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Game Industry in Asian Tigers: Analysis and Suggestions

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Abstract

According to a recent report, the game industry, including PC games and video games, have already grown larger than the movie industry in the last a few years. The phenomenon represents that the game industry will be one of major entertainment industries in the very near future. Asian Four Tigers, including Korea, Taiwan, Hong Kong, and Singapore, have all developed the game industry as one of their future industries. As we have seen in other traditional industries, each country has experienced different levels of success, and faced different situations in this highly competitive battlefield. This study is an attempt to examine the potential of Korea, Taiwan, Hong Kong and Singapore in the game industry and to investigate the problems they might encounter on the way to attain globalization. Also, some suggestions are also made in the paper for those four Asian Tigers to improve their future competitiveness in the global markets of the game industry.

1. Introduction

The game industry is booming in a thunder-fast pace no matter in what kind of formation or on what kind of platform. According to Interactive Digital Software Association's research, 225.1 million of computer and video games were sold in 2001 in U.S. alone, which means the industry made 6.35 billion dollars from the sale [11]. According to the Market Intelligence Center (MIC) of the Institute of Information Industry, the global market for game consoles and software reached over \$26 billion in 2001. PC and video games accounted for about 80 percent [6].

Americans bought a record \$10.3 billion worth of video games, consoles and accessories in 2002 - more than they spent on going to the movies [3] - a figure which has become an important indicator that shows the era of a brand new type of entertainment is coming. Moreover, the global sales revenue of the game industry was estimated to reach to \$34.3 billion in 2003, 12 percent more than 2002 [21]. Compared with most industries that suffered in these years because of the world recession, the steady growth of the game industry could attract much more attention than ever before very easily. According to a latest research from Pew Internet, male college students in U.S. spend on an average of 15 hours per week on playing games [12]. Based on this substantial amount of number, more and more companies all around the world,

such as Sony and Microsoft, because conscious that the video and PC game industry could be one of their most important arenas in the near future and are trying to focus on this market in order to keep their leading positions in related industries.

Any company in any specific industry which could possibly connect to the game industry would not give this market up easily and many of them are eager to invade this territory in order to capture the market share in the early period. One of those examples is Nokia's latest cell phone N-Gage, which is the game controller-like cell phone designed specially for game playing. Compared with the platform of PC or video games, this is still the virgin land of the game industry with a great deal of potential.

2. The Importance of the Game Industry in Asian Tigers

Asian Tigers had played critical roles in Asian economy for many years mainly by manufacturing, especially Taiwan and Korea. Although two countries had made substantial profit by exporting electronic components that was ordered by the U.S. and companies from other countries, not much innovation or creativity were involved in it. According to the old experiences, incomes from this style of industry usually could not stand for a long period of time. The movement of those companies and investment into China could be a clear warning signal for two countries to become aware of this nature of the trend.

The rise of the game industry in these few years could give two countries a great chance to transform their IT industry to another new era. Since these two countries had already cultivated IT related infrastructures from the '90s, the environments are comparably more mature than other countries in East Asia. The online population in Taiwan was 8.59 million by the end of 2002, accounting for 37.35% of the total population. The broadband population was 2.10 million, accounting for 24% of the total online population [22]. These figures mean that about one-fourth of the people who had access online were using broadband service. Since the online gaming market is growing steadily since 1997 when Electronic Arts published the world's first successful multiplayer online role-playing game, the available rate of the broadband Internet service also became a critical indicator for the game industry. According to research done by Point-Topic in September 2002, Korea, Taiwan,

and Hong Kong are the top three in the list of DSL available rates worldwide. The U.S. was not in the list of top ten [17].

Compared with most major industrialized countries in the world, the size of Asian Tigers is tiny. The largest one in four, South Korea, which is only about the size of Hungary or half of New York [13]. Therefore, physical resources in the Four Tigers are scarce and high-value-added industries are eagerly needed. As Switzerland did with the watch and chocolate industries, the value added by games with the combination of programming, art, and entertainment could lead to a substantial profit for these countries, since both the game, watch, and chocolate are all the industries that add the maximum value to a single product.

