

Social Capital and Venture Creation: Identifying Entrepreneurial Opportunities in the Chinese Digital Game Industry

GEJUN HUANG¹
Soochow University, China

This article explores how entrepreneurs in the Chinese digital game industry initiate their venture creation by investigating the relationship between their social capital and key steps of identifying entrepreneurial opportunities in the premarket entry stage: opportunity recognition and opportunity evaluation. Drawing on semistructured interviews with 33 gaming entrepreneurs in Shanghai, the findings show that social capital plays a minor role in their recognition of opportunities, whereas it substantially affects their opportunity evaluation. These entrepreneurs adopt varied approaches to accessing and mobilizing social capital given their situated industry sectors. Those who focus on commercial game products or services prioritize specific members of professional networks, while those on indie and fledgling game products and services rely more on diverse ones. Such a difference in networking practices is subject to the industry's overarching dynamics.

Keywords: Gaming entrepreneur, social capital, opportunity recognition, opportunity evaluation, Chinese digital game industry

As one of world's largest digital game markets, China managed to increase its number of players to 7.2 billion that generate \$27.8 billion market revenues amid the global pandemic (Statista, 2020). Alongside the economic boom, the digital game industry in China has demonstrated unprecedented vitality and competitiveness on a global scale. In parallel with other key factors, gaming entrepreneurship is indispensable to the formation and growth of the Chinese digital game industry. The advent of the earliest PC game companies in China, for instance, was mainly ascribed to the first generation of Chinese game programmers and IT entrepreneurs (L. Zhang, 2013). As importantly, gaming entrepreneurs in China have been keen on exploring emerging market sectors such as eSports promotion and VR/AR entertainment. In gaining competitive advantages and revenue streams, their utilization of emerging gaming technologies and employment of new business models have substantially advanced the development of Chinese digital game industry.

Gejun Huang: gjhuang@suda.edu.cn

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A growing body of literature presents strong interests in understanding how the Chinese game market and industry leapfrogged into their current world-leading status. Much attention has been paid to the shifting relationships between and among the state, the domestic digital game industry, and the global major players (e.g., Fung, 2018). By contrast, there has been a paucity of research centered on gaming entrepreneurs, whose small- or medium-sized companies constitute the industry's majority (Kerr, 2017). It remains unclear how gaming entrepreneurs unfold the entrepreneurial process with respect to their individual abilities and the domestic industry environment.

To address these research gaps, this article serves as a pilot study to interrogate the formation of entrepreneurship in the Chinese digital game industry. Specifically, it focuses on the relationship between gaming entrepreneurs' social capital and their process of identifying entrepreneurial opportunities for venture creation in digital game industry. This article begins with elaborating on the social capital theory and reviewing its application in the existing research on entrepreneurship and cultural and creative industries (CCI). Then it articulates the opportunity identification process with emphasizing two important steps: opportunity recognition and opportunity evaluation. Drawing on semistructured interviews with 33 gaming entrepreneurs in Shanghai, this article examines the relationship between their social capital and entrepreneurial opportunity identification based on two interrelated research questions: (a) how gaming entrepreneurs access and mobilize social capital to recognize entrepreneurial opportunities, and (b) how they access and mobilize social capital to evaluate the opportunities. The findings suggest that, for gaming entrepreneurs, leveraging social capital embedded in professional networks is not conducive to spotting opportunities in the first place. However, it considerably affects entrepreneurs' opportunity evaluations. Such contrasting outcomes of social capital access and mobilization are also attributed to their situated industry sectors.

Literature Review

Gaming Entrepreneurship in China

Entrepreneurs are individuals known for "the creation of new opportunities by pulling together previously unconnected resources for a new economic purpose" (Granovetter, 2005, p. 46). With the diffusion of low-cost development and distribution methods, gaming entrepreneurs have gleaned easier ways to build business ventures and then compete and collaborate with the existing industry players. Based on her extensive review of recent data about major digital game industries, Kerr (2017) pointed to the exponential growth of small game companies, of which some are exemplary cases of gaming venture. Founded by gaming entrepreneurs, Rovio, Riot, Devolver Digital, and other similar game firms emerged from scratch and have achieved phenomenal success in an oligopolistic market where a few top companies dominate. In this sense, gaming venture refers to a startup dedicated to digital game-related businesses, including game development, publishing, and third-party service, with a scalable business model against the risk of loss or failure.

Studying gaming entrepreneurs is important because of their robust existence and remarkable contributions to the digital game industry. The mass entrepreneurship and innovation campaign (Xinhua, 2018), as a national strategy, has indeed given a strong boost to entrepreneurship in the Chinese CCI via policy incentives, especially the gaming sectors. In China, establishing gaming ventures constitutes the largest

stream of entrepreneurial activities pertaining to CCI. According to ITJUZI,² the number of gaming ventures (5,368) accounts for almost 60% of the sum of other culture, entertainment, and media ventures (9,006). One major type of gaming venture is commercial game firms, whose titles are extensively built on freemium business models coupled with repetitive gameplay experience. Such games account for the mainstream consumer choice in the Chinese digital game market and have served as a benchmark for game development and publishing in the industry (Chew, 2016). A growing number of gaming ventures label themselves as indie because of their self-identified financial and creative independences, as well as their products, which are akin to trendy indie games in the West. However, the Western conceptualizations of indie may serve poorly to describe the indie gaming scene in China, which has its unique historical and geographical specificities that await further examinations (Grabarczyk, 2021). At least for now, the concept of indie has not drawn an agreed-on definition or a definitive scope of included titles and genres in the Chinese context. In addition, the third type is gaming ventures who base their businesses on emerging technologies, such as VR and AR, because of the diffusions of development tools and consumer hardware that have carved up market opportunities to exploit (Grabarczyk, 2021).

