-game purchases. American game developers should follow suit, creating mobile-optimized free-to-play models with in-game purchases.

4. **Leverage in-game purchases:** Mobile game developers need to tailor their in-game purchases to their target gamers. For example, Korean gamers who prefer quick and simple gameplay will upgrade to beat a tough level, whereas American gamers who prefer very challenging gameplay will upgrade to beat a tough level or unlock new levels. Depending on the country, developers may need to partner with a local third-party payment platform – in China, Tencent’s TenPay or Alibaba’s Alipay are two of the most used payment platforms.

5. **Capitalize on Game Traffic:** All gamers are not equal, but developers should be able to monetize all gamers. Mobile developers can monetize non-paying or low quality gamers by placing 3rd party ads in their games. Chinese and American gamers both average over 30 minutes per game session, and more than three-quarters of gamers in all three countries play at least once a day. Developers should also take advantage of newly emerging mobile ad formats, such as native and customizable ads, app galleries, and value-exchange ads.

6. **Optimize with data:** Data is key. Mobile developers need to take a data-centric approach when designing their games and crafting their distribution and monetization strategies. Developers must merge consumer insights with gameplay metrics to continuously optimize their campaigns, effectively maximizing their revenue potential.
Conclusion

As the mobile gaming revolution continues to spread worldwide, developers should consider country-specific differences to identify ways to best maximize scale and revenue in each country. They should research the types of games that are popular in each region, the gameplay behaviors in that region, the context in which games are played, and the gamer’s typical length of gameplay. This information can also help developers decide where, when, and how to use in-app advertising to their advantage.

About InMobi

InMobi enables the world’s leading brands, developers, and publishers to engage global consumers through mobile advertising. InMobi platforms leverage advances in big data, user behavior, and cloud-based architectures to simplify mobile advertising for its customers. Recognized by MIT Technology Review as one of the 50 Disruptive Companies of 2013, InMobi is the world’s largest independent mobile ad network, engaging 759 million consumers across 165 countries.

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Developers, start monetizing today by downloading our SDK at www.inmobi.com/SDK.
Download our free Apponomics Book at http://www.inmobi.com/apponomics/

References

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Additional Sources

Appendix

USA Market Overview, 2013 Q4

Device Share of Impressions, InMobi Network

- **77%** SMARTPHONES
- **17.3%** TABLETS AND CONNECTED DEVICES
- **5.6%** FEATURE PHONE

Handset Share of Impressions, InMobi Network

- **28.0%** iPhone
- **6.3%** iPod
- **7.5%** iPad

- **6.4%** Samsung Galaxy S3
- **3.5%** Samsung Galaxy S4

OS Share of Impressions, InMobi Network

- **41.8%** iOS
- **47.1%** Android

Ad impressions on InMobi network in USA are on mobile websites.

Ad impressions on InMobi network in USA are on mobile apps.
China Market Overview, 2013 Q4

Device Share of Impressions, InMobi Network

- **78.3%** SMARTPHONES
- **20.5%** TABLETS AND CONNECTED DEVICES
- **1.2%** FEATURE PHONES

Handset Share of Impressions, InMobi Network

- **47.0%** iPhone
- **18.8%** iPad
- **1.9%** Samsung Galaxy Note II
- **1.6%** Samsung Galaxy S4
- **1.3%** Samsung Galaxy S3

OS Share of Impressions, InMobi Network

- **66.3%** iOS
- **27.9%** Android

Ad impressions on InMobi network in China are on mobile websites.

Ad impressions on InMobi network in China are on mobile apps.
Korea Market Overview, 2013 Q4

Device Share of Impressions, InMobi Network

- 95.7% SMARTPHONES
- 4.2% TABLETS AND CONNECTED DEVICES
- 0.0% FEATURE PHONES

Handset Share of Impressions

- 11.0% Samsung Galaxy S3
- 8.6% Samsung Galaxy Note II
- 8.2% Samsung Galaxy Note
- 5.9% iPhone
- 4.4% Samsung Galaxy S2 (SKT)

OS Share of Impressions, InMobi Network

- 91.1% Android
- 8.7% iOS

Ad impressions on InMobi network in Korea are on mobile websites.

Ad impressions on InMobi network in Korea are on mobile apps.