2.1. Korea

Except for Japan, Korea and Taiwan play the major roles in the game industry in East Asia, especially Korea. Although Taiwan was in the leading position in the game industry among the Tigers in the early 1990s, Korea had already taken its place and expanded enormously. The Korean gaming industry posted revenue of \$833 million in 1999 and \$2.5 billion in 2001. The game developers there exported \$130 million in 2001 alone. According to the data from an assistant manager of Korea Game Development and Promotion Institute, a non profit association in the game industry that is entirely subsidized by Korean government, there are 2,600 game related companies in Korea, 1,900 companies are developing games and 700 companies are publishing at the point of January 2003. There are also eight companies developing video games for Sony's PS2.

Although both Taiwan and Korea are comparatively strong in the game industry among Tigers, Korea has more resources than the other three. The Korean government plays a very important role after 1998 in developing its game industry by supporting game companies and PC rooms (Internet Café). Young men in Korea even could avoid the obligation to serve in the military after passing the national test and working in the game industry for more than five years [10]. Moreover, the game developing courses were also offered in the high schools since ten years ago [20]. By combining these resources, Korea has a very special sustainable competitive advantage on developing its game industry, and it could be very helpful for it to transform its IT manufacturing industry into a content generating industry.

The prospering of the electronics industry could also have a great impact on the game industry. Contributed by the advanced technology, gaming platforms are not limited on PCs or TVs in recent years. Mobile phones could a good example. Since Samsung had already made a great success by making a \$35 billion revenue worldwide in 2001[23] and had occupied the second largest market share, next to Motorola, in the U.S. market

[25], there could be a chance for Korean game companies to integrate their games into cell phones without cooperating with cell phone companies in other countries.

2.2. Taiwan

The competitive advantages of Taiwan are very similar to those in Korea. Both of these two countries had dedicated semiconductor experience to the IT industry for many years. However, the resources in these two countries could be definitely different in several aspects. Compared with the Korean government, the Taiwanese government spent little on game related investments. Game companies in Taiwan suffered by lacking budgets and quality personnel. The education aspect could be one of the major weaknesses on developing game industry in Taiwan. Although there were some schools and institutes began to educate students on game developing by setting up game related majors, the contribution was quite limited since the priority was still focused on short-term profit making. Since Taiwan is not the leading country in the game industry, instructors from other countries might be needed in order to make a breakthrough in this highly technological and entertainment oriented industry.

Taiwan was also one of those countries that set the IT industry as its primary target developing industry in the 21 century. The transformation from the high-tech manufacture industry is needed in the era that more and more people would agree that digital contents are more valuable than physical equipment. The success of the game industry also could be a critical indicator of Taiwan's innovation and transformation.

2.3. Hong Kong and Singapore

Hong Kong and Singapore are far behind Korea and Taiwan in the game industry. Although about 70% of households in Singapore have at least one PC inside [1] and 62% in Hong Kong [24], most of the games played by people who live here are still from the U.S., Europe, Japan, Taiwan, or Korea. Although there are still some game companies in Hong Kong and Singapore, the inability to reach their customers results from the lack of strong publishing companies is one of the major problems for them to make profits. Since most people here speak Chinese, they rely heavily on publishing companies from Taiwan in order to enter the Chinese markets, which include China, Hong Kong, Singapore, Indonesia, Malaysia, and Taiwan. Some companies in Hong Kong and Singapore target their market globally. Therefore, they would try to make their games locally, but publish them globally. The recent example would be the game Capitalism that was made by Enlight Software in Hong Kong, but published by UBI Soft, a France based global game publishing company that makes the game so that it could be bought worldwide.

Both the Singapore and Hong Kong governments were conscious about the trend of this prospering industry and

had invested some capital in it. The Government of Singapore Investment Corporation had invested in NCsoft Corporation, the Korean leading game company, by accumulating a 5% stake of it in the year of 2002 [19]. The Hong Kong government also set up the Secretary for Commerce, Industry and Technology to develop multimedia entertainment, including the game industry. Hong Kong also led game related companies to join the Electronic Entertainment Expo and Tokyo Game Show, which were two of the most important game expositions held annually in Los Angeles and Tokyo, Japan. Hong Kong, which has the second large entertainment film industry in the world [8], has an advantage as more and more films combine computer technologies in them. Movies like Final Fantasy in 2001, Matrix, and others integrated a great amount of advanced computer technologies making audiences used to accepting those fancy pictures. As the relationship between the film and game industries in these years grew closer, people there who were used to making films to entertain people could be familiar with the ways to do so in the game industry. The experiences in the film industry could be one of the most important assets for Hong Kong to get into the game industry in these few years.

