

Case study: Grigon Entertainment' s success and failure

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Abstract

The Korean online gaming industry has seen rapid growth since the boom of information technology (IT) related industries, especially Internet and PC-bang or local area network (LAN) use, throughout the country. Online games are real-time games in which two or more players meet, compete, and cooperate in the same game space using the same communication network. Even though the growth rates of IT-related industries have recently slowed, the growth of the online gaming industry has increased, and Korean firms are expanding their businesses to countries all over the world. However, the online gaming industry is becoming an oligopoly, in which 4-5 leading companies occupy most online gaming markets. This situation presents a disadvantage to the Korean online gaming industry, since online players usually seek a diversity of online gaming contents and high quality online game services. Therefore, small- and medium-sized game developers must survive in this market by upgrading the quality of their online gaming services in an effort to provide differentiated goods and services in monopolistic competition markets.

However, most venture companies in the online game industry, whether new or previously existing, are not able to obtain adequate financing. The objective of this paper is to examine the management environment for medium- and small-sized game developers in the Korean online gaming industry. By introducing the case of Grigon Entertainment, we try to identify the source of difficulty obtaining external financing for Korean venture firms in the online gaming industry.

Keywords: online game, oligopoly, management environment, venture firm, financing

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I . Korean online gaming industry structure and its features

1.1 The structure of the Korean online gaming industry

The Korean online gaming industry was built up in a relatively short period of time and has grown continuously at an incredible rate. However, some factors have come into play that could hamper the development of the online gaming industry in Korea. For example, new competitors in the market would not be able to access the industry, as the Korean online gaming industry has already established itself as an oligopoly, being composed of 4-5 leading game companies. Furthermore, even if entry into the industry goes smoothly, most participants, besides a handful of major firms, do not achieve profitability from the online game business. For example, the top 5 online game companies occupy 65.4% of total sales in 2002, and 57.9% of total sales in 2003 within the entire online gaming industry (Rho, 2007). Even though there are 55 companies in the Korean online gaming industry, the online gaming market comprises the market shares of NCsoft (20%), Nexen (15%), Neowiz (13%), NHN (12%), Blizzard (10%), and others (30%) in 2006. Consequently, the industry has clearly become an oligopoly, since the top 5 online game providers hold 70% of the market share in the online gaming market. This oligopolistic tendency could have a negative impact on the vitality and diversity of the online game genre and the contents corresponding to online game users' needs without new entrants in the market.

The monthly subscription fee for online game products is usually set between 20,000 and 30,000 Korean won, being a tacit collusion in pricing. This presents a very profitable market for the top 5 vested companies, but proves disadvantageous to new entrants.

In fact, the Korean online gaming industry experienced monopolistic competition in its beginning, since there were several online game developers providing slightly differentiated goods rather than homogeneous goods, and there were no restrictions to free entry and exit. In terms of

economic theory, monopolistically competitive firms experience a downward sloping demand curve due to the market power driven by producing differentiated goods in a short period of time. However, the price elasticity of online gaming goods under monopolistic competition is greater than that of pure monopoly or oligopoly, because several substitutes exist (Varian, 1992). Therefore, excess profit or loss could occur according to the scale of average cost of each game developer. This would also influence the needs of the game players.

1.2 Korean online gaming features

Korean online gaming products are homothetic but differentiated. That is, the game products are developed for the primary purpose of playing a game, but each product is slightly different in an effort to offer product differentiation to compete with other companies' products. Therefore, the online game goods cannot be easily adjusted by setting only a lower price against a competitor's product, although a homogeneous product is able to be adjusted in oligopolistic markets by strategically setting a profitable price for each firm. To ensure profitability, each firm must usually employ marketing strategy and develop interesting game contents to entice users. Because online games use these features, the adjustment of market price is becoming more difficult, and the market competition is becoming sharper in the online game industry.