More importantly, as Grabarczyk (2021) eloquently argued, a thorough analysis of mainstream videogame industry cannot overlook “the presence of smaller, local, grassroots forms of production” (p. 6). Spearheading “the creation of novelty in the face of fundamental uncertainty about conjectures of value” (Hartley et al., 2012, p. 93), gaming entrepreneurs can introduce creative products and services to the industry. The evident link between the buoyant indie game scene and the growing digital game industry in different national contexts (e.g., Australia and Canada), for instance, testified to gaming entrepreneurs’ thriving presence and to their indispensable role in boosting the industry’s vitality (see Parker, 2013). Likewise, visionary gaming entrepreneurs, who focus on either monetization-heavy commercial titles (e.g., founders of miHoYo³) or “pixel art, siderolling platformers, and low-fi music” indie games (e.g., founders of Chillyroom⁴), have scored high in the domestic market competition (Keogh, 2015, p. 156). They thus have placed their ventures in a virtuous circle of growth but have also advanced the industry benchmarks of game design and business model because of their high-quality, inventive game products and services.

On the other hand, the shrinking number of new gaming ventures, along with the declining industry growth rate, alludes to an increasingly hostile business environment to gaming entrepreneurs in China. It is indisputable that the Chinese digital game industry is highly concentrated, dominated by several top domestic companies (e.g., Tencent and Netease). They control an increasing share of domestic market revenues and manifested competitive advantages in terms of producing, distributing, and promoting game products and services far beyond gaming ventures’ capacity (Blazyte, 2018). In addition, the related industry regulations often force administrative pressure on gaming entrepreneurs (H. Zhang, 2019). Despite some relaxed regulations on game import, such as lifting bans on videogame consoles (Burkitt, 2015), the central

² ITJUZI is one of the largest Chinese business information platforms, centered on Internet industry and entrepreneurship. The data on specific industry sectors can be found at <https://www.itjuzi.com/analysis>

³ miHoYo is a game developer and an animation studio based in Shanghai and is known for the recent hit in the Western mobile game markets, *Genshi Impact*.

⁴ Chillyroom is an indie game developer based in Shenzhen and is known for roguelike games, such as *Soul Knight*, in the Chinese market.

government has tightened up rules about how domestic games are made and distributed. For instance, China's capricious game approval system had unsettled most domestic game companies, and a great many gaming ventures were caught in the aftermath (Liao, 2018). Put together, the growth of gaming entrepreneurship in China have met substantial setbacks in the recent years. An intriguing empirical question has arisen for interested scholars: How do gaming entrepreneurs in China launch their businesses against the industry's oligopoly and the government intervention?

The Role of Entrepreneurs' Social Capital in Venture Creation

This article pays attention to gaming entrepreneurs' venture creation in the Chinese context. The term venture creation, which essentially concerns "the organizing of new organizations" (Gartner, 1985, p. 697), can be understood as an organization-building process that begins with opportunity recognition, technology setup, organization creation, product development, and moves through the first sale and customer feedback (Bhave, 1994). Applied to gaming ventures, most of which are established and operated based on projects (Kerr, 2017), this process starts with initially recognizing opportunities for viable digital game products and service projects through to marketing and evaluating the project outcomes. Since the first sale also marks a venture's market entry into its focal industry (Moeen & Agarwal, 2017), the premarket entry stage of gaming venture creation encompasses all the building steps before the first instance of making a game product or service available on the market.

Obviously, venture creation is a direct outcome of entrepreneurs' business intentions followed by identification and exploitation of desirable business opportunities (Shook, Priem, & McGee, 2003). It is also inextricably tied to the entrepreneurs' knowledge of technology and management that accounts for "the tangible and intangible assets of the firm" (Alvarez & Busenitz, 2001, p. 766). This article thus focuses the analysis of gaming venture creation on entrepreneurs' social capital. Placing social capital theory as the centerpiece of inquiry accords with the established focus of entrepreneurship studies on articulating the relationship between entrepreneurs' social capital and various aspects of their entrepreneurial performance (Slotte-Kock & Coviello, 2010; Stam, Arzlanian, & Elfring, 2014). Note that the application of social capital theory in this article attends only to gaming entrepreneurs' professional networks—that is, the social relations are primarily centered on business in digital game industry. This choice builds on the prior research that accentuates how entrepreneurs' professional networks, in general, facilitated their ventures' growth as distinct from the influence of mere friendship or family affiliations (Chell & Baines, 2000; Ostgaard & Birley, 1996). Such significance of professional networks has also been well documented in literature discussing entrepreneurs' social network and venture creation in CCI (e.g., Huang, 2020; Neff, 2012).

Social capital theory has been substantively instrumental in interpreting the social mechanisms of entrepreneurship. Social capital can be defined from various theoretical perspectives. Most prominent scholars in this field, including Bourdieu (1985), Coleman (1988), Lin (1999), and Putnam (2001), have proposed their own definitions given the specific aspects and outcomes of social relations they investigate. This article is aligned with Lin's (1999) definition: "resources embedded in a social structure which are accessed and/or mobilized in purposive actions" (p. 12). The definition is well-warranted and fits the aim of this article based on canonical scholarship addressing the individual-level analysis of social capital with a resource-based view. Extensive theoretical debates have accentuated the significance of an individual's

social relations to accessing resources possessed by their network members (e.g., Bourdieu, 1985; Coleman, 1988). By the same token, substantial empirical examinations have unraveled the intricacies of social capital in mediating individual's resource acquisition about the diversity of personal networks (e.g., Marsden, 1988; McPherson & Smith-Lovin, 1982).

