

KABAM ANALYSIS

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ABSTRACT

There are many favorable markets around the world that Kabam can enter, but we believe that the Asian-Pacific market is the best candidate for Kabam's expansion. It has many countries currently experiencing immense growth in the mobile development sector. However, identifying the best countries within this region to enter is challenging because of each country's unique characteristics. China, Japan, India, South Korea, Indonesia, and others all deal with different issues because of distinct governments, demographics, and preferences.

This paper is structured as follows: Section I discusses the general market and why the Asia-Pacific region is the most advantageous market to enter. Section II explains the methods we used to narrow our list of countries down and focuses on the two models we created to rank the markets. This is followed by Section III, which presents qualitative analysis on five countries, four of which are individual countries we recommend for Kabam's entry and one is a larger market that we recommend for entry at a later date. Section IV details three Asian-Pacific markets of interest that we do not recommend for entry. Section V provides additional context to the markets and how game pricing preferences are optimal for Kabam.

Finally, in addition to this report, we have attached three excel sheets. The first sheet, 'Supplemento1', is the data we used to narrow our search in the Asian-Pacific market to a set of eight countries. The second sheet, 'Supplemento2', is a study of

the top eight countries that we found, which looked at infrastructure development related to the mobile gaming industry and purchasing power to identify markets with the most accessible gaming industries. Finally, we attached a master data sheet, 'Supplemento3', which was the main source for our data for 2017, pulled from Statista.

1 INTRODUCTION

Of the numerous emerging markets that Kabam could approach, the Asia-Pacific region (hereafter abbreviated APAC) bears the most potential. We believe this for the following reasons:

First, by sheer numbers, the APAC market is most populous by far. 4.5 billion people, or 60% of the world's population, live in the region.[1] In 2014, there were 740 million mobile gamers in the APAC market and 741 million in all other global markets combined.[2] Of those mobile gamers, 243 million in the APAC were paying users, compared to 270 million paying users in the rest of the world.[3] In 2016, the APAC region captured \$24.8 billion or almost 62% of the total revenue of mobile games worldwide.[4]

The APAC has significant internet and mobile phone connectivity. The region accounts for 44% of global internet users and the average internet penetration is only 43.1% (compared to 76.2% in the United States) so there is a lot of room to grow.[5][6][7] In 2017, there were 2,713.3 million mobile phone users in Asia and a smartphone user penetration rate of 32.5%.[8][9] As of 2016, APAC had the highest percentage of internet users who play games on a mobile phone at 71%; compared to 52% for North America, 50% for Europe, and 68% for Africa, the Middle East, and Latin America.[10]

Data shows that the average annual growth rate for Asia's gross gaming yield over 2010-2018 is also much higher than that for the Americas or Europe. For Asia it is 7.61% while for the Americas and Europe it is 2.52% and 1.87%, respectively. Gross gaming yields measure the percent a host of a game keeps from wagers. This means the average Asian player is much more likely to make wagers and spend in a way that will profit Kabam. This trend started in 2011, when Asia's total gross gaming yields surpassed Europe's and in 2015 it passed the America's.[11] Thus, even at a user level the Asia's market is optimal for revenue generation because of a higher willingness-to-pay on products that yield more revenue for Kabam.

The Asia-Pacific is highly appealing because of its high total revenue and consumer population. Its high growth rates indicate the abundance of opportunities present as this region is rapidly developing both economically and technologically. Within the APAC region, however, specific markets vary greatly in potential revenue and barriers to entry. In the next section, we discuss how we came to select specific markets to enter within the APAC region.

2 MODEL

To hone in on specific markets in the Asia-Pacific region, we drew upon equal parts quantitative and qualitative analysis. For the quantitative analysis, we created two studies. First, we built a statistical model to identify chief drivers of revenue, then applied it to rank major markets in the Asia-Pacific. Next, we created a model to evaluate the development of each country based on features essential for a successful mobile gaming market. Finally, we delved into qualitative mobile gaming market research to gain a holistic understanding of our selected regions.

2.1 Revenue Driver Model

Our first model is focused on determining what market variables drive or predict market success. We were seeking a system with which to measure the eligibility of markets for Kabam to enter.

We chose to use data from Statista's Digital Market Outlook [12] because we deemed Statista a reliable source and the data set provided several mobile gaming metrics of interest from 2015 through 2021. The variables we examined included total mobile gaming revenue, number of mobile game users, mobile gaming penetration rate, and population.

