The unbound network of product and service interaction of the MMOG industry: with a case study of China

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ABSTRACT
The paper explores the MMOG industry from a network perspective. The aim is to make a theoretical contribution of how this rapidly growing sector can be conceptualized by using a relational and spatial framework from economic geography and international business. Additionally, the paper uses the case of China to show how the theoretical model can be utilized in an empirical context.

Author Keywords
MMOG, network, service, China

INTRODUCTION
The rapid economic growth of countries in East and Southeast Asia is pushing the economies towards a situation where services will become a more important part of the contribution to GDP [9, 45, 50]. With technical ability and strong innovation systems, countries can leapfrog in economic development. ICT clusters in Korea and China stand strong in the new knowledge based economy [36]. A disaggregated analysis of different sub-sectors in Asia shows that the region is competitive in some of the most advanced professional business services such as IT- related services and supply chain management, but seem to lack the competitive advantages of others like management consulting, advertising, financial services to mention a few [8, 45, 47].

One of the most interesting and challenging service industries in contemporary research is the rapidly growing online game sector [7] which is found at the intersection of products and services in Asia. The online game market was 3.4 bn USD 2005 and according to one analyst it is expected to grow to 13 bn USD by 2011 [10]. The market of online games in Asia outside Japan, notably Korea, Taiwan and Kina, that were insignificant game markets less then a decade ago now accounts for over 50% of the online game market [10]. The industry is in general characterized by that a few games that have the majority of the market; a relatively complex and time consuming development process, operation spanning over a long time, recurrent revenues through monthly subscription or the sales of in game items and high risks [7, 19, 27, 37].

The growth is connected with technological developments and economic development plans. The growth of this industry has a number of connections to other service sectors and is to a large extent influenced by a networked or relational economic geography as suggested by [4, 12, 40]. This part of the often called creative industries is considered to be a way of connecting to the global knowledge driven economy for many East Asian countries [28].

AIM OF THE PAPER
The aim of this paper is to make a contribution to the conceptualization and understanding of the online game industry. Prior academic research has predominantly put effort on the micro oriented areas of the online games such as guilds, avatars, player behaviour in online worlds, the virtual world and the associated virtual economy resulting in a somewhat compartmentalized analysis [7, 35, 49]. We aim at introducing additional perspectives for the understanding of the industry on a broader scale trying to catch the complexity of the product and service interaction that spans over many different levels. The Chinese online game industry which has been growing rapidly in recent years will be used as a case study to exemplify how the industry can be conceptualised with the network approach presented.

The paper focuses primarily on the MMOG game segment of the online game market and is based on a number of primary and secondary sources as well as interviews with representatives of the online game industry in Asia.

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ONLINE GAMES – A NETWORK APPROACH

The rapid technological change and complex business environment in the industry calls for a holistic network approach in order to catch the development and the market transformation. For the conceptual understanding of the industry, the network approach found in international business in combination with the relational shift in economic geography theory is used. The network approach has been developed and used in the studies of how firms connect to each other by using activity links, resource links and actor bonds [20]. Even though the network approach has mainly been applied to manufacturing, attempts have also been made to extend the approach to cover the service industry [6, 43, 45, 52]. Blankenburg-Holm [5] has, for internationalization theory, synthesized the main differences between traditionally received theory and network theory. Interesting counterparts are put forward: strategic decision-making vs. process development, unilateral action vs. multilateral interactions, intra-firm resource allocation vs. inter-organizational resource dependence and creation, and, finally, a normative vs. a descriptive approach. Being a newly established and growing industry the online games relies heavily on the network based approach with a mixture of activities, resources and actors. Within such an environment of high-velocity, "the strategic logic is opportunity and the imperative is when, where, and how often to change" [13].