Drawing on these research streams, Aldrich and Zimmer (1986) proposed an important perspective to treat entrepreneurship as "embedded in networks of continuing social relations" (p. 8). Along this perspective, a voluminous body of entrepreneurship studies have delved into the benefits that entrepreneurs derive from their access to and mobilization of social capital to build new ventures. Specifically, they are armed with stronger resource access and appropriation about knowledge acquisition, innovation performance, and financial choices in the process of venture creation (Liao & Welsch, 2003; Seghers, Manigart, & Vanacker, 2012; Yli-Renko, Autio, & Sapienza, 2001). Entrepreneurs' social capital is also pivotal to building their ventures' relationships in the early stage of business with other firms in terms of partnership, collaboration, or exchange of goods and services (e.g., Grandori & Soda, 1995; Ostgaard & Birley, 1996).

Moreover, employing social capital theory corresponds with a growing ramification of CCI research that addresses entrepreneurial activities in CCI through a social construction lens (e.g., Currid, 2007; Lee, 2015). Entrepreneurs in CCI share some business characteristics, such as high volatility and high potential profitability, with those in other knowledge-intensive industries like medical and financial services (Brint, 2001). Nonetheless, they are particularly mired in striking a balance between creative autonomy and economic gains. Not only in the West, but similar cases also take place in China where entrepreneurs often find their creativity precarious amid a developing cultural market and submit themselves to undesirable market demands for survival (Wang & Keane, 2020). Notably, the balance hinges on the degree to which those entrepreneurs comply with expressions of tastes that are often benchmarked and even gatekept within CCI-related social networks (Currid, 2007; Hesmondhalgh & Baker, 2011). Their choice, decision making, and learning, centered on venture creation, are inevitably subject to the choices of other social network members since novel ideas and rules are socially produced and consumed in the context of CCI (Potts, Cunningham, Hartley, & Ormerod, 2008). As to venture-creation practice, entrepreneurs in CCI treat social networks as "a valuable adaptive mechanism" (Hartley, 2008, p. 19) to cope with the uncertainties and risks related to cultural production. They are prone to position their ventures in a creative cluster where they have better chances for acquiring resources by exploiting close-knit social networks because of colocation (Lee, 2015; Neff, 2012).

In a nutshell, social capital theory draws on profound theoretical discussions and has allowed extensive applications across different disciplines to interpret entrepreneurs' venture creation. The findings of related literature demonstrate that entrepreneurs in CCI can address specific concerns related to venture creation, especially the acquisition of various resources, based on their access to and mobilization of social capital. Nonetheless, entrepreneurs in the Chinese digital game industry are yet to be examined in similar manners. The relationship between their social capital and venture creation is rather undiscussed, hindering a thorough and critical analysis of gaming entrepreneurship in China.

The Role of Entrepreneurs' Social Capital in Venture Creation

To unpack the significance of social capital to the creation of gaming ventures in China, this article pays attention to entrepreneurial opportunity. This term is defined as "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships" (Eckhardt & Shane, 2003, p. 336). Addressing entrepreneurial opportunity is important since it serves as the fundamental driver to initiating venture creation (Bhave, 1994; Gartner, 1985; Shook et al., 2003). It also corresponds with the cutthroat industry environment gaming entrepreneurs are faced with. They must initiate and run businesses with limited resources to access and with constrained market niches to compete in. In this case, entrepreneurial opportunity becomes more critical to launching and securing their creation of gaming ventures.

How entrepreneurs handle entrepreneurial opportunity begins with the process of opportunity identification (Shane & Venkataraman, 2000). A successful opportunity identification means the initial ideas and thoughts are developed into a mature business concept along with a full-blown business plan (Ardichvili, Cardozo, & Ray, 2003; Bhave, 1994). In general, this process consists of two interrelated steps in the premarket entry stage: opportunity recognition and opportunity evaluation (see Figure 1, Ardichvili et al., 2003; Bhave, 1994). Opportunity recognition broadly refers to entrepreneurs' formation of business concepts about the existence of supply and demand before their actions (Ardichvili et al., 2003). Alvarez and her colleagues (2010) underscored the mainstream interpretations of opportunity recognition employing either a realist approach (i.e., opportunity discovery or a constructionist approach, or opportunity creation). Entrepreneurs may treat opportunities as a tangible reality that awaits discovery; alternatively, they may create their own opportunities by reinterpreting and reconstructing the existing environment to generate new concepts (Alvarez & Busenitz, 2001; Eckhardt & Shane, 2003; Gartner, 1985).