The concept behind our model was to regress some outcome, or dependent variable, on a set of predictors, or independent, variables. This would generate a regression model that quantifies the relationship between the dependent and independent variables as an equation. If we assume our outcome variable is an adequate proxy for "success" of a market, then we can use multiple regression to determine which predictor variables in our data set are most correlated with "success". We considered several potential outcome variables, but decided total market revenue was the most relevant measure of overall market opportunity. The following chart contains the coefficients generated from regressing *2017 MG Total Revenue* as the outcome variable on combinations of 2015 predictor variables in eleven Asian countries.[13]

The variable *2015 MG Total Revenue* is used here as a control variable. It is meant to capture, or control for, in our model all of the unobserved but relevant differences between the countries that would otherwise distort our results. For example, China's much higher population makes its 2017 total mobile gaming revenue much larger than that of a smaller country, such as Singapore. By including 2015 total mobile gaming revenue, we are hoping this control will encompass all other variables that would otherwise affect total revenue (called confounding variables), such as population, so that the true relationship between the outcome and predictor variables can be seen.

Four separate regressions are displayed in the four numbered columns of the chart. For each cell, the main number is the coefficient calculated for the variable at the far left of its row, for the regression at the top of its column. In parentheses is the standard error for each coefficient and the asterisks next to each coefficient denote its significance level (*, $p = 0.1$; **, $p = 0.05$; ***, $p = 0.01$). Cells that are blank denote variables excluded from that particular regression.

For example, the equation generated by Regression 1 is as follows:

$$2017_MG_Total_Revenue = 729.781 + (-4436.551)2015_MG_Penetration_Rate + (1.335)2015_MG_Total_Revenue + error\ term$$

	Regression 1	Regression 2	Regression 3	Regression 4
2015 MG Total Revenue	1.335 *** (0.052)	1.367 *** (0.048)	1.366 (0.057)	1.406 *** (0.041)
2015 MG Penetration Rate	-4436.551 *** (1008.443)	-4561.429 *** (878.930)	-4501.850 * (1382.633)	-6696.308 *** (1128.255)
CAGR MG Total Users (2015-21)		2975.183 * (1570.052)	3074.133 (2379.641)	2593.866 * (1228.173)
2015 Avg Revenue Per MG User				7.389 * (3.112)
CAGR Avg Revenue Per MG User (2015-21)			234.044 (3949.695)	
Constant Term	729.781 *** (186.791)	490.416 ** (205.697)	466.451 (461.405)	621.731 ** (168.839)

Table 1: Regression Output ¹

	Regression 1 Ranking	Regression 4 Ranking
1	Japan	South Korea - Hong Kong (tie)
2	South Korea	
3	Hong Kong	Japan
4	Singapore	Singapore
5	Indonesia	Indonesia
6	China	China
7	India	Malaysia
8	Malaysia	India
9	Vietnam	Philippines
10	Philippines	Vietnam
11	Thailand	Thailand

Table 2: Country Rankings

From the results in **Table 1**, we see that the *2015 MG Penetration Rate* is significantly correlated with *2017 MG Total Revenue*. The variables *CAGR total users* and *2015 Avg Revenue Per MG User* are also correlated, though with less significance. We take these three variables to be the principal predictors of future mobile gaming revenue.

To create a ranking of the countries we looked at regressions (1) and (4). We ranked the countries by each of the non-control variables and averaged the ranks to obtain an overall rank. Listed in **Table 2** are the rankings.

Based on our findings, we decided to investigate South Korea, Hong Kong, Japan, Singapore, Indonesia, China, and India. The next section details our economic development model, which focuses more on the consumer and their ability to access mobile gaming within these eight countries, to narrow the list down even more.

2.2 Economic Development Model

While potential revenue of a market is important in determining total potential profit, understanding which markets will be easier to access large segments of the population in requires a study of a country's infrastructural and economic development. Thus, we created a relative ranking model, which converts data for each

¹ Note: MG = mobile gaming, CAGR = compound annual growth rate; see [14] for discussion on endogenous variables

country on smartphone penetration, mobile gaming penetration, average mobile gaming spending, broadband connection speeds for phones, and income inequality into raw scores and then compared the sums of the scores to rank countries. The point of the analysis is to rank the countries we determined to have the highest potential revenue in terms of their relative accessibility to the mobile gaming industry. Relative is an important word here because these rankings only show, which countries are better than others (they do not have any absolute value). Additionally, while following the explanation of the model, please review the excel sheet labeled “Supplemento2”.

First, we assigned smartphone penetration a maximum value of 5 (meaning 100% penetration = 5) and mobile gaming penetration a maximum value of 10 (50% means a raw value of 5). What this means is that an increase in 1% of mobile gaming penetration, contributes double to the total raw score as does a 1% increase in smartphone penetration. Essentially, this model uses relative valuation of different variables to rank countries. We believe both smartphone and mobile gaming penetration are good indicators of how accessible a country’s smartphone market is, but mobile gaming penetration is more strongly associated with an accessible market than smartphone penetration. Thus, its weight in the model is bigger. However, both are still relevant indicators of the presence of technology necessary for a mobile gaming industry.