Jeffcutt & Pratt [23] discuss the complexity of the cultural industries in an attempt to suggest a framework for analysing the sector. They argue that the sector is characterized by "dynamic contact-zones that are inter-operational and inter-diciplinary – providing a territory that is hybrid, multi-layered and rapidly changing" [23]. To better understand the sector it is necessary to position research within micro, meso, macro and meta levels. The micro level deals with the driving force behind creative processes and products or services, often found at the company level. The meso level concentrates on the comparative analysis of sub-sectors in terms of innovation support and key intermediary factors across territories. At the macro level the analysis is concentrated around the study of key environmental enablers such as intellectual property rights, skills, ICT capabilities, governance, and development policy. Finally, the analysis of the meta level takes into account more long-term changes in society such as lifestyle and the spatiality of the evolving network or knowledge based society. For research to contribute to the conceptualization and understanding of the sector "...strategic knowledge in the cultural industries must be situated in the analysis of particular organisational fields; not simply imported from other sectors or industries" [23]. The figure below presents the main frame that we see in the online game industrial network in order to catch the complexity of a specific industry that Jeffcutt & Pratt [23] suggests.

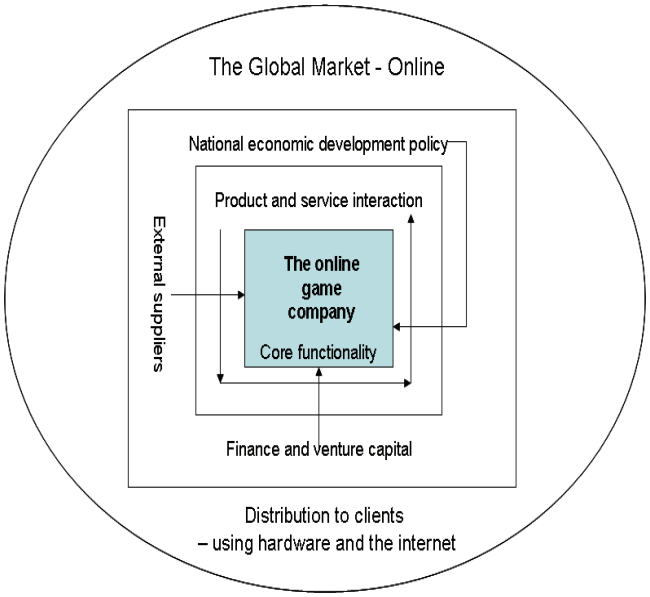

Figure 1: The unbound online game network. Source: Authors'elaboration

The model can be seen from both a process oriented viewpoint where the issue of time is included and a geographical viewpoint. The creation of a well-developed network takes time and to be successful it needs to be included in the game development. The network approach also takes into account the geographical differences. Each company finds itself within national boundaries, but with an almost immediate global market presence through the internet. However, the industry has shown that companies try to expand internationally based on geographical closeness or psychic distance well in line with the early thoughts on internationalization [2, 24, 25]. An example is the regional market of online games in Asia, with a large share of regionally based actors. Additionally, differences in government support programmes, infrastructure, access to capital and cultural dimensions are geographically based. The local business environment where relations, face-to-face meetings and knowledge flow are vital is also geographically determined [4, 16, 44].

Core functionality – technology and infrastructure

This part of the model elaborates on the core functionalities and prerequisites for development of the game. High-speed internet connection has pushed the industry more towards the direction of complex knowledge intensive services. On the micro level, the company needs to take advantage of new possibilities for the online game supply. In order for games to function and gamers to stay satisfied and willing to continuously pay the game fee, the entire value chain had

to become more integrated. The game must work properly and be attractive for players, the internet connection must be stabile. The company must decide on the best way to work with up-grades and potential technical problems. With increased technical power of clients, this dimension is vital. The company needs to employ high-skilled, but also creative employees for game development. The development process includes efforts from artists, programmers, game designers, quality assurance personnel and managers. Employees with extensive experience of developing online games are very important in this regard as the development process in many regards are more complex than stand alone games. Technological limits, development budget, the capabilities of the developer and other factors put restraints on what is possible to achieve. The development takes longer than stand alone games and early versions are used to get player feed-back on functionality. These core functionalities are a necessity for the game to take off.