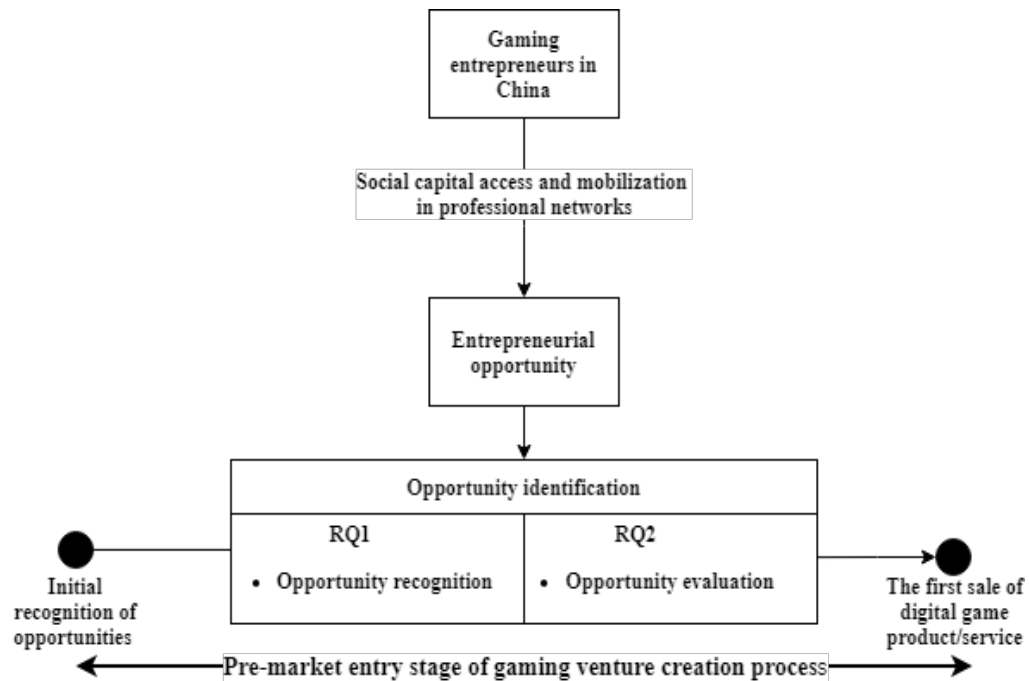


Figure 1. Conceptual model of social capital and entrepreneurial opportunity identification.

In tandem with the recognition step, opportunity evaluation refers to entrepreneurs' examination of the "presumed market needs or resources" (Ardichvili et al., 2003, p. 111) concerning the initial business concepts. That is, entrepreneurs evaluate market size and growth, entry barriers, labor and capital access, and other concerns to gauge the viability of recognized opportunities. Given the results of such assessments, entrepreneurs may revise business concepts and adjust business plans accordingly; or they may abandon what is already recognized and take another round of search (Alvarez & Busenitz, 2001; Davidsson, 1991). How entrepreneurs conduct opportunity evaluations in the same industry may differ from each other because they hinge on "the normative evaluations and the criteria sets," (Mole & Mole, 2010, p. 288) which are espoused by individual norms and values.

Many entrepreneurship studies have explored how entrepreneurs access and mobilize their social capital for entrepreneurial opportunity identification. These studies agreed on a strong connection between social capital and opportunity recognition. They underscore that entrepreneurs locate opportunities from diverse social connections, channeling a broader range of knowledge and information to the formation of business concepts (Alvarez & Busenitz, 2001; Anderson, Park, & Jack, 2007; Chen & Tan, 2008; Eckhardt & Shane, 2003; Elfring & Hulsink, 2003). By the same token, exploiting the preexisting social relations enables entrepreneurs to obtain opinions from knowledgeable peers so that they can better validate their initial business concepts (Wood & McKinley, 2010). In sum, social capital access and mobilization strengthen entrepreneurs' opportunity recognition and evaluation, thereby facilitating their opportunity identification and the rest of the venture-creation process down the road. Given the peculiarities of gaming entrepreneur and the industry context in China, this article aims to address the following questions (see Figure 1):

RQ1: How do gaming entrepreneurs in the Chinese digital game industry access and mobilize social capital to recognize entrepreneurial opportunities in the premarket entry stage of venture creation?

RQ2: In the same vein, how do these gaming entrepreneurs access and mobilize social capital to evaluate entrepreneurial opportunities?

Method and Data

As core value generators, game development and publishing are considered the fundamental business practices in the digital game industry (Marchand & Hennig-Thurau, 2013). This article thus defines the research population as the founders of gaming ventures established in Shanghai since 2011 and was limited to those specialized in game development, publishing, or the related services across various gaming platforms (e.g., console, PC, mobile).

Setting 2011 as a cutoff year accords with China's nationwide policy initiatives targeting domestic CCI. Combined with the diffusion of mobile devices and mobile Internet, there has emerged a business-friendly environment for gaming entrepreneurship in China. In terms of location, Shanghai has a long-established reputation for high-tech and media entrepreneurship bolstered and reinforced by global financial capital, domestic policy incentives, and robust talent pool (Coresight Research, 2017). Particularly, with the establishment of the China National Center for Developing the Animation, Cartoon and Game Industry, Shanghai enjoys a relatively high policymaking and implementation latitude at the municipal level, underpinning the development momentum of its prominent local game industry (Fung, 2018). Talented labors and entrepreneurial aspirants across the world have been drawn to Shanghai, accounting for new tissues to a vibrant body of game industry professionals. Moreover, Shanghai is home to several key industry events, including large-scale game expos like ChinaJoy, which provide gaming entrepreneurs with social spaces to effectively embed themselves in target professional networks.

A total of 33 entrepreneurs were recruited for semistructured interviews in 2018. I combined multiple purposive sampling techniques, including typical case sampling, deviant case sampling, and reputational case sampling, to ensure the representativeness of sampling result (see Teddlie & Yu, 2007). In terms of typical case sampling meant to identify average-like cases, an initial sample was curated from entrepreneurial data sets, crowdfunding platforms, and relevant media coverages with only applying restrictions on founding time (2011 onward) and location (Shanghai). Meanwhile, deviant case sampling was used to identify serial entrepreneurs who have founded several gaming ventures, of which some are notable successes or big flops. Then snowball sampling was used to conduct a gradual selection of interviewees to include more underrepresented entrepreneurs in the industry (e.g., female). Last, the sample was refined and categorized based on firm age, business platform, and product genre or service category. During the interview, I used a semistructured guideline informed by the antecedent research to solicit the interviewees' opinions of professional relations in digital game industry, as well as individual networking approaches focused on opportunity identification. Pseudonyms were assigned to each interviewee and his or her venture to guarantee privacy and confidentiality.

In terms of demographic distribution (Table 1), the interviewees were predominantly male in their 20s and 30s with bachelor or associate degrees.