II. Korean online game revenue model and success factors

2.1 Online game business model

There are main two business models within the online game genre. The first business model is online simulation games representing one-to-one or many-to-many personal computer games such as Starcraft, Command & Conquer, and Warcraft. The second business model is the massively

multiplayer online role-playing game (MMORPG), which allows users to play games in the networked virtual space under some game scenarios according to the social, political, and economic systems. Examples of MMORPG games include EverQuest, Ultima Online, Lineage, and Final Fantasy. Under the first model, wholesalers or retailers sell a package of online game products, and under the second model, software developers provide game users with online games through their servers or Internet service providers (ISP) (Roh and Wi, 2007). In general, software developers are concerned with server management, regular maintenance, and repair with considerable costs. Game users need to obtain software for playing online games in both business model cases. However, the one clear difference between the two models is that software developers try to raise revenue from selling more packages of online games in the first model, whereas the main source of revenue in the second model is the monthly access fee.

2.2 Korean online game revenue model

Revenue from online games usually comes from usage fees from online game users, selling of charged items, royalties from PC-bang or LAN owners, advertising through online banners, etc. Among these sources of revenue, the practice of charging fees for online games plays the greatest role in creating revenue for online game service providers. The fee-charging model could be composed of the meter-rate system, a flat-rate system or a subscription fee system, and a partial-paid service system. At the start of the online game industry, the meter-rate system was popular since it was suitable for making a high profit from a small number of game users. However, this system made predicting revenues relatively difficult, and the paying system was not sufficiently developed at that time. For these reasons, a flat-rate system has generally been used in the Korean online gaming industry. However, a subscription fee system, especially a prepayment system, is not effective in attracting new game users, since players do not want to pay a subscription fee of 20,000-30,000 Korean won without developing a certain interest in the online game, even if there are closed beta and open beta tests before launching an online game. On the

other hand, a partial-paid service system is appropriate for easy entry into new online games and provides a clear payment with respect to recent game players' view. As a result, the partial paid system, which sells many different charged items for gamers to buy for better in-game performance but provides basic game play for free, plays a key role in the Korean online gaming industry for revenue today. This system was known as a reasonable revenue model for casual games in the past, but now the payment system has been adopted in some MMORPGs, which previously used a flat-rate system. The MMORPGs have now experienced a period of prosperity again after converting to the partial paid system.

2.3 The online game success factors

Several factors contribute to a successful revenue model within the online gaming industry. The development of online game contents, effective services for the contents, and the expansion of online game technology and infrastructure are three important factors under general consensus. Firstly, the differentiated content is a critical element for competition with other firms in the online gaming industry, and it effectively holds existing game users' interest while also attracting new game players. Furthermore, creative and unique content leads an online game provider to obtain a market power followed by a temporary monopoly in monopolistic competition. Secondly, an effective marketing strategy and successful fee-charging model are also important factors, because this attracts many online game users through strategic marketing and creates continuous revenue for the online game businesses from game players through flexible fee-charging models. Lastly, the development of technology and infrastructure are supplementary elements to create primary values in most industries. No matter how many creative items and sufficient game subscribers there are, the online game business cannot run smoothly without technological maintenance and systematic management. For example, online game service usually requires large-scale server systems and high-capacity database systems, as a large number of game users tend to seek access into online game servers simultaneously. Therefore, the expansion of online gaming technology and

infrastructure is compulsory.

III. Medium- and small-game developers in the Korean online gaming industry

3.1 Online game business case study: Grigon Entertainment' s success and failure

3.1.1 The outline of Grigon Entertainment

Grigon Entertainment Co., Ltd. (GE), was founded for business purposes of online game development and service in 1998. The company' s business range has been expanded into software programming production, sales, export and import trade, information process consulting, system and integration (SI), online game service, etc. Above all, online game development and publishing has been the company' s core business activities. Examples of game produced by Grigon Entertainment include Seal Online, Gambledon, and Qring. The history of GE began as "A Big Crag Face, established on April 1998. The firm name was changed to Grigon Entertainment the following year. GE was registered as a venture firm in March 2001, and was nominated as a venture firm for international online gaming markets by small and medium business corporations in July of that year. The full 3D game Zaphie 2 came out February 2002. As a result of its success, GE was named a top-ranked technology company by the trust guarantee funds in the last month of the year. Role-playing game (RPG) Chunrang came out in March 2003. The company' s first commercialized game, Seal Online, won a great prize for digital content by the Ministry of Information and Communication in November 2003, and it also won a prize for digital content by the President of Korea the following month. The sequels, Gambledon and Qring, delivering fee-charging services, were launched in the Korean online gaming industry in April 2006. GE concluded a contract of joint web game development with the Cartoon Network in the