Product and service interaction

As the games grew more complex with the increase of players, virtual worlds and characters, the game suppliers saw new challenges arise. The structure can be seen as the core functionality for the operation of the game and relates to what we described above as the core functionality for the development. In-house game development increases the possibility to control and launch new versions and up-grades of a game, rather than being dependent on licensing agreements. It also strengthens the ability to proactively monitor and counter hacking activities, to be able to supply a well operating service experience. The complex interaction between product and service connects to the company micro level, the surrounding meso and the macro level. A way to interact with clients and providing service and feed-back is to use real testing of the games in alpha and beta versions of the game. Successful online games have a lifecycle of many years after the game is launched, during which constant service in order to retain current users and attract new ones are necessary. Online game firms need to maintain a high level of service level towards the customers. They need constant support in relation to payments, technical issues and claims etc as well as service that maintain an entertaining social dynamic in the game and update the game regularly in accordance to the users' requirement. This kind of extensive service has not been needed in traditional console games. Regional or global competition demands that the company can utilize and control these primary functions of the game, both in the early development phase, but more importantly when the game is running [37]. Questions on ownership of virtual items have surfaced. It raises new areas of service in relation to the industry, primarily legal services for companies and customers. In this sense online games are in many regards more a service than a product. One example is the need for data base handling. To store all the information that players generate during their time connected to the game, giant data bases with a large number of connected servers are used. To run these technically demanding networks, game developing companies have felt obliged to work with other service professionals in the area. The increase in development costs and complexity of operating the games have also generated a need for outsourcing. Before most parts of the development chain could be handled in-house, but the market demand have pushed companies to contract external expertise. This kind of production system has traditionally not been the strong points of service production in Asia [8, 45, 46]. Companies that specialize in data base building and processing is brought in on a consulting basis to help with these problems. Another problem that was not present before is the fact that hundreds of servers put together at one location need a lot of electricity and maintenance.

Being a mix of a product and a service, online games are both subject for service economies in the part of the business that concerns the services and more product oriented operations in the part that concerns the product. For companies this means that they must have capabilities in the specific requirements for both services and product economies. When it comes to service operations it has been argued that they have to give priority to external efficiency and quality perception, instead of overemphasizing internal efficiency, economy of scale and cost focus [18]. This is true for the service aspects of online games. However, when it comes to the product aspect such as the development of the online game, economies of scale, internal efficiency and cost focus is very important. Normann [38] suggests that firms need a specific capacity to deliver services, close linkages and social relationships, transfer of complex know-how and management and organization as a cornerstone of the service offer. Furthermore, internationalization and marketing the service at the same time, in an often turbulent environment built on close connections with the customers, can be a difficult task.

Customer interaction

The major differences between MMOG games and stand alone games are the social interaction on a massive scale and the persistent nature of the worlds. These are also their major difficulties and what constitute the disruptive nature of these games. Creating a world in which players could enjoy socialising in and continuously service them so that they stay and enjoy their game experiences is a capability on which successful MMOG companies like NCsoft today can build their competitive advantage. Just like for other advanced service companies in other industries, this is a difficult capability that require considerable time to build up [14].

MMOG games are only "partly a piece of software but mostly an ongoing service" [7]. Companies have to build up a service organization that facilitate and regulate player interaction, constantly upgrade the online world and modify it accordingly to users need. This also calls for a high

cultural awareness to attract players. Managing the online world is as important as developing it. No other type of games is as close to the players and reliant on user's feedback as MMOG since companies both need to develop a game that is demanded by certain players, market it and then constantly monitor, service and improve it once it has been released. The customer services involved in online games involve extensive online as well as offline services, daily as well as less regular services, services related to the game play itself and services related to other issues of the game and services that are managed both by the online game company itself, through third parties or in cooperation with third parties. (Figure 2.)