Table 1. Demographic Distributions of Interviewees.

	<i>N</i>	% of <i>N</i>
Gender		
Male	30	91
Female	3	9
Age		
30s	13	39
40s+	12	36
20s	8	25
Education		
Bachelor's degree	16	48
Associate degree	9	27
Master's degree	5	16
High school graduate	2	6
Some high school, no diploma	1	3

Note. (*N* = 33).

This demographic pattern conforms to a recent survey on Chinese Internet entrepreneurship, showing that most Internet entrepreneurs in China are 25- to 35-year-old males with educational backgrounds of college or above (NetEase Cloud & ITJUZI, 2017). It is also reflected in the population of high-tech and media entrepreneurs in Shanghai and is like the results of recent International Game Developers Association (IGDA) survey that was predominantly contributed by game industry professionals in North America (Chinanews, 2018; IGDA, 2020). For business attributes, all the interviewees' ventures have surpassed the premarket entry stage as having at least one game product or service available in either the domestic or foreign game market. Commercial game development (25%) and indie game development (24%) are among the most prevalent product and service categories, followed by VR/AR game development (15%) and others (Figure 2). More than one-third of the interviewees operate their products or services across different platforms (i.e., mobile and PC in most cases), 27% solely work with mobile devices, 27% solely work with PC or gaming consoles, and the rest work with VR/AR technologies (Figure 3).

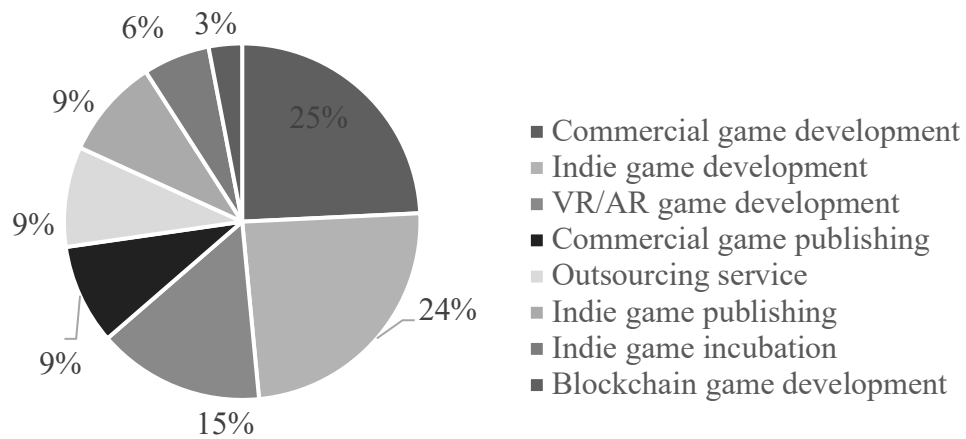


Figure 2. Product/service category. (N = 33).

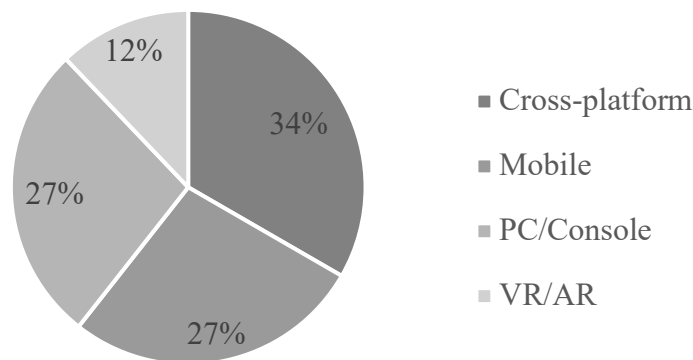


Figure 3. Business platform. (N = 33).

To consolidate the business attributes, this article tentatively categorizes the interviewees into three groups in line with the respective focal markets of their products and services: commercial gaming entrepreneurs, indie gaming entrepreneurs, and fledgling gaming entrepreneurs. This approach caters to the identification of core game industry segments that shifts from “a device or platform way” (Kerr, 2017, p. 36) vastly employed in the antecedent game industry research. The first group includes the interviewees whose development- or publishing-focused ventures revolve around game products or services featuring pay-to-win designs or extensive monetization mechanisms. Those providing third-party outsourcing services to commercial game development also fall under this group. The second group includes the interviewees dealing with indie game development, publishing, and incubation. As mentioned earlier, there lacks a consensual definition of indie in the industry. I thus resorted to the interviewees’ self-identification and to whether their products or services were labeled as indie by the related game media coverage and community

review. The third group includes the interviewees adopting emerging technologies, such as VR, AR, and blockchain, to develop game products and services that target niche game markets.

Further, more than half of the interviewees are industry veterans with at least 10 years of work experience, and some are serial entrepreneurs who have founded multiple gaming or creative content ventures. To gauge their industry background before being entrepreneurs, the interviewees were asked to voluntarily disclose game firms they had worked for as full-time employees. It turned out that half of commercial gaming entrepreneurs revealed work experience at large and famed game companies in either the global or the domestic game market, while the other half revealed work experience at domestic SMEs. Half of fledgling gaming entrepreneurs worked for major game companies, and less than one-third of indie gaming entrepreneurs had similar experience. Noteworthy, one-third of indie gaming entrepreneurs and fledgling gaming entrepreneurs, respectively, have no previous work experience in digital game industry (Table 2).

Table 2. Industry Background of Interviewees.