Second, we converted mobile gaming spending to average revenue per user and then divided each country’s value by the maximum (Japan’s average revenue per user was \$48.90 making it the max) and then multiplied this percent by a maximum raw score of 10 (Japan scored 10 on this). This means that countries with lower average revenue, had a lower percentage of the maximum known value and thus captures a smaller portion of the max score of 10. We used the upper bound as the denominator for the ratio because it stay consistent with the relative measures model. Average spending is a critical indicator of a country’s ability to spend on mobile gaming, thus it models the financial needs for a thriving mobile gaming market.

For broadband connection speed we created a ratio by dividing each value in Mbps by the country with the slowest internet, then subtracted that value from 1 and multiplied the total by a maximum raw score of 5 (meaning faster speeds or lower Mbps subtracted less from 1 and increased the raw score). Mobile gaming connection speeds are essential to a game’s functionality, and represent another technology related constraint that may exist in the APAC markets. We consider it about as important as smartphone penetration, since you can’t play online games without either but they are not variables that directly relate mobile gaming.

Finally, we also used income inequality as a variable in this model. While income inequality is a broad measure, it is a strong indicator of a consumer population’s spending capabilities. High GDPs per capita, empirically, do not always translate into wealth for everyone - especially in developing economies. Looking at income inequality allows us to see if the average gamer can even consider spending on mobile games. We used Gini Coefficients to measure income inequality. The data sheet labelled ‘income inequality’ provides an in depth explanation on Gini Coefficients, but essentially they measure the share of wealth captured by each additional person in the economy. A value of 0 would mean all wealth lies in the hands of one person while a value of 1 would mean wealth is totally, equally distributed among all people. In 2014, OECD countries, the most developed currently, had an average Gini Coefficient of 31.8, so we used that as our ideal Gini Coefficient. Then, we looked at the percent difference for each country from the ideal Gini Coefficient; we subtracted the percent difference from 1, and then multiplied by a raw score of 5. This meant that countries with high inequality, had a greater difference from 1 and a smaller raw score. Every country we looked at had higher inequality than 31.8, but some were much more unequal than others suggesting the consumer populations

in these countries may not be able to spend on mobile gaming as much as initially thought.

Based on the weighting of these variables, our model ranked the countries as following:

1. South Korea
2. Singapore
3. Japan
4. United States
5. Hong Kong
6. India
7. China
8. Indonesia

This analysis further confirmed the list of countries that we were certain that we wanted to enter and helped us build a case against entering some large markets that do have high potential profits. Indonesia, China, and India are all countries with emerging mobile gaming markets, but this model suggests that not all of that population will have the ability to fully experience mobile games, yet. Singapore, South Korea, Japan, and Hong Kong all represent concentrated markets with the necessary institutions for Kabam's success so we kept these four countries became our initial shortlist. The quantitative analyses helped us narrow our search to a few select countries. What we saw was that smaller, highly developed markets scored well (I.E. South Korea, Singapore) large semi-developed markets did moderately well (I.E. Japan), and large developing mobile gaming markets did poorly (I.E. India, Indonesia). This led us to the conclusion that as of now, the best markets for Kabam to enter will be the smaller urbanized centers of the APAC region, not the huge markets with high total revenues.

OUR RECOMMENDATIONS ARE AS FOLLOWS:

Enter: Taiwan, Hong Kong, South Korea, Singapore.

Proxy Enter: China. (see China section for further explanation)

Do Not Enter: Japan, Indonesia, India.

To finalize our recommendations, we conducted a qualitative analysis of each individual country to evaluate our strategy of targeting smaller markets in the APAC region. Our subsequent research will dive into the economies' specific mobile gaming infrastructure, total revenues, average revenues, and future growth to evaluate how consistent our model is with other research on these markets. The next section is divided into eight segments, each five dedicated to markets that we recommend entering and three dedicated to markets that may seem attractive but are difficult to enter in the near future.

3 MARKETS TO ENTER

The two quantitative analyses gave us a deep understanding of which markets to narrow our search to, but the industry averages will not be 100% representative of Kabam's results. Thus, we looked into the features of each country that are important to a healthy mobile gaming market to see if the countries we ranked best were also the best markets according to other research by industry experts. Each analysis includes a section summarizing the macro data of the mobile gaming market and the projected growth (total revenue, penetration, growth etc.), an analysis of user related metrics (average revenue per user, cost of acquiring users, game preferences etc.), and finally a study of each country's economic development and institutions (business systems, purchasing power, mobile connectivity).

Additionally, the section about Hong Kong has an analysis about China attached to it because we believe entry into Hong Kong can eventually lead to accessing the rest of the Chinese market. Thus, we do not recommend direct entry into all of China yet, but believe it is a good candidate for Kabam in the future, proxied through Hong Kong.