U.S. during the same year. Seal Online won a prize for a monumental 3 million dollars by the Ministry of Commerce, Industry and Energy in the 43th trade day in November 2006. GE launched joint project FusionFall with the Cartoon Network the following year and FusionFall service in the North America web gaming industry and a prearrangement of Canhel service in the Korean online gaming industry in 2009.

3.1.2 Grigon Entertainment' s online game features and revenue model

3.1.2.1 MMORPG Seal Online

Seal Online was developed by Grigon Entertainment in 2003 and its online service has been provided by YNK, which is a professional online game publisher. Seal Online' s fee-charging service started six months after its launch of open beta service. At that point, the number of gamers who logged into the game at the same time was 57,000 during weekends and 37,000 during workdays. This online game was the first Korean game to use 3D cartoon laundering graphic methods. When Seal Online began offering a subscription fee-charging service of 25,000 won per month on January 2004, many game players left the online game service. However, when the fee-charging service was converted to a partial-paid revenue model in 2005, the number of simultaneous gamers and sales of charged items rose successfully in the online gaming market. Publishing partner YNK acquired the copyright for Seal Online from GE for domestic and abroad online gaming service in 2007.

There are some factors that guaranteed profitability from the Seal Online gaming service. As mentioned earlier, differentiated content is the first element. The use of cartoon 3D graphic methods must be differentiated from other online game services in monopolistic competition, and GE chose game publisher YNK to form a part of the strategic marketing, since YNK had a successful record of online game commercialization at that time. Seal Online was deployed on a commercial scale starting with services in Japan and then going to China, Taiwan, Thailand, and Indonesia through YNK' s marketing

strategy. Lastly, GE was nominated as a top-ranked technology company by the trust guarantee funds in 2002. The company now must manage and supervise a large scale of server systems and a higher capacity of database systems for tens of thousands of players to access the game simultaneously. This technological stability is very important in providing game players with convenient service utility.

A brief history of Seal Online overseas expansion through YNK is as follows:

- January 2004 Seal Online fee-charging services started in the Korean online gaming industry
- April 2004 Seal Online fee-charging services started in the Japanese online gaming industry
- June 2004 Seal Online fee-charging services started in the Taiwanese online gaming industry
- April 2005 Seal Online fee-charging services started in the Chinese online gaming industry
- July 2005 Seal Online fee-charging services started in the Thailand online gaming industry
- May 2006 Seal Online fee-charging services started in the Indonesian online gaming industry

3.1.2.2 Webgame FusionFall

FusionFall is a modern massively multiplayer online game (MMOG), developed jointly by Grigon Entertainment and Cartoon Network Universe in the USA. The game is the first full 3D MMOG realized on web browser instead of the simple 2D online game format. Therefore, the game was evaluated to be an advanced quality of service compared with other web games. In FusionFall, game players can enjoy the service without downloading a client with only Internet access. FusionFall recently recorded 5 million subscribers in the USA, four months after launching the web game

service. This makes the game more popular than World of Warcraft from Blizzard among younger gamers, even without being known to the general public in Korea. In fact, FusionFall was designed as a standalone client game, which requires gigabyte unit download management, but it was developed into a web game to make it easier for game users to access. While considering the fact that the superhighway Internet supply ratio was less than 50% in the USA, web gaming was more commercial at that time. Furthermore, since young Americans could not easily install the game onto their parents' computers without permission, the web game was determined to be the most appropriate to attract young game players in the USA. In terms of revenue model, FusionFall introduced various models by providing a subscription fee-charging service of 1 month, 3 months, 1 year, and family unit.