	Commercial gaming entrepreneur (<i>n</i> = 14)	Indie gaming entrepreneur (<i>n</i> = 13)	Fledgling gaming entrepreneur (<i>n</i> = 6)	Total <i>n</i>
Transnational game corporations (e.g., EA, 2K Games, Konami, and Virtuoso)	21%	15%	50%	8
Domestic major game firms (e.g., Tencent, Shanda, and Giant Interactive)	29%	15%	N/A	6
Domestic small and medium-sized enterprises (SMEs; e.g., SocoGame and Triniti Interactive)	50%	38%	17%	13
No previous employment in digital game industry	N/A	32%	33%	6

Note. (% of *N*).

Findings

RQ1: Social Capital and Opportunity Recognition

Speaking of opportunity recognition, most interviewees did not relate social capital to their opportunity recognition in the premarket entry stage of venture creation. Neither accessing nor mobilizing individual professional relations was linked to generating business concepts of game products or service projects in most interviews. To commercial gaming entrepreneurs, they commonly held a “discovery view of opportunities” (Alvarez, Barney, & Young, 2010, p. 26) in that entrepreneurial opportunities exist in their situated industry environments, waiting to be discovered thanks to individual industry background. As a former producer of many Electronic Arts’ bestselling titles, Christian Gregory downplayed the significance of social capital: “But for the game space, because I’ve had the most visible success there, it’s usually where it’s the easiest for me to go and say, I’m gonna make something here” (personal communication, June 2018). Likewise, Mavis Jiang derived his commercial game publishing service from his earlier entrepreneurial experience in the industry:

My team and I accumulated much experience of mobile game monetization from my previous startup. Then I found my old business in fact did better than other game publishers in terms of monetization. So I decided to make my own publishing service. (Personal communication, August 2018)

Similar accounts about opportunity recognition were also brought up by many indie gaming entrepreneurs. Contrary to their commercial counterparts, indie gaming entrepreneurs saw that entrepreneurial opportunities were created as they came up with new business concepts independent of the mainstream sector—the commercial game—of the Chinese digital game industry. With scant mentions of social capital, these entrepreneurs highlighted that their personal devotions to making or publishing “a good game that I love” (Toby Cai, personal communication, July 2018) were synonymous with the recognized opportunities to their venture creation. For instance, Andy Ren based his indie game-publishing company on his career commitment that “since my childhood I’ve been determined to pick a profession related to games” (personal communication, August 2018). He even made fun of his venture creation as “a reckless move” because “I actually did not ask other people for their opinions (of my venture creation)” (personal communication, August 2018). Similarly, Matthew Chen explained his motive for establishing an indie game studio:

If you are your own boss in making a game, it depends more on your interests. Whether the game has good sales or not is not up to market analyses [. . .] So just make a game you really like to ensure at least having your favorite characters in it. (Personal communication, June 2018)

By the same token, most of the fledgling gaming entrepreneurs revealed that the initial concepts of new projects were created because of individual intents and judgments rather than social capital. As the founder of a VR serious game studio, Casper Lin admitted that his reliance on professional networks was limited in recognizing viable opportunities; instead, “I think it was mainly about myself. I learnt myself

towards VR serious game in searching for new directions” (personal communication, July 2018). Apart from consulting with her friends running similar companies in Singapore, Kimberly Sun primarily came up with her project of VR serious gaming platform based on extensive research: “For instance, we surveyed the educational market, the trends of education service, the related government policy and the development of VR technologies in China” (personal communication, August 2018).

RQ2: Social Capital and Opportunity Evaluation

Interestingly, most of the interviewees reflected on how their social capital access and mobilization were related to opportunity evaluation in the premarket entry stage of venture creation. Many commercial gaming entrepreneurs accessed their preexisting professional networks and exploited certain connections, which were tied to major Chinese game firms, to evaluate their initial business concepts. In their cases, crucial knowledge and information pertaining to market trends, industry dynamics, and government policies were gained through social interactions (Alvarez & Busenitz, 2001; Elfring & Hulsink, 2003). These entrepreneurs were thus better informed about the business viability their initial project concepts bore based on peer endorsements or suggestions. For instance, Mitchell Han revealed that leveraging his relationship with the ex-CEO of Shanda⁵ was pivotal to validating his intent of building an outsourcing service company:

He decided to build a big outsourcing business in order to maintain his industrial connections upon leaving Shanda . . . Because I had been doing outsourcing for a while and realized some changes must be done to game arts outsourcing, I shared my initial business ideas with him. He supported me to polish the ideas and referred me to some venture capitalists. (Personal communication, July 2018)

Similarly, many fledgling gaming entrepreneurs considered that certain professional relations, especially those associated with the technologies they rely on, were critical to their opportunity evaluations. Foraying into the field of blockchain game, Richard Tian was nevertheless unfamiliar with blockchain at the very beginning of his venture creation: “Fortunately I had cultivated some social connections in the blockchain area due to my previous entrepreneurial experience [. . .] These people helped me figure out whether blockchain was manageable in my case” (Personal communication, July 2018).

Many indie gaming entrepreneurs also provided accounts of accessing and mobilizing social capital for opportunity evaluation, although their approach differed from exploiting certain professional relations. In this sense, they relied on relatively extended professional relations where a greater degree of “dispersion of information” (Venkataraman, 1997, p. 122) occurred, channeling diverse knowledge and information to their opportunity evaluation. Mark Li drew on suggestions from a wide range of industry peers to consolidate his intent of creating an indie game publishing company: “A lot of people, including others in the indie game industry, our investors, and those who are familiar with our business, have been persistently suggesting me to launch a publishing service since 2013” (personal communication, July 2018). As the founder of an indie game studio, Harold Fu also took advantage of the industry meetings with other indie game developers to

⁵ Shanda is one of the earliest Chinese online game companies, scoring sensational market success during the early 2000s.

better shape his game project concept: "I know many developers in the indie dev community. I reach out to them during our regular gatherings and ask for their opinions and suggestions about my ideas" (personal communication, June 2018).