Online game services directly to customers

Less regular
Expansion packs to expand and improve game experience

Larger special events in the game world

Patches and bug fixes

Daily basis
Financial services through sales of subscription, virtual game cards, in game items and other products directly to customers.

Constant e-mail services

Services through the Game Masters

Prevention of hacking, gold farming, virtual item trade (some companies)

Offline services to customers

Customer service lines

Customer help desk

Marketing, promotion and interaction with customer though physical events

Online and offline services to customer through third party

Distribution of games and expansion packs

Internet café services, online and offline

Promotions involving celebrities, joint and sponsored company marketing campaigns

Online and offline distribution, sales of game subscription, game cards and services to internet cafés

Physical distribution and sales of game point cards, games and extension packs

Virtual Item trading services

If the game is licensed by a developer, they often have extensive service requirements regarding issues that involves improving the game code

Figure 2: Customer interaction services for online game operators

The releases of extension packs to extend and improve the online game are less frequent services. Other services such as game patches are occurring more regularly and daily services includes 24/7 management of customer service, inquiries, hacker prevention, gold farming prevention, theft of and a number of measures to ensure that the games EULA (end user license agreement) are being followed by players. Not only online services through the Game Master and e-mail, but also offline services by phone or physical helpdesk are used in this regard. These service functions should be able to handle a large range of problems, such as functional, and payment related. Services that include more regular proliferation of the game-play experience than extension packs include the creation of events, constant adjustments due to feedback from players and other measures. The large numbers of Game Masters employed by online game companies play a vital part of this work as well. Being persistent online worlds, they are never finished but a constantly ongoing project.

Offline physical distribution services and the service provided by firm external internet cafés is other important services in many countries. In China e.g., the most common payment method is the use of game point cards. The distribution of these cards through internet cafés and other market channels are very important. Other geographical markets have other systems connected to various payment

and subscription solutions. While often not supported by the game firms themselves, virtual item traders (RMT) have an important third party service role for many players as well. Players might want to build status within the game, progress more rapidly or lack the time to play enough to keep up with their friends or quickly fulfill immediate desires in the game [21, 42]. Buying items could then increase the entertainment and service experience for the player. An increasing number of online games have started to incorporate virtual item trade in the games themselves. It is difficult to breakthrough in the marketplace without a substantive marketing budget [11]. Celebrity endorsements, co-promotion with other brands, traditional advertisements, spin-off products and a range of other measure are used in this regard.

Finance and venture capital

MMOG requires resources in development like servers, database knowledge, large support and financial system. Considerably more resources are also needed as the size of the most advanced MMOG games are about 3x larger than most stand alone games and 10x more complex. MMOG are expensive to develop and like stand alone game, their development costs increase as the hardware development and game complexity follow suit. With increasing development costs, finance is a service industry that needs to be well-connected to the industry and found across the border line of the meso and macro levels. Venture capital firms see new possibilities to support companies that might be very successful in the future. The system of monthly subscription or the 'in game item' business model of online games that creates a recurrent cash-flow has especially created this new interest. A recent study shows that the interest from various financial actors in the online game industry is growing, partly explained by the interaction of social networks and entertainment [11]. An important aspect for online companies is to have venture capitalists that really understand the service-based business model where development, distribution, marketing and service skills are all important and it has become increasingly important for firms to build up the specific capabilities for all these fields. In relation to the finance, the question of being a privately owned or a publicly traded company becomes of strategic importance. After an initial growth period many online game companies have become publicly traded companies with the accompanying advantages of using their shares as payment (both in the form of options to keep key personnel and to acquire other companies) or in relation to other financial arrangements.