3.1 Hong Kong

Hong Kong is highly concentrated, small sized market. Revenue for mobile gaming in the nation of 23.55 million was \$148 million.[15] It is expected to experience an annual growth rate (CAGR for 2017-2022) of 11.9%, to \$260 million in 2022.[15] Thus, even though Hong Kong's market is not as big as China or Indonesia, it has a high revenue relative to the population meaning the probability of profiting from an investment into this market will generally be higher. This is also evident in the penetration and average revenue per user rates.

At the user level Hong Kong is a very good market. User penetration for mobile gaming was 30.9% in 2017 and is projected to grow to 52% by 2022 (3rd highest by 2021). The average revenue per mobile gaming user is \$64.97 according to one source and \$64.82 according to another (4th highest in the world), while the cost of acquiring a gamer is only \$1.45.[15][16] Smartphone penetration is also high; in 2018, Zenith Media predict it will hit 92%, which means there is still a large population of smartphone users who are yet to participate in the mobile gaming industry[17].

In terms of economic development, Hong Kong scores well in all metrics. If Hong Kong was its own country, its GDP per capita adjusted for PPP would be higher than the United States', by \$886 at \$58,322[18]. It is also the best region to do business in in the Asia-Pacific according to the Heritage Foundation, which looks at property rights, government integrity, judicial effectiveness, government size, and business/labor/monetary freedom to determine its rankings.

Hong Kong is, therefore, a great market because of its high total revenue relative to its population, which translates into a higher average revenue per user and mobile gaming penetration rate. On top of that it has experienced strong economic development so the necessary institutions to support the mobile gaming industry already exist.

Another important factor in our decision to recommend Hong Kong is its connection to China. A lot of evidence suggests that Hong Kong serves as a proxy for the entry into the broader Chinese Market.

3.2 China

Hong Kong and China have had a tumultuous relationship over the years; however, the bond between the two regions is undeniable. Hong Kong has been a gateway for foreign capital entering the Chinese market. This is for this is for two reasons. First, the unique investment landscape in China requires foreign companies to find business partners with regional expertise. Hong Kong's professionals interact with Chinese businesses on a frequent basis and are thus familiar with the Chinese business system. This makes Hong Kong attractive to western investment as a path to entering China[19]. This is confirmed by statistics on Hong Kong's contribution to the Chinese economy. Even though Hong Kong's total percent share of the Chinese economy has been tanking, it has grown in relevance in other ways. The Economist explains, "Since 2012, Chinese companies have raised \$43 billion in initial public offerings in the Hong Kong market, versus just \$25 billion on mainland exchanges, according to Dealogic. More than anywhere else in the world, Hong Kong has also accounted for two-thirds of foreign direct investment into China last year, up from 30% in 2005." [20]

However, the connection between the two countries goes beyond just union between the two private sectors. The governments of China and Hong Kong both work to support the bridge between the nations. According to the American Bar Association, China's 12th Five Year Plan contained a chapter with the goal of

“[E]levating Hong Kong's competitive advantages, including. . . Nurturing emerging industries and facilitating extending their fields of cooperation and scope of service in China.” The article continues to state that: “Hong Kong has become a conduit to funnel capital, high-caliber talent, and technology into China from all over the world, while also introducing China's enterprises, products, and services to the global market.”

Therefore, it is clear that entering the Hong Kong market does not only affect Kabam's presence in Hong Kong, it helps prepare for a later entry into the rest of China. This happens in two ways. First, developing relationships in the Hong Kong business system will make it easier to do the same in China because of their understanding of the market and the connections that they can provide with the broader Chinese business community. Second, the governments of Hong Kong and China work closely together to develop their partnership and provide the institutions needed for foreign business to thrive in Hong Kong, and eventually the rest of China.

However, given that we know Hong Kong is a proxy market for China, that still begs the question: is China a market we want to enter.

According to Statista data, total revenue for the Chinese mobile gaming market was the highest for any country at \$8221.5 million.[12] This is projected to hit \$12028.3 million by 2021 (a CAGR of 12.1%). An App Annie report states that “the majority of Chinese app users should settle into a habitual usage pattern by 2021, resulting in sustained revenue growth even as downloads slow”, meaning that the Chinese market should be hitting its optimal size by the time Kabam releases its games.[22] In terms of the total global share, China will capture 41% of mobile app store spending by 2021. However, at the user level China still has some progress to make. Mobile gaming penetration was only 21.6% in 2017 and will only hit 24.4% by 2021. Average revenue per mobile gamer was \$27.56, high for a country of over one billion but low relative to Japan, Singapore, South Korea, Hong Kong, and Taiwan.