However, gearing professional relations toward opportunity evaluations could incur trivial or even opposing opinions. Such reflections were mostly brought up by commercial gaming entrepreneurs. As a result, they did not find that utilizing social capital was always beneficial to their opportunity evaluation. In preparing his mobile game studio, Sonny Yang recalled that his former employer, the CEO of Lilith Games,⁶ "threw a wet blanket over my business idea" (personal communication, June 2018) regardless of the underexploited market sector his mobile game product aimed at. Jenna Chen revealed a similar experience when, before establishing her serious mobile game studio, she discussed this idea with the CPO of NamiBox⁷: "He told me entering the field of children education was a right call, but he did not mention making children app at all because it was not a profitable business back in the day" (personal communication, August 2018).

Discussion

Notwithstanding their disadvantages in market competition, gaming entrepreneurs are endeavoring progressive changes to the Chinese digital game industry. Such efforts merit a critical examination to unpack how entrepreneurial behaviors occur and evolve against the broader industry dynamics. Focusing on their professional networks, this article adopts social capital theory to interrogate how these entrepreneurs manage opportunity identification from a social capital perspective. The semistructured interviews with 33 gaming entrepreneurs in Shanghai lead to thought-provoking findings about two key steps of the identification process: opportunity recognition and opportunity evaluation.

In sum, the findings partially corroborate the well-argued relationship between social capital and entrepreneurial opportunity in the existing research: Social relations are an important source through which entrepreneurs identify opportunities for their venture creation (see Slotte-Kock & Coviello, 2010; Stam et al., 2014). That is, by accessing and mobilizing social capital, gaming entrepreneurs were capable of securing opportunity identification because of deliberate social interactions in the industry. However, there emerged contrasting reflections between recognizing and evaluating opportunities about social capital in the premarket entry stage of venture creation (see Table 3).

⁶ Lilith Games is a leading mobile game developer and publisher located in Shanghai.

⁷ NamiBox is a leading children's online education provider located in Shanghai.

Table 3. Reported Relationships Between Social Capital and Opportunity Identification.

	Commercial gaming entrepreneur (<i>N</i> = 14)	Indie gaming entrepreneur (<i>N</i> = 13)	Fledgling gaming entrepreneur (<i>N</i> = 6)
Opportunity recognition	Make little use of social capital because of work experience and industry status		
Opportunity evaluation	Discovery view: Rely on prominent members in the preexisting professional network	Creation view: Rely on extended professional relations	

On one hand, as opposed to their significance in the existing literature (e.g., Anderson et al., 2007; Ardichvili et al., 2003), social capital access and mobilization were not linked with gaming entrepreneurs' opportunity recognition. A noticeable deemphasis of social capital among gaming entrepreneurs suggests alternative interpretations of how their business concepts are formed in relation to professional networks. Commercial gaming entrepreneurs' extensive industry experience brings them in-depth knowledge of the industry environment they plug in, and therefore, they can readily identify and translate new changes into venture creation opportunities (Alvarez & Busenitz, 2001; Davidsson, 1991). This is particularly relevant to entrepreneurs having successful venture creation records because their prior work experience contributes to a higher chance of spotting new opportunities. In short, their established industry background suggests a relatively high level of human capital, by which they are knowledgeably apt to "discover opportunities perceived to be attractive enough" (Davidsson & Honig, 2003, p. 321) regardless of accessing or mobilizing social capital.

Because of their work experience (see Table 2), it seems that indie and fledgling gaming entrepreneurs might have less human capital to leverage for locating opportunities in the first place. Instead, they use a "heuristic-based logic" to parse new industry changes and apply the implications of these changes to forming new business concepts (Alvarez & Busenitz, 2001, p. 764). In this process, their opportunity recognition is fueled by "a systematic overconfidence and a willingness to generalize from small samples," (Alvarez & Barney, 2007, p. 16) which are common cognitive attributes of entrepreneurs who create opportunities for themselves. By contrast, their constructivist approach to opportunity recognition means they barely could refer to the preexisting industry sectors in China (i.e., commercial game) to inspire the origination of new game products or service projects. Thus, their networking with industry peers to collect relevant information about viable opportunities is likely futile because such information is yet to be existent (Alvarez & Barney, 2007).

On the other hand, gaming entrepreneurs revealed heterogeneous accounts of accessing and mobilizing social capital for opportunity evaluation. Commercial gaming entrepreneurs factored preexisting connections with significant industry peers into assessing their initial formation of business concepts, albeit with less instructive suggestions yielded at the same time. Working at the major game firms allows many commercial gaming entrepreneurs to have access to the prominent industry figures possessing advantageous positions in the industry (Peterson & Anand, 2004). Such professional relations could be exploited to facilitate these entrepreneurs' gain of key knowledge and information in the process of opportunity evaluation, and ultimately, account for their successful identification of opportunities. Meanwhile, this sort of social capital mobilization could

incur counterproductive feedback and suggestions that likely offset entrepreneurs' evaluation efforts by overly relying on knowledgeable industry peers (Wood & McKinley, 2010).

Conversely, indie and fledgling gaming entrepreneurs relied on extended professional relations to conduct opportunity evaluations. Although lacking similar professional networks compared with the commercial counterpart, these entrepreneurs relied on relatively diverse professional networks to be "better informed about what to do, where to go, and whom to talk with" (Chen & Tan, 2008, p. 4) for the sake of validating recognized opportunities. They were exposed to information flows from various sources and then can compare and synthesize different opinions about the potentials of their initial business concepts (Aldrich & Zimmer, 1986; Elfring & Hulsink, 2003). These entrepreneurs were informed about the possible access to necessary and rare resources (e.g., finance and technology), by which they can better gauge the viability of opportunities (Alvarez & Busenitz, 2001; Wood & McKinley, 2010). Put together, these findings on opportunity evaluation conform to the resource-based view of social capital: In evaluating recognized opportunities, gaming entrepreneurs' social capital access and mobilization mediates their acquisition of key knowledge and information. Meanwhile, it is important to notice that exploiting preexisting influential professional relations benefits gaming entrepreneurs who discover opportunities, to a greater degree, while exploiting extended professional relations suites those who create opportunities.