3. What fields are cultivatable for game companies in four Tigers?

3.1. Hardware

Asian Tigers have no local-brand game console manufacturer. Manufacturers in Taiwan are concentrating on supplying OEM game consoles and accessories for Sony's PlayStation 1 and 2, Microsoft's Xbox and Nintendo's GameCube [7]. Since the worldwide console market was already dominated mainly by Sony, Microsoft, and Nintendo, it could be less possible for companies from Four Tigers to innovate any new console platform and to maintain competitiveness at the same time. Although the market of the game accessories is not what most game companies focus on, companies making game accessories like Logitech and Thrusmaster are still making good profits by producing joysticks for PC gaming. Four Tigers could concentrate on this part and do as innovative as possible within limitations.

However, it is not totally impossible for the Tigers to keep far from the console platform market. The Korean company Samsung Electronics could be one of Sony's toughest competitors in the very near future. Samsung had already got rid of the image of inferior goods by spending a great deal of money on advertising and developing new marketing strategies. It also has the technology to produce the large size plasma TVs and slim laptops that made Michael Dell shock and place the order from it immediately. Moreover, Samsung also had invested part of its resources on the game industry. The World Cyber Game competition held in Korea annually as the game Olympic could be one of those examples.

Once Samsung integrated all of its experience and expertise, a strong power can be generated, but its management decision making processes and financial structures still need to match NASDAQ's high standard in order to be a public company in the US [5].

3.2 Software

3.2.1. Platform – PC or Console?

There are only a few companies within Tigers to make console games. The amount of companies in Korea that are making console games are about eight, less than five in Taiwan, and no clue shows that there are any companies in Hong Kong and Singapore doing so.

Unlike PC with its open environment that any company can make games to fit its standard, the developing environment on console games is much closer and thus has more limitations. The obstacles of making console games therefore could be much more than making a PC version and thus could explain the phenomenon that there are only eight companies in Korea making console games.

3.2.2. Genre

According to NPD Tech World's research, the most popular game genre was sports on consoles and strategy on PC in 2001 [16]. Popular genres of the games differ from platform to platform mainly because of the nature of the functions created from the platform or game itself. People would not expect a video game player would use a mouse and plug a USB keyboard into the machine to play real-time strategy games. It would be also difficult for PC game players to control Jason Kidd, a star basketball player in NBA, to have some fancy movements before scoring by pressing a series of keys on the keyboard.

Not only the closed and inconvenient developing environment of the console games made the Tigers avoid developing them, but the sports genre also limited them. There are no such international famous sports in those four countries and area like the NBA, MLB (Major League Baseball), or European League soccer so that many people who do not live in America or Europe still could recognize those players easily. Therefore, the characteristics of comparable non-boundary strategy games (STG) or role-playing games (RPG) became the most popular genre of those game developing companies in the Tigers. The situation would likely still be the same in the future unless Asian professional sports could be well accepted by the whole world, or companies could not make it possible to make other genre of games with a hope to be competitive in the global market.

3.2.3. Online, Match, or Single Player Games

Since the success of Ultima Online made by Origin System and published by Electronic Arts in 1988, online

games became one of the most promising and competitive markets in the game industry. DFC Intelligence is saying that the online game market will grow from \$875 million (in 2002) to over \$5 billion worldwide in 2008. DFC, for reference, has reported before on the growth of the gaming industry and Nintendo's continued financial strength despite weak performances by GameCube. The majority may still have to do with PC-based subscription services, but there is a rapid increase in support of online capabilities by console systems. DFC also forecasts that the installed base of online-capable videogame systems will be over 100 million worldwide by 2008 [18].