External suppliers

Game operators can choose to either license a developed game or manage the game development process themselves. With the former approach the game operator license an online game for operation in a certain region or country. These external online game developers usually require an upfront cost as well as 20-30% of revenues for MMOG games and 17-40% of the revenues for casual online games. With the later approach the online game is developed either in-house or by a firm external development studio under supervision and financial assistance from producers and other management personnel from the game operator. Within this process the company might use middle-ware developers to save time, cost and enable game characteristic. It might be a question of graphic engines or other major parts of the game along with various licensing agreements with external intellectual property holders. To be able to launch, maintain and up-grade, the company might have to work with a consulting firm to handle these complex IT problems, but also to use advice from other kinds of professional business firms such as legal, database consultants and internet payment providers. These external activities are often R&D driven and build relational networks on several spatial levels. For the game to grow and reach a global client area, it is paramount that these issues are to be considered at an early stage [37]. These external suppliers are connected to the company in a complex network. When the game is ready for publishing, the marketing and distribution capabilities becomes crucial. The marketing effort is handled in cooperation with external partners. It is necessary to spend extensive resources both building up the game seen a product, but also as an online entertainment service. Depending on the company size, it is usual to build relations with experienced publishers or advertising firms. Having close relations to experienced marketing and pr service firms often needs geographical proximity. As the complexity of payment solutions with subscriptions or 'in-game item' purchase increases, the legal aspect of the game can not be neglected. Ownership in the virtual economy is becoming important as items in the games reach considerable sums [32].

National economic development policies and regulation

Technical possibilities of the online games tend to move in parallel with various public and private incentives to strengthen and support the ICT sector. (Figure 3.)

Policies that affect domestic market demand

Broadband policies

PC policies

Policies regarding financial systems of payment

Internet café policies

Policies that affect the firms in the industry

Education policies

Tax subsidies

Governmental financing of game development

National Systems of Innovation

Regulation

Regulation of content

RMT regulation

Playing time regulation

Internet café regulation

IP regulation

Piracy regulation and enforcement

Regulation of financial systems of payment

Barriers to foreign competition

Barriers to development and operation of online games of foreign companies

Barriers to foreign ownership of companies

Strict regulation of content of foreign games

Barriers to other forms of entertainment (e.g. Korea's import ban of consoles)

Figure 3. National policies and regulation

The development of macro or meso level policies for sustained economic growth has been debated from several perspectives such as national systems of innovation [33] or learning regions [1]. Large investments have been made in Asia to up-grade the information technology sector [36]. These investments have been part of a larger national economic development plan, where some industries have been prioritized to build macro oriented support programs. In Japan, Korea and China, the state has tried to direct and support specific industries through investment programs, tax incentives and regulation. Creating a high standard of ICT has been a way to try secure sustained economic growth in the knowledge-driven economy. As the economy becomes more knowledge-intensive, ICT infrastructure create new possibilities for innovation systems. Masayama & Vandenbrink [31] called this "disruption of the flying geese pattern in Asia" where Japan traditionally has been the leading goose in economic and technical deveopment. The national innovation system and large investments in ICT and broadband capacity have been important in making Korea a leading nation in a number of high tech industries [31]. The national or regional policies for the so called creative and cultural industries, which include the online game industry, are often influenced by the works of leading theorists [15]. Kong et al. [28] have studied these plans in several Asian countries. The findings point to the importance of these industries in particularly Korea, Singapore, Hong Kong and Taiwan. Here the industry and government work closely together. In Japan, however, it has primarily been the industry that drives these issues. East Asian *technonationalism*, where the government is heavily involved in supporting highly advanced knowledge sectors, has created a dual approach of leveraging the economic potential seen in the online game industry, but at the same time taking measures to shield the domestic industry from to much foreign influences and being wary of the societal effect of the new medium. Education at different levels for promoting game development policies can be mentioned as an example.

Regulatory aspects will be important to the industry development in the near future. Trade barriers and non-tariff barriers make it difficult to create a larger regional economic entity. Different authorities handle issues of content and operation in relation to the industry. Regulations in combination with censure might be effective non-tariff barriers, distorting the economic geography and competitiveness within the sector [2].