All of this evidence leads to the conclusion that China is a great market but requires a more nuanced marketing strategy in order to tap into the large markets within the huge country. We believe that outright trying to enter China's market may not be the best strategy and that using Hong Kong as a stepping stone in would be the optimal way to gain users and monetize in China without spending exorbitant amounts of capital.

3.3 South Korea

South Korea's mobile gaming market is a good candidate for a highly developed middle sized market. Gaming is an integral part of the country's culture and captures large segment of the economy, which directly translates to a strong mobile gaming market. There are 25.6 million gamers generating \$4.2 billion in revenue with about \$2 billion spent on mobile gaming; 80% of this population plays at least one mobile game and 55% spends money on games.[23][24] Almost everyone is online with 42.8 million out of 49.8 million South Koreans connected to the Internet.[23] 36.3 million South Koreans have smartphones.[25] Thus, there is room for increases in the number of smartphone users who play mobile games, increases in the number of South Korean's with Internet access who also use smartphones, and increases in the number of South Koreans connected to the Internet.

The data on growth of the mobile gaming industry in South Korea is also very promising. South Korea will remain the fourth largest market by revenue in 2021, with a total revenue at \$1,814.40 (an average annual growth rate of 6.8%). Average

revenue per user has slowly been declining in South Korea, likely due to an increase in the market penetration for mobile gaming. By 2020, Statista models predict penetration to hit 45% (increasing from 34.2% for 2017), while average revenue per mobile gamer per year drops to \$77.46 from \$86.66 in 2017. Thus, it is more likely an increase in the number of gamers contributes to the majority of this decline. When looking at the total number of mobile gamers this becomes even more evident. As of 2017, there are 17.49 million but that will jump to 23.24 million by 2020, an annual growth rate of 10.7%! [26]

Finally, at the user level, South Korea is a great market. In 2017 its average revenue per user was second only to Japan. [26] South Korea's users are also interested in western superheroes unlike the average Japanese gamer (which we will get into later). Captain America: Winter Soldiers made \$63 million in South Korea, and Avengers: Age of Ultron made \$80 million. [27] The spending habits of these gamers are also conducive to Kabam's freemium model. Many MMORPG have some kind of a gacha model, in which you can purchase crystals, keys, etc. to open treasure chests that has a set of probabilities in getting different characters (better generally means lower probability). This is very similar to the model used in Transformers: Forged to Fight and Marvel: Contest of Champions.

Thus, when looking at the South Korean mobile gaming market, it is an excellent candidate for Kabam's entry because it is a market with high revenues at the macro (total revenues) level as well as the micro level (average revenue per user), is projected for higher penetration, culturally receptive to western games, and its gamers have experience with a pricing model similar to Kabam's. One thing to note is that Netmarble is active in South Korea but when we asked if we should consider its presence in our analysis, it was stated that we should consider Kabam an "independent entity". Therefore, we do not consider entry into the South Korean market a conflict of interest.

3.4 Singapore

Singapore is another great small sized market for Kabam to enter. In 2017, Statista reported Singapore's total mobile game revenues to be \$119 million. [28] However, a Newzoo report from 2014 found that the average revenue per mobile gamer in Singapore was \$189.40, which gives it the highest average out of all of the countries in Asia-Pacific meaning even though the market is much smaller than that of Japan, India, or Indonesia, investment into this market will bring in a high rate of return. [29] Singapore, like Hong Kong, is highly concentrated with players who are willing to spend a lot.

In terms of the gamers' preferences, Singapore is also a good market. 80% of people in Singapore can speak English (in Indonesia it is 15% and less than 1% in China) so games will not have to be translated. [29] Their game preferences are similar to Western countries. In an interview Teo Chor Guanm, program director for Singapore-MIT GAMBIT Game Lab, stated "I believe Singapore players have similar taste to US and European players (as seen from the most popular games that are still trending). It has to be free to play usually (as per most mobile games now)." [30] Kabam's pricing model fits with Singaporean pricing preferences making Kabam's monetization model perfect for the concentrated market.

The economic development of Singapore is also very high. The Heritage Foundation ranked Singapore the second best region to do business in the Asia-Pacific, second only to Hong Kong. [31] 75% of individuals in Singapore have smartphones today. [32] For mobile gaming specifically, the penetration in Singapore in 2014 was 29%. [32] Coupled with the high average revenue per mobile user, this market has very high potential and a high chance of revenue with each newly acquired user since each user provides so much potential revenue. The report attributes this to Singapore's GDP per capita, which is the third highest in the world. Singapore's CPI is also very strong (around Western Europe and the US), meaning businesses