Furthermore, gaming entrepreneurs' social capital access and mobilization were closely tied to the respective environment of industry sectors they were involved in. To commercial gaming entrepreneurs, their gaming ventures must wrestle with the major companies' oligopolistic grip on the domestic industry. Earlier game industry research has well documented this sort of industry concentration. Williams (2002) points to the competitive pressures of the U.S. video game industry that result in a value chain controlled by top companies. Johns (2006) further sheds light on the asymmetric power relation between small developers and big publishers. Likewise, in China, the domestic major companies, such as Tencent, have been reinforcing their decisive roles in structuring the industry value chain, establishing the production norms, and mediating the distribution of business resources (e.g., finance, talent, and technology) since the mid-2000s. As a result, commercial gaming entrepreneurs would prefer utilizing connections with these organizations to obtain important knowledge and information, which help dispel the risks attached to their opportunity identification. At the same time, these entrepreneurs were susceptible to information flows that bear little significance to their venture creation. This concern pertains to the industry concentration as major companies lay the standards of commercial game business and homogenize relevant industry discourses, surfacing a shortage of diverse opinions and thoughts on creating commercial gaming ventures.

To indie and fledgling gaming entrepreneurs, their gaming ventures were situated in a less competitive industry environment. Thanks to minimally censored access to Steam, the developing indie community has been able to achieve overseas market presence and evade head-to-head competition with the gaming behemoths (e.g., Tencent) in the domestic market (Messner, 2020). And despite the narrow markets they operate in, most fledgling gaming entrepreneurs barely confront mainstream game companies as there is no mainstream in their situated niches, such as the case of VR gaming (Deng, 2018; Grabarczyk, 2021). In other words, the nascent indie, VR/AR, and blockchain game sectors of Chinese digital game industry have yet to reveal the existence of dominant actors or the encroachment of major commercial game firms. This situation alludes to a relatively heterarchical industry structure that underpins the related game business, indicating a less degree of clear-cut

labor divisions and a surmountable entry barrier to these entrepreneurs (Peterson & Anand, 2004; Picard, 2011). Therefore, albeit with smaller market sectors to target, indie and fledgling gaming entrepreneurs conceived of new business concepts in response to innovative game products and service ideas driven by the widening spectrum of gaming platforms, genres, and market niches (Martin & Deuze, 2009). They were capable of swiftly locating opportunities against large game firms bound by their "bureaucratic hierarchies," which make these major players risk averse and slow in handling new industry trends (Küng, 2017, p. 98). This kind of industry environment does not necessarily punish indie and fledgling gaming entrepreneurs for their absence of existing professional networks or key connections. It prompts their penchant for taking advantage of the fluid industry structure. In this sense, they could avail themselves of accessing and mobilizing extended professional relations to obtain necessary knowledge and information, thereby advancing the process of opportunity identification.

Conclusion

As a pilot study, this article attends to the gaming entrepreneurship in the Chinese context with an emphasis on the relationship between social capital and opportunity identification for venture creation. Specifically, this article examines how entrepreneurial opportunities were recognized and evaluated in relation to the entrepreneurs' access to and mobilization of social capital embedded in professional networks.

In sum, a rich qualitative account of gaming entrepreneurs' varied approaches to social capital access and mobilization partially conforms to the well-discussed significant role that social capital plays in opportunity identification. More importantly, it highlights that the importance of social capital does not permeate the whole process of opportunity identification. It receives limited attention and is eclipsed by other individual attributes (e.g., human capital) in gaming entrepreneurs' recognition of opportunities. Nonetheless, it provides these entrepreneurs with strengthened resource access to better conduct opportunity evaluation. In addition, their social capital access and mobilization are contingent on professional networks conditioned by the industry sectors they belong to.

With these findings, this article presents a preliminary analysis of gaming entrepreneurs in China while considering the industry environment they are wrestling with. These entrepreneurs seem to share a good understanding of the entrepreneurial implications of social capital in initiating their venture creation. Their accounts point to a strong capacity of leveraging social capital in accordance with the broader industry dynamics. Despite the differences across the recognition and evaluation processes, the interviewed gaming entrepreneurs have endeavored to align their social capital with opportunity identification in the premarket entry stage of venture creation.

Further, focusing social capital analysis on gaming entrepreneurs' entrepreneurial opportunity identification may yield analytical implications for the growing research on CCI entrepreneurship. Examining this venture creation imperative helps investigate how the population of CCI entrepreneurs leverage professional networks in the aim of building new ventures. Besides, such an examination foregrounds the existing norms and values of Chinese digital game industry. Similar applications in other CCI research may help reflect the acceptance of and encouragement for entrepreneurial efforts within different sectors of CCI.

Departing from these findings, future studies should employ quantitative measures to survey the gaming entrepreneur population in China on a larger scale, especially including those that are female and located outside the traditional industry hubs. The resulting data may contribute to a more holistic and longitudinal depiction of how those entrepreneurs undertake venture creation about the dynamics of situated industry sectors. Moreover, future studies should examine on- and offline interactions between entrepreneurs and gamers, which might be translated into a critical source of social capital that channels trust, information, and resources in favor of the venture creation process.

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