THE GROWING ONLINE GAME INDUSTRY IN CHINA – A CASE STUDY

Core functionality

In terms of core functionality, the rapid growth of broadband infrastructure, PC penetration [34] and internet cafés have been important factors contributing to the growth of the Chinese online game market. Additionally the competence of the companies has been strengthened through employing skilled developers, using licensing and trying various in-game items that has attracted paying players. Competition to attract the best creative and technically skilled employees is fierce in an environment where skilled and experienced game development personnel is rare but less skilled workforce is in excess. In terms of development capability Chinese online games firms have lagged behind Korean and US game developers significantly, although the gap has decreased in recent years. The graphical transition from 2.5 D to full 3D games are one in which many Chinese online game companies are still struggling with. Although many Chinese online games are less complex than many foreign ones, they could be produced with a lower cost and at a greater speed [39].

Product and service interaction

The rapid growth of the online game market has enabled the growth of a large number of domestic online game companies. Given the initial low level of development capabilities of many online game firms, initially focused their competitive advantages on cost efficient service and an extensive distribution network to clients. Most of them only acted as operators and licensed games from Korea, US and Japan. In recent years they have rapidly been able to gain market shares in the development of games as well [22, 39] While still far behind the best Korean and US game

companies in terms of development capabilities [36], this catch-up process is difficult to understand if not the interaction of product and service of online games are taken into account. The importance of service and community building capabilities for Chinese online game companies is evident in that the major companies original business before entering the online game operations were either in the area of internet online communities (e.g. Shanda, The9, Tencent) or internet portals and e-commerce (Netease). The importance of cost efficient service in China are a direct result of the lower ARPU (Average Revenue Per User) in China, e.g. a Chinese World of Warcraft player generate on average only ¼ of the revenues of a player from US, Europe or Korea [48].

Customer interaction

Different forms of scale, cost and quality of customer interaction were initially important for many Chinese game operators. (Figure 4.) The largest game companies Netease, Shanda and The9 early on managed to build up an organization that could handle inquires and game problems from players both through an extensive cost efficient service organization online through Game Masters and other measures and offline. Apart from the daily service issues with players, the ability to cost efficiently reach out to the geographically widespread Chinese market was one of the major difficulties. A large network of servers was one prerequisite in this regard and capital as well as a network of external suppliers were important in enabling major Chinese game companies.

Regulation put restriction on what is allowed in this regard. TV advertising of online games was prohibited in 2004 [29]. Except marketing efforts in internet cafés, the games official website, game magazines and online advertisements a range of other marketing efforts was possible by some firms. Netease used their large range of internet portals and paid a large amount of money (over 15 million RMB 2005) for celebrities acting as spokespersons. Different types of co-marketing with softdrink companies is another important marketing technique to interact with a large market that have been used by a large number of Chinese online game companies [30].

The development process in-house that has characterized Chinese firms in recent years could in theory provide them with better service capabilities. Hacking have been a major problem in major Chinese online game firms, and could often be more rapidly be fixed if the operator also develop the games. The same is true for a number of other minor fixes and bugs. The approach also enables a larger share of the profit, as well as games and expansion packs developed specifically for the Chinese market. If the game is poorly developed, service problems will occur regardless and dissatisfaction with reliability is the major cited reason for gamers quitting a game [22].