are able to sell goods and services at high prices, but this does not constrain the consumer's ability to spend because their incomes are generally high, as seen in the GDP per capita.[33] Additionally, 55% of Singapore residents have credit cards today, making their financial systems optimal for the billing model Kabam has.[34] Internet penetration is also growing at a fast rate in Singapore and is extremely high. A report found that "Singapore, Thailand and Indonesia already have 136.5, 52.5 and 36.0 wireless broadband subscriptions per 100 inhabitants respectively. The global average for broadband subscriptions stands at 35." [35] All of these factors suggest that prices are strong in Singapore and that the consumer can easily access mobile gaming. Even the cost of acquiring a customer in Singapore for mobile gaming is low; for iOS it is \$2.54 and for Android it is \$1.80 (42% on iOS 58% on Android). For Japan, Android is \$2.06 and iOS is \$3.05; for South Korea, Android is \$1.69 and iOS \$2.49; for Taiwan, Android is \$2.23 and iOS is \$2.70. This shows that the cost of market penetration is not elevating, with a clearly high average revenue per user suggesting Singapore's market is largely untapped.

Thus, Singapore is a strong candidate for Kabam's entry. It has high revenues relative to the small population that resides there, users who are receptive to western culture, and strong economic development means that investment into this market has a high probability of success relative to other countries.

3.5 Taiwan

The last market we recommend entry into is Taiwan's, another small but dense market. While we do not have as much data on Taiwan's industry as we do for other countries, the research on the industry that is available all suggests it is a key emerging market.

There are 12.8 million gamers in Taiwan, 6.0 million of which spend money on games.[36] The total game revenue in 2017 was one billion with mobile gaming capturing 53% of the revenue, the largest portion.[37] 93% of their gamers fall under the "casual/social gaming" category, perfect for Kabam's games.[38] The second most popular category was games played on smartphones with 70% of gamers playing on that platform. Even though Taiwan's population is 55th in the world, its PC and mobile gaming market ranks 15th.[39] From this we can conclude that Taiwan is a market with high potential total revenue, player-to-payer ratio, and mobile gaming penetration. Key metrics in determining if a market is worth entering.

In terms of the future, the growth potential for the economy is high. Total gaming revenues is projected to increase by 8.1% in 2018.[40] By 2021, half the population will be playing mobile games.[41] Mobile gaming professional Wu Wen-jung of the Taipei Computer Association, citing figures from the Market Intelligence & Consulting Institute said that, "Mobile games in particular saw a significant annual growth of 226 percent".[42] A curator of the Taipei Game Show, he found that the number of mobile app developer booths increased from 950 to 1471 from 2014 to 2015. This conference alone had 430,000 visitors over five days. One factor he attributes to the growth of the mobile gaming market is Taiwan's respect for intellectual property.[43] Therefore, Taiwan is currently an exceptional market and will continue to be into the coming years as Kabam releases its forthcoming games.

Additionally, Taiwan is a very economically developed nation. 89.3% of the population has smartphones, as of 2017. It's GDP per capita in 2010 was ranked 32nd in the world, total GDP adjusted for PPP ranked 19th, and GDP (real) growth rate was 4th.[44][45][46] Forbes contributor Daniel Runde attributes this to Taiwan's "national commitment to investing in its people." [47] Thus, Taiwan is a healthy market for entry in economic terms.

Finally, Taiwanese game preferences are also favorable for Kabam's games. The mobile games that are popular among Taiwanese gamers are generally developed by non-Taiwanese companies. In 2014, only 2/10 of the top games by revenue in Taiwan were produced by Taiwanese developers and only 1/10 of the top games

by downloads were produced by Taiwanese developers.[48] This suggests that the market is open to games that culturally are not Taiwanese.

In summary, Taiwan is a great market by revenue both currently and in the future, is economically developed to a point that is optimal for the mobile gaming industry, and at the user level games preferences are favorable for Kabam.

4 OTHER MARKETS

4.1 Japan

While Japan is a very developed country with individuals who have high incomes and a large mobile gaming market, it is a difficult market to access due to cultural barriers, a complex business system, and existing competitors. For these reasons we do not recommend attempting to penetrate the Japanese market. It is a feasible task to accomplish but will require huge expenditure of resources and may not be successful in the current mobile gaming environment.