Although the single player games and match games still have their markets, everybody's attention is on the online game market in recent years. For a game company, counterfeiting and piracy is one of the most serious problems it needs to solve, especially if its market is in Asia. Since the structure of an online game is totally different from a match game or a single player game, the company's revenue could be secured very well. An online game consists of two parts of programs. One part of the programs is installed in users' PCs or consoles make them as the client machines, while the other part is in the companies' headquarters or in ISPs (Internet Service Providers) machines and make them as the server machines. There is no access for any player to play any online game without connecting the client machines with the server ones through the Internet. Once a player's PC connects with the server, a unique ID and password will be requested. Therefore, it is useless for a player to just simply copy those client programs in a desire to get into the game.

Korea and Taiwan are doing very well on online game market. NCsoft Net, a Korean leading game company had 36 million subscribers on its online game-Lineage, 3 million of these subscribers were from Taiwan [14]. Because of the income secured and easy addictive characteristics of online gaming, it had already become a gold mine to many game companies. Moreover, the life cycle of a successful online game is usually about five years or longer (Ultima Online since 1998, Everquest since 1999), which also means the risk of inventing a brand new game could be eliminated once one online game could be accepted by enough players. According to the reasons listed above, the online game market could be one of the most important markets for game companies in Asian Tigers.

4. Where are the Markets?

For most companies in the game industry, game titles usually were designed for at least two similar markets in different countries. Game companies like Soft-World International Corp. from Taiwan could export their games easily to Hong Kong, China, Singapore, Malaysia, or even Indonesia and sell them to those Chinese origins. Theoretically speaking, game markets between these

countries could be circulated easier than marketing a game from Korea or other countries. However, because of the internationalization it became much easier to get information from other countries in the 21st century as boundaries between countries with minimum cultural differences could be eliminated. The best example to explain this phenomenon could be the Korean game market in Taiwan and China. By translating their contents into Chinese characters, the Korean game companies had already had 48.65% of the online game market share in China [2]. They also had 65% of the market share in Taiwan [9]. Since many Korean games were developed based on non-existing fantasy medieval stories, they minimized the resistance from different cultures and therefore could be accepted by consumers in other countries. The local markets for Asian Tigers are too small for companies to make substantial profits from them. Companies not only in the game industry, but also in other industries in Asian Tigers are all trying to sell their products regionally or even globally. Samsung Electronics could be an example of doing so.

For game companies in Asian Tigers, the easiest way to sell their games and to get acceptable profits could be to sell them regionally. Many game companies from Korea and Taiwan already did so and are making substantial profits. Although there is no successful example that can show companies from the Tigers get succeeding in the global market so far, Lineage II, a fantasy based online role playing game that made by NCsoft from Korea could be a new hope later in this year. NCsoft tried to use Lineage, its well-known and most popular game title in Asia to enter the U.S. market in 2000. However, mainly because of its relatively poor graphics and non-dynamic game play it failed in America. After that, the company obtained a lot of support from Richard Garriott, the creator of the world's first successful online game to develop Lineage II and is almost ready to start a new battle in the U.S. market. It could be an important milestone for Asian game companies to examine if their techniques of making games could match the needs of the global markets after several years' efforts this time.

5. How to Market Games in the Global Markets

Like other industries, the marketing aspect of the game industry is very dynamic and could be very challenging. The strategy that Asian game companies used to give their online game software away to players with a minimum or even with no charge is not suitable for the U.S. market. As a game company, a subscriber for an online game needs to pay the maintenance fee monthly and therefore it could generate a stable income for a game company. Based on this way of thinking, the income from the retail software is comparatively unimportant and it also could be an obstacle if the company wants to gain the largest market share with a standard software charge.

The situation in the game industry in U.S. is somewhat like that in Japan in other industries. Most people would believe a quality game always has a higher price. That is why Star War Galaxies, the latest online game published by Lucas Arts charges its subscribers for the software only at the price of \$49.99. Comparably, NCsoft charged its subscribers no software fee in 2000 when it came to the U.S. market for the first time. Subscribers just need to download the software of Lineage and pay the maintenance fee monthly. The media gave it a negative comment almost immediately and said it is a poor game that looks like there is always gauze in front of the screen because of the bad resolution. Other companies that wish to public their games globally should notice the impact of adopting different marketing strategy in different markets.