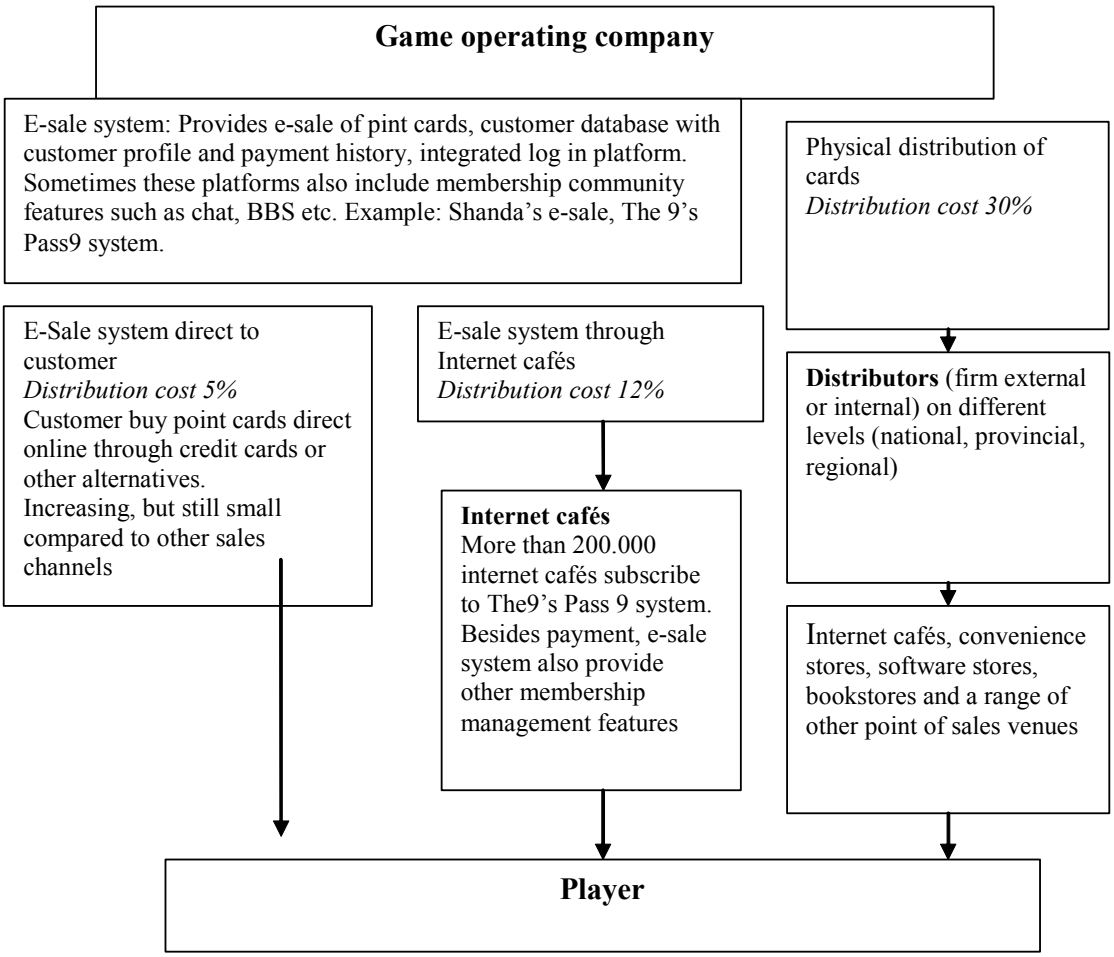

Figure 4: Sales channels of game point cards in China

Finance and venture capital

The increasing costs of developing, distributing, operating and marketing online games means that access to financial capital is important for the growth of online game companies. The high risks involved in online game operation where the success of an MMOG game is highly unpredictable also puts great emphasis on having the financial capital to support the company or having a broader portfolio of a number of online games to decrease the risks. Due to the high costs, extensive resources and time involved in developing and operating a single online game, Netease and Shanda are the only Chinese online game companies that have a portfolio of MMOG. For the largest MMOG companies Shanda, Netease, The9 and Tencent the listing of the stock market have been such an important source of capital as well as credibility and a way to better retain and attract key personnel. For Shanda, and to a less degree The9 the listing on the stock market has also enabled them to build up development capabilities through the acquisition of other companies. For smaller companies in their growth phase, venture capital, often from foreign sources, has been important sources of capital for expansion. Examples of this in recent years include a 72 MUSD investment in Kingsoft from a number of venture capital funds and an 8 MUSD investment in Perfect World from Softbank Asia Infrastructure Fund (SAIF) [17].