Japan is an extremely developed country, it ranks 17 on the HDI with an average score of 0.903. Their GDP per capita in 2016 was \$38,894.47, 23rd in the world. This means that the average Japanese gamer has income to spend on mobile games.[49]

The Japanese mobile gaming market total revenue in 2017 was 6,184.14 million USD, 20.6% of the world mobile gaming market and second only to China's market. It had a very high average revenue per user in 2017 sitting at \$90.25. Penetration was highest in 2017 at 54.2%. All of this makes Japan sound like a great market but in reality this prized market will be more challenging to be profitable in than at first glance.[12]

While Japan has many mobile gamers, their tastes are vastly different from the average western gamer. A primary example of this is the panning of Halo Reach in Japan, a game that topped charts in the US and Europe. Hirokazu Hamamura, president of Enterbrain, a popular video game magazine publisher in Japan commented on this phenomenon, stating:

"Halo's theme is warfare... The Japanese don't like shooting and war games very much. They prefer playing in fantasy worlds and battling with swords. I think there is very little interest in fighting with guns and this sort of combat game... It's only my guess but European and American game designers are probably more inspired by movies. In Japan, many creators are inspired by comics and animé. I think that's the big difference." [50]

Other than differences in gaming preferences, the Japanese gaming industry and business built around it is dominated by a network based on relationships that requires a lot of patience. This means an initiative in Japan will require a lot of time and commitment, and almost certainly necessitate a Kabam office in Japan. Alex Krotoski, a PhD who writes for the Guardian's technology blog believes that success in the Japanese business system requires a lot of "face time" with partners. She attributes Microsoft's failure in Japan with the Xbox 360 to their failure to understand the business practices in the emerging market, writing:

"Sure, they had an office [in Japan], and sure, some of the development houses were working on Microsoft products, but every decision had to be made by home office in Seattle. The lack of autonomy, and the associated lack of support, turned the developers off, and thus they lost one of the most important markets in the world." [51]

The combination of a complex business system and cultural differences in preferences make Japan an extremely hard market to enter, but not impossible. The

additional challenge of existing mobile developers with a large market share, adds a third and final component that makes entry into the Japanese incredibly challenging. From 2001 to 2013, foreign made video games in Japan's top 100 games totaled close to zero. This transitioned into an even more difficult situation; games analyst Serkan Toto said, in 2015, that "Two apps dominate everything: Puzzle & Dragons and Monster Strike." Data shows that in 2013, Puzzle & Dragons captured 51% of mobile gaming revenues. In 2015, Monster Strike and Puzzle & Dragons took between 70-80% of revenues. Thus, while the Japanese market is huge, it is dominated by companies who have designed their games to fit the Japanese market preferences perfectly.

Therefore, while Japan presents a great opportunity because of its large market, a high average revenue per user, and strong economic development. However, differences in gaming preferences, a complex business environment, low economic development, and existing developers with large market shares make it a challenging country to enter and less optimal in comparison to other options.

4.2 Indonesia

Indonesia is a rapidly growing, large economy that presents an attractive opportunity for Kabam. Its mobile gaming market total revenue in 2017 is projected to be \$607.12 million, 6th in the world. The projected average annual growth rate till 2021 is 17.4%, higher than any other market. However, a low average revenues per user and prominent, existing competitors make it a subprime opportunity.[12]

The average revenue per mobile gamer in 2016 was \$10.09 and is only projected to grow to \$11.29 by 2021. Mobile gaming penetration in 2016 was 19.6% and is projected to hit 33.10% by 2020. Even though this is higher than China and India, countries with high populations, it is significantly lower than markets like South Korea, Japan, and Singapore. Thus the probability of gaining a significant amount of revenue from an investment into acquiring an Indonesian mobile gamer is low.

Moreover, Indonesia's economic development is increasing quickly, but it is still not optimal for Kabam. Reasons include:

1. Complex regulations on the market - The World Bank ranked Indonesia 114th, out of 189 countries for "Ease of Doing Business"[52]
 - There are many restrictions on online content. Vimeo, Netflix, Imgur and Reddit are all banned due to negative content.[53]
2. Persistent corruption and issues with rule of law - The International Corruption Perceptions Index ranked Indonesia 107th in 2014
3. An ineffective judicial system to settle legal disputes
4. Infrastructure has not kept up with the economic boom which is largely due to the consumer side of the economy
 - Connection speeds averaged 3.0 Mbps compared to the global average of 5.1 Mbps. 4G services have been launched but are unreliable because of a lack of sufficient network infrastructure [53]
 - Mobile phone penetration was 26.52% in 2016 and will only be 40.57% by 2022 [54]

In terms of competition, the existing companies in the market have found a lot of success. Three developers capture 91% of the gaming market share.[55] Furthermore, Companies from Japan, China, Taiwan, Singapore, and South Korea are as active in this market, as they are in their domestic markets, because Indonesia is an attractive, close opportunity for them.[56]

Indonesia is a good market because of a high total revenue and revenue growth rate. However, the average revenue gained per mobile gamer is low, and mobile

penetration is not high. Combined with the barriers to business because of existing market conditions and the environment created by the government make other countries in Asia-Pacific region better for Kabam's entry.