A brief history of the process of launching a commercialization of FusionFall in Korea is as follows:

- April 2006 GE concluded a contract of joint web game development with the Cartoon Network in the USA
- 2007 Launching of the joint project FusionFall with Cartoon Network
- November 14-16, 2008 The first closed beta test was performed (CBT: more than 300,000 login members' participation)
- December 5, 2008 The second closed beta test was performed
- December 12, 2008 The third closed beta test was performed
- December 2008 Open beta test was performed
- January 2009 Launching of FusionFall service in the North American web game industry

3.1.2.3 MMORPG Canhel

Canhel of Grigon Entertainment is a MMORPG that had been carefully prepared for four years. This game has a feature that is similar to the castle battles of NCsoft's game, Lineage, and the other features are the item-centered system and face-off system. These beneficial qualities of the

service are based on GE' s online game development know-how accumulated over the previous 10 years. Moreover, GE had already deployed the online game Seal Online on a successful commercial scale. Therefore Canhel was evaluated as a competitive online game with long-term management and contents providing capacity even with the presence of powerful games such as Lineage 2, Aion, and World of Warcraft in the domestic MMORPG markets. Incidentally, Canhel did not clearly specify what sort of fee-charging service will be deployed, but the recently trend of fee-charging service is a partial-paid service rather than a flat-rate service.

A brief history before launching a commercialization of Canhel is as follows:

November 2008	Prologue test
February 19-22, 2009	The first close beta test (CBT: possible participation up to 9,999 login members)
April 18, 2009	Canhel focus group test (FGT) event
April 24, 2009	The second close beta test

Grigon Entertainment jointly developed the web game FusionFall with the Cartoon Network and achieved a meaningful performance in the U.S. web gaming industry. An ambitious work, Canhel had been slotted to be released after the closed beta tests during the upcoming summer. However, the domestic service of both online games cannot be conducted due to GE' s being out of business for the time being, and the U.S. service of Fusionfall will be fulfilled by the Cartoon Network.

IV. Grigon Entertainment' s failure factors analysis

4.1 The financial situation of Grigon Entertainment

There have been many medium- and small-game developers in the Korean online game industry since the beginning of the industry. While most survivors among the game developers have converted into publishing

companies after expanding their business scale, under the circumstances, GE has mainly concentrated on developing online games without converting a whole business range into publishing activity. In fact, GE also penetrated into publishing because of its online game business experience ranging from development to service, and the accumulated online game know-how could provide competitive advantages in a monopolistic competitive market. In the light of a business strategy, GE founded Andengames as a publisher for online game Gambledon in 2006, even though GE received publishing suggestions for Gambledon from leading publishers in online game markets. However, the Gambledon online service was unfortunately ended during the following months due to insufficient game accesses to the game service, and the development man power had to be allocated into the new game service project as well. As a result, the new investment inflow of external capital was not established smoothly for GE due to the failure of the Gambledon service. The financial conditions of Grigon Entertainment can be analyzed in three sections regarding profitability, stability, and productivity. As we see in Appendix B, return on whole sales is relatively satisfactory, but profitability is weak due to the reduction of operating profit and a pre-tax profit. In particular, there is no presence of a loan, in spite of the company's high debt ratio. In terms of stability, financial safety is not favorable due to a low equity ratio. Above all, research and development (R&D) has been unprecedented for the last three years. Consequently, no new investment inflows of external capitals were established in the past couple of years.