Unlike Korean and Taiwan, many other countries do not have as many Internet cafés as they have. Moreover, customers' activities in the Internet cafés are also different from country to country. Because of the high density of the Internet café and the major activities in it is playing games, it plays as one of the most important channels for game companies in Korea and Taiwan. However, the situation is not the same outside those two countries. Take the U.S. for instance, where consumers rely heavily on traditional retail stores or online virtual stores to purchase their game software. The cooperation within game developers, publishers, and distributors is comparably more important than it is in the East. Companies also need to adjust their resources in order to be suitable under this kind of environment.

6. The Problems Game Companies May Encountered

Although the game industry is in the field of entertainment as the movie industry, problems these companies face are always as serious as those in other industries. The government policy and legal problems could be one of the major problems that game companies need to face.

The U.S. District Judge Robert Lasnik issued an injunction blocking enforcement of the Washington State law banning the sale of certain violent video games to minors. The law was due to take effect on July 27, 2003, and would have imposed a \$500 fine on retailers selling games depicting violence against law enforcement officers to anyone under the age of 17 [15]. Although there are still some disputes on this topic, it could somewhat had an impact on the whole game industry while it is still not illegal to sell mature rated DVD or VHS to minors so far.

As we mentioned in the former part in this paper, the sociocultural problem is also a very critical aspect for a game company to take more attention. Tony Hawk's Pro Skate, published by Crave Entertainment, was one of the best-selling games in North America and had a supreme reputation, but it would not be the same if this game went

to the East. The same situation happened on The Sims, which was developed by Maxis and published by Electronic Arts. More than seven million copies of The Sims have sold in the U.S., making it the top-selling PC game of all time. Combined with all the expansions (Living Large, House Party, Hot Date, Vacation, and Unleashed), Electronic Arts has sold an outstanding 17 million units. However, this title sold less than 0.1 million copies in Taiwan when it was published there. Consumers in Taiwan who live in small apartments obviously do not consider the virtual reflects the facts of their daily lives while all avatars in it live in American style villas.

7. Conclusions and Suggestions

The game industry used to be the last choice for quality college students to work for. Parents might think that there is no future if their children like to work in a game related company. However, according to Fortune's latest research, the leading company in the game industry-Electronic Arts (NASDAQ: ERTS) - was announced in the list of 100 Best Companies to Work For in 2003 [4]. Game related jobs even had already become one of the first choices for top college graduate students to work with. In those four Asian Tigers, most competent college graduates go into the game industry. Actually, it is not strange to find that lots of CEOs of game companies in those countries are graduates from prestigious colleges and university in the world, including Ivy League schools in the States. It is certainly not an industry for making toys for children only any more.

For Asian Tigers, the education and investment could be the most important part for them to catch up at beginning stage of booming. Like other industries, the game industry would be more and more professionalized and therefore professional knowledge would be needed. Only by setting formal, serious and scientific methods on developing games could be successful in the future.

Setting professional schools or departments in the university also could be very helpful for developing quality workers in the future. Korea is already doing so, but Taiwan, Singapore, and Hong Kong still have a long way to go.

The attitudes of the governments are also very critical. Taiwanese government is seriously lagging on this aspect while governments in Korea, Singapore and Hong Kong invested a great amount of money in the game industry in these years. Without support from governments, companies would find it very difficult to overcome problems like capital collecting and related regulations.

The potential for Korean game companies is very huge, especially in these years. After NCsoft launches its Lineage II in late 2003, it is clear that Korean-made games have already become internationalized or still has its regional markets. Taiwan's development in game industry would be much better if the government could support its game companies instead of seeing them as toy

making companies. Referring to Hong Kong and Singapore, because of the scarcity of resources no matter on capital or human resources, they could develop very specialized expertise in certain areas such as visual design, music composing or animation in the whole game making chain. Outsourcing would be needed once the game industry getting more advanced.

Generally speaking, Korea, Taiwan, Hong Kong or Singapore all have great potential and some of them even already have solid foundations in the game industry, especially the online gaming market. Governments and companies should seize the chance and adopting suitable methods in order to gain the benefits of this newly risen industry in time.

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