4.3 India

India presents a large mobile gaming market, suggesting it may be a great opportunity for Kabam. Total mobile gaming revenue in India sat at \$556.93 million, 8th in the world. By 2021, this is slated to grow to \$943 million, a growth rate of about 11% annually.[57] A report from App Annie found that app store downloads will grow annually by 28% to 22.7 billion by 2021, app store spending will increase annually by 75% to 2.1 billion, and mobile game downloads will grow by 111% in 2017.[58] However, the sheer size of the Indian market may seem to be its best feature, but it is actually what makes this market so difficult to be successful in.

The same App Annie report found that while app revenues will experience growth in India, they will only account for 2% of global consumer spending in 2021, meaning revenues will lag behind the increase in mobile gaming measured by downloads. Currently, The mobile games market, while growing by 111% in terms of downloads in 2017, accounts for less than 1% of the global consumer spending. The report attributes this to a lack of purchasing power and a slow rate of adoption of smartphones. This is due to a very low average revenue per user and low pay-to-player rate in India, a country with a huge population.

Statista put India's mobile gaming penetration at 17.5%, 32nd in the world and far below every other country studied in this report. By 2020, this will only grow to 33.1%. However, given the huge population in India (1 billion+), this issue can be managed until we look at the average revenue per mobile gamer. India ranked dead last on the reported countries, 44th, at \$2.37 spent monthly by mobile gamers. This means even acquiring a user, which is difficult given the existing penetration rate, does not ensure Kabam will be profitable in India. The growth rate of average revenue is also extremely slow, at 1.8% average growth per year until 2021 putting the projected average revenue per user at only \$2.53 a month. An app maturity model created by created App Annie illustrates the difference between China, a market where mobile game revenues have had a chance to develop, and India, where revenues have not developed.

Forbes contributor John Koetsier conducted a survey of 3500 mobile gamers, and studied 220 million app Indian app downloads in 2016. His survey data suggested the revenue conversion generation rate for mobile gaming was much higher in India, at 34% but even he found that 85% of these gamers spend less than \$1.54 a month on mobile games.[59]

It's puzzling why India, a middle-income country slated for immense growth, has such low adoption of smartphones, mobile games, and revenue generated from this market. The reasons we were able identified include: low purchasing power in India, an early stage smartphone market, and differences in willingness-to-pay for games.

Smartphones have only recently taken off in usage in India, and are still slow to penetrate this huge population. A book on emerging markets published by OneSky called "Breaking Down the BRIC Wall" states that "The lag caused by high requirement of connection bandwidth brings headache to Indian gamers. Mobile game developers should consider hosting a different APK file with lower quality graphics and require a minimum of connection bandwidth in the market." This means that any Kabam products with high quality games, like those demanded in South Korea or Taiwan will need different versions to perform optimally in India. This explains why mobile gaming rates are not as high as expected.

The lack of revenue generated by this market can be explained by a difference in gaming preferences and a lack of purchasing power in India. According to the World Bank in 2016 30% of India's population was below the poverty line, account-

ing for 1/3 of the world's impoverished.[60] Moreover, India is the second most unequal country in the world.[61] The top 1% owned 58.4% of wealth in 2016 ; the top 10% owned 80.7% of wealth.[62] Between 2015-16, inequality grew at the highest rate since 2010. This unfortunate reality explains why average revenue per mobile gamer is so low.

User preferences become an even greater issue when we look at the Indian population itself. Only 125 million Indians speak English; the most popular language is Hindi but even that is spoken by only 425 million Indians.[63] In terms of spending habits, only 25% of gamers in India use credit cards; the most common method of payment is digital wallet, account for 32% of transactions.[64] This means Kabam payment methods may need to change to be compatible with the average Indian consumer's method. The same article continues to state that "50 percent of Indians give a game just a few days and switch to a new one, if it's not interesting, fun, or engaging enough they switch to a new one," which means these gamers also have a low bar for patience with mobile games.

Thus, while India presents a great opportunity because it is a growing market with high total revenue, the average revenue per user, low smartphone penetration, and differences in consumer gaming preferences and habits make it a difficult market to enter and align with a strategy that would be consistent with a successful strategy to enter Taiwan, Singapore South Korea, Hong Kong and China.

5 CONCLUSION

In summary, the Asian-Pacific market is the best market for entry in the next five years compared to other continental regions because of higher total revenues, growth rates, and more profitable spending habits. Our first model focuses our study of the region to eight countries deemed most likely to be among the countries with the highest revenue in the near future. Our second model ranks these eight countries by their ease of consumer accessibility to mobile gaming in order to create a final list of countries that we recommend. Finally, our qualitative analysis of each country looks at more detailed features of the economies to confirm our quantitative research. The analysis also examined the countries that we did not recommend, to verify our conclusion that they were not optimal for entry. Our final proposal of countries to enter is: Taiwan, Singapore, South Korea, Hong Kong, and eventually China. We do not recommend entry into India, Japan, or Indonesia in the next five years.

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