4.2 Grigon Entertainment's difficulty with KOSDAQ listing

KOSDAQ listed a requirement for online game companies depending on their number of commercialized online games. For example, online game developers should deploy at least two games on a commercial scale. Online game publishers should usually aim to commercialize more than three online games to the online game market. In spite of the difficulty of KOSDAQ's listing, online game companies try to be listed on KOSDAQ due to capital assurance, an increase in firm recognition, and the welfare of existing staff members and new staff recruitment. Furthermore, new various investments

such as game development and service through a large scale of capital insurance would be easily conducted. Therefore, many online game firms continuously try to go public, but most are unable to succeed because the new listing requirements are not satisfied. As a result, game companies often turn to foreign security markets because of their comparatively uncomplicated requirements. In addition, back-door listings on KOSDAQ by acquiring a listed firm or through a merger and acquisition (M&A) came into action because of the difficulty of going public through a general listing procedure, and it usually takes 3-4 months to complete the process. In light of the KOSDAQ listing difficulty for medium- and small-game firms, back-door listings must follow one strategy to overcome a tricky management situation. Gamehi and Dragonfly, for example, have already followed the business strategy.

GE, which met with difficulty to be listed on KOSDAQ, concluded an acquisition contract with Telloard last June. Telloard is an IT firm listed on KOSDAQ, founded in 1996. The firm's business ranges are system integration, mobile phone, and casino game machines. Its wholesale was 31.2 billion Korean won last year. However, GE's total sales were just 5 billion Korean won. The wholesales of an acquiring firm should be bigger than the acquired firm; therefore, GE is faced with the challenge of stimulating sales by at least 30 billion Korean won this year since the Financial Supervisory Service strengthened management and supervision and regulation on a spin-off M&A and a back-door listing from last year. In fact, KOSDAQ managerial regulations were not rigid on back-door listings so far as the financial scale of the listed firm is greater than the unlisted firm in the merger two years previously. Consequently, the difficulty of meeting listing requirements on KOSDAQ might be one problem for small- and medium-game developers to raise external capital through Initial Public Offerings (IPO).

V. Business implications from the case study of Grigon Entertainment

An enterprise of middle standing, Grigon Entertainment, approaching the

10th anniversary of its foundation, finally went out of business due to financial difficulty in 2009. The company developed Seal Online, assuring profitability as a commercialized online game, and it had plans to launch two more profitable online games, FusionFall and Canhel into the Korean online gaming industry in 2009. In fact, new invest inflow of external capitals had not been established since the failure of Gambledon, in spite of ten years' experience in online game development. The fatal reason for the business shutting down was the failure of a trial of back-door listing the previous summer. GE, which had an annual sales of 5 billion, tried to acquire Telloard, which had more than 30 billion annual sales, by paying 14 billion Korean won. However, GE could not accumulate that volume of money at an appointed time and was forced to give up the contract deposit of 1.5 billion Korean won.

Too much burdensome acquisition and difficulty in raising external funds as a firm of middle standing was the main cause of GE's bankruptcy. However, unfavorable management environments for small- and medium-sized venture firms lie at the root of institutional problems. Therefore, systematic supports by governmental institutions should be provided to save some small - and medium-potential game companies that have already proved their profitability in terms of KOSDAQ listing and venture firm financing. The online gaming industry has gradually assumed a key role in economic industry, compared with other content industries. For example, it overwhelms the film industry, which takes a substantial part in content businesses, in a scale and in income. Nevertheless, the online gaming industry has not obtained sufficient support with respect to financing and government aid. At the point of vitality in this industry, activation programs such as initial public offerings (IPO), financing formation in favor of small-scale game developers, and expansion on government supports should be systematically established. As mentioned earlier, IPOs provide a very useful method to raise external funds, to obtain beneficial tax breaks, and to improve public relations (PR) for small-sized venture firms. Therefore, the requirements for obtaining IPOs must become easier for small-scale online game developers that have already proved their profitability. In case of financing, a large-scale new investment of external funds does not come into

action due to poor investment policies and financial resources driven by policy makers' and investors' lack of understanding of the importance of the online gaming industry. For example, a large-scale investment is usually made in the film industry if a film scenario is good, whereas a practical investment is usually established in the online gaming industry at the phase of completion of online game development. Therefore, it is necessary to set more flexible investment policies and sufficient funds for small-scale venture firms having profitability through changes in policy makers' and investors' perspectives on the online gaming industry. In addition, a stable investment system to online game industry has unfortunately not been constructed yet. The investment decision-making system for online game contents evaluation and profit prediction should be built in advance. Government subsidy also provides essential support. The most compulsory element for newly established online game firm is to secure financing for game development. Today, some online game developers suffer from lack of funds and try to obtain an inflow of funds from abroad. However, in this case, the domestic online gaming industry can be gradually encroached upon by foreign funds. Furthermore, the core online gaming technology can be released to potential competitors abroad. Therefore, institutional improvement plans to prevent the problems is desperately needed through supports from the Korean government.