In terms of financial revenue models for the games themselves companies have moved from a model characterized by monthly subscription to one dominated by free basic play but revenues for the sales of in game items. As a result firm capabilities to create various value added services that the players are ready to purchase such as virtual items and specific online events (e.g. cyber marriages) have emerged as a new important competitive advantage among Chinese online game firms.

External suppliers

For game operators that do not develop their own games, the relationship with foreign firms that are licensing firms is one of the most important suppliers. Indeed, legal cases where foreign license holders have accused game operators of imitation or incorrect payments of royalties have been

common in recent years and represent one of the difficulties that might emerge in this relationship between operator and developers. Even if the online game company develop the game in house, a large number of external suppliers are important e.g. as a source of IP (e.g. the content licensing between Shanda and Disney), middleware (e.g. the licensing of 3D engines), database tools etc.

In the operation many game companies relies on external suppliers, often in the form of large telecom operators that are renting or leasing servers and server technology. Internet cafés are important suppliers that providers of a social space for play. Game operators also cooperate with inline security service providers that could decrease the risk of theft of user accounts and passwords. While not supported by the game operators themselves, RMT trading firms have an important role as external suppliers of virtual item trading services. The large network of distributors on many spatial levels is important for enabling the distribution of physical game point cards.

National economic development policy

Since the inception of the industry there has been a sometimes ambiguous policy through which the Chinese government wants to create a strong domestic online game industry and at the same time have concerns over the societal, cultural and political consequences of online games. Sometimes these two interests coincide, sometimes they depart.

Online games as the main driver of the usage of broadband and internet cafés [41] could be regarded as an unintended consequence of the development. Through a *technonationalistic* policy that have characterized many Chinese high tech industries [26] the importance of not only having Chinese operation, but also Chinese developed online games were put forward with great emphasis in 2003 when the online games were listed in the "863" national science and technology high tech program [51]. The large numbers of policy measures to strengthening the domestic online game development have been one important factor to rapidly increase the market share of domestically developed Chinese online games. The measures that the Chinese government have been put forward in recent years include preferential tax policies, large scale governmental financial support of "healthy" Chinese online games and educational efforts in the online game field. At the same time online games became of increasing interest for a number of regulatory agencies which have made the regulatory barriers in the industry higher. The creation of a regulatory system for a new medium in China is complicated as laws are new and interpretation differs. The last one of these regulations provides one example of how *technonationalistic* interests and increased censoring of content also could coincide [3]. Foreign companies are not allowed to operate online games in China and foreign investors are prohibited from owning more than 50% of the equity interest China entity that provides internet content provision services [48]. Recently proposed new regulations include regulation of player time verification of player identity and regulation of virtual item trade (RMT) transactions. In order to impose stricter censorship and regulation, the government give way for other opinion groups to spread "research" findings about "internet addiction", and Chinese family values of promoting hard studies, but not frivolous gaming are expressed. Regarding IP rights, large number of domestic Chinese firms that lacked the same development capacity as Korean firms were able to initially increase their market share by creating games that borrowed extensively, bordering to imitation, of the most popular foreign games. The specific Chinese legal environment has partially contributed to this, although a number of IP infringement cases have surfaced in recent years.

CONCLUSION

Based on the conceptual model and the Chinese case, we see a number of interesting conclusions. The role of the unbound online game network model is vital as the value chain of online games have become increasingly complex. This complexity is seen through the interrelation of product and service, which demands a clear strategy and distinct capabilities both in the area of product development and services to develop, launch and operate a successful game. The role of national economic development policies shows that the industry is perceived as a key high-tech and creative industry in many Asian countries that is valuable for competing in the global knowledge economy. The increasing complexity of networks of suppliers throughout the value chain and different financial models in the development and operation shows that the relational aspect becomes central. The recent dominance of in game item revenue models for online games in China and Korea further reinforce the need for such framework. Finally we see that the network approach suggested in this paper will be even more important in the future as the industry expands further.

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