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Appendix A

Venture firm' s financing

As a scale of Korean online game industry increase rapidly, the investment system of online game industry is necessary to stabilize game development and investment. And most game developers are short of seed money except 4-5 top ranked businesses. Therefore, project financing or portfolio investment such as diversified investment and joint venture could be appropriate to raise external funds when to consider the features of online game industry. Investment system is generally circulated in following orders of capital investment, game development, game service, investment payback, and re-investment. There are general conditions according to game industry stages as follows:

1. Planning stage

Investment criteria	A scenario	Game developer
Investment resources / investors	Business starting fund/ business starter Financial sector loan	Policy funding / government agency Investment funding / game investment funding
Investment methods	Stake investment Package investment	Project investment
Considerations	Seed money shortage High risk	No concrete criteria High possible profitability

2. Beta test stage

Investment criteria	Beta version game	Game developer
Investment resources / investors	Investment funding / venture capital Publisher / Game portal	General portal
Investment methods	Stake investment Package investment	Project investment
Considerations	Market reaction Risk in commercialization	High competition in case of successful games

3. Commercialization stage

Investment criteria	Commercialized games / Same time accesses, sales	
Investment resources / investors	Investment funding / venture capital Publisher / Game portal	General portal Big size corporations
Investment methods	Stake investment Package investment	Project investment Acquisition, M&A
Considerations	Investment/ revenue is relatively low	Investment in successful games (low risk)

4. IPO listing stage

Investment criteria	Commercialized games / Same time accesses, sales	Game portfolio Game company profiles
Investment resources / investors	Individual investment Big size firms	General portal Individual investment
Investment methods	Stake investment Package investment	Project investment Acquisition, M&A
Considerations	IPO difficulty of game firms	Generating continuous revenue

Appendix B

Grigon Entertainment financial ratios

A settlement term		2006/12	2007/12	2008/12	Average/2008
Growth	Total assets growth rate	13.54	4.16	50.40	10.43
	Tangible assets growth rate	13.46	51.70	6.99	14.38
	Liquid assets growth rate	34.83	57.03	547.82	0.85
	Equity capital growth rate	89.57	623.54	8.24	5.83
	Sales growth rate	6.42	21.62	19.64	14.63
	Net profit growth rate	Deficit	Surplus	72.04	
	Return on total equity	26.02	6.20	1.42	0.94
Profitability	Return on net worth	162.21	51.77	7.91	1.69
	Return on net sales	28.65	24.88	16.05	5.78
	Times interest earned ratio		N.A.	N.A.	
	Current ratio	11.93	6.03	25.95	160.41
Safety	Debt ratio	3,408.63	364.78	545.85	84.3
	Debt capital ratio	0.00	0.00	0.00	18.96
	Equity capital ratio	2.85	21.52	15.48	54.26
	Liquid debt ratio	2,701.25	317.45	441.41	63.92
	Illiquid debt ratio	707.38	47.33	104.44	20.38
	Total asset turnover ratio	0.80	0.94	0.61	1.09
Activity	Net working capital turnover	N.A.	N.A.	N.A.	
	Inventory turnover	N.A.	N.A.	N.A.	27.78
	Receivables turnover	N.A.	N.A.	N.A.	5.59
	Operating assets turnover	N.A.	N.A.	N.A.	
	Total asset turnover ratio	27.35	6.22	1.12	38.96
Productivity	Added value ratio	34.11	6.64	1.83	50.1
	Profit dispersion ratio	95.12	99.78	126.16	
	Equity dispersion ratio	84.01	374.05	877.85	
	R&D investment ratio	0.00	0.00	0.00	6.3