

**Mega-events and Entrepreneurial Rents:
Lessons from the Beijing Olympics**

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Abstract

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The 2008 Olympic Games in Beijing was a mega-event with dramatic effects for the supply and demand for goods and services. These effects created opportunities for value creation and capture by entrepreneurial firms. Despite doubts that mega-events contribute to economic growth, at the firm level these events can be profitable and sources of entrepreneurial rents. This paper integrates the research on mega-events and the Olympic Games with resource-based theory on relational rent. Hosting the mega-event produces two primary changes in the market: scarcity and time compression. The central organizing authority creates a cartel which limits access to opportunities. The cartel increases the pricing power of the participants, produces relational rent and is an ideal venue to introduce innovations. These innovations can take on four types: communal, donated, ambush, and private. The appropriation of the rent created by these innovations depends on the isolating mechanisms employed and the intention of the parties. We draw upon the Beijing Games for examples of firm behavior, central authority structure, relationships, and innovation. The implication for entrepreneurial companies is that they must have the capabilities to capture the rents generated by the mega-event.

INTRODUCTION

In the summer of 2008, Beijing hosted the Olympic Games, the first event of this kind for China. The national government of China, the city of Beijing, and many associated public and private organizations spent more than US \$40 billion preparing for the games. The International Olympic Committee (IOC) received almost \$900 million in financial support, in-kind goods, and services from the 12 top sponsors. Broadcast rights totaled another \$1.7 billion. Ticket sales amounted to about \$150 million. From the over \$3 billion in revenue taken in by the IOC directly, 92% was distributed to various national Olympic Committees, teams, and athletes.

By any financial standard, the 3-week long Beijing Olympics was an event of enormous scale and scope (Kalwarski, 2008). The economic and financial impact of the Beijing Olympics Games was both a continuation of a process initiated when the modern games began in 1896, and the culmination of a process that started in 2001 when the games were awarded to the Chinese Organizing Committee in Beijing. Whether the games were characterized as a marvelous world-wide spectacle or a symptom of Olympic “giantism,” (Preuss, 2004), there was no denying the extent to which the global village embraced the event.

Indeed, the global reach of an Olympic event is startling. The opening and closing ceremonies, and competitive sporting contests, were broadcast to practically every nation on earth. Over a billion non-Chinese people watched some part of the Games on television or followed the results on the Internet. Adding China’s own billion television viewers, the Beijing Olympic viewership was approximately 2 billion people. Every country that fielded a team of any size sent its media representatives to cover the competition. The global media

also reported extensively on the local conditions of the host nation: its geographic grandeur, its social and political accomplishments and challenges, and its economic power and potential. The world received an intense and comprehensive presentation of Chinese society for the duration of the games. It was a watershed event (Xin Xu, 2006).

What were the origins that led to this outcome? A bid proposal from a prospective host city and national Olympic Committee typically occurs about nine years prior to the games. The IOC usually receives several bids and takes 2 years to evaluate these (Preuss, 2004). The final decision is itself a global televised media event. As soon as the announcement is made and the winning bid chosen, a 7-year -long sprint begins. The announcement is a trigger (Spilling, 1993) that signals the beginning of the race. It is an exogenous shock upon the market and the industries that deliver the physical amenities, goods and services, and structures and systems which are required to put on the event. The event has a broad and deep effect on the entire economy (Roche, 2006). The announcement is invariably received as good news for the winning city, region, and country---but it produces a market dominated by scarcity, time compression, and limited access.

This paper is about how firms react to the new market conditions and how they become engaged in the process. To stage the Olympic Games, a vast pool of resources and capabilities (e.g., millions of dollars, people, and hours of productive capacity) must be aggregated, organized, and employed. With the exception of the promises of the organizers and bid committee, at the time of the event announcement the pool of resources is mostly empty. The goal of the organizers is to fill the pool. To accomplish that end they must contract with private companies and organizations. Filling the pool produces turbulence and

a dynamic operating environment. Firms that can exploit opportunities to participate in the Olympic process create value and can capture economic rent (Alvarez & Barney, 2004).

Research on mega-events, of which the Olympics is the modern archetype, has focused on the macro-economic and regional economic effects of hosting the games. Generally, the results of hosting from these viewpoints are disappointing (e.g. Roche, 2000, Preuss 2004, Horne & Manzenreiter, 2005, McCartney, 2005, Whitson & Horne 2006). The conclusion most frequently reached is that the promoters and organizers of the event seldom, if ever, fulfill their promises. However, research examining the firm level impact is mostly anecdotal and scarce. The aim of this paper is to help fill this gap.

We begin by describing how a mega-event like the Beijing Olympics provides entrepreneurial opportunities for firms. New resources were created to meet demands, while existing resources, skills, and capabilities were redeployed into higher earning uses due to the event. Next, we explore how these opportunities arise. The scale and scope of the Olympics create scarcity in many sectors of the economy. The narrowing window of opportunity and time compression elements between announcement and implementation disrupt the normal creation and capture of value in the economy. Furthermore, the emergence into the market of a powerful, worldwide, and incredibly well-known entity, the “Olympic Movement,” fosters relationships and networks that also lead to rent-seeking behavior.

Then, we explore the factors which inhibit and expand these rent-creating opportunities. Drawing on Dyer and Singh (1999) and Lavie (2006), among others, we explore how relational rent is created and apportioned, and under what circumstances networks create rents to be captured by the participating firms. Next we look at how the

mega-event acts as a motivator and venue to introduce innovations. We develop a typology of mega-event innovations, and suggest how rent might be captured by these innovations.

Adopting the approach of Stearns and Hills (1996), we examine entrepreneurial opportunities and value creation, or the opportunity-seeking, risk-taking, innovation, combination-creating, resource marshaling, and value creating and capturing behavior. We do not simply look at the small business concept or the new venture phenomenon. Rather, we explore entrepreneurial value creation in a variety of contexts. This includes the start-up firms created specifically to meet a demand of the mega-event, and the established organization creating new combinations of their existing resources (Schumpeter, 1934, 1949). The profits generated by such firm activity are defined as *entrepreneurial rents*. These combinations almost always include the resources of the IOC and the various national Olympic committees.

Finally, we suggest how companies, both new and existing, and entrepreneurs within these organizations, can manage their own mega-event involvement. We draw upon the experiences of companies that participated in the Beijing Olympics for these managerial implications.

THEORETICAL BACKGROUND

Mega-events, market opportunities and internal rent

Roche (2000) defines mega-events as “the large scale cultural events (including sports and entertainment) which have a dramatic character, mass popular appeal, and international significance.” They include such activities as major fairs, festivals, expositions, political rallies and conventions, cultural and sporting events which are held on either a

regular or a one-time basis (Hall, 1992). Mega-events are dramatic, global, mediated, large, and special in meaning (Horne & Manzenreiter, 2006). The nature of the sporting competition, the scale of the event, the media coverage, and the global reach of an Olympiad make it a mega-event by all criteria.

With few exceptions (see Lancette, 1996; Ritchie & Smith, 1991; Spilling, 1996; Whitson & Horne, 2006), all prior work on the Olympiads has focused on total regional and national economic impact, and ignored business and firm-level effects. This work concludes that promoters persistently overpromise and under-deliver on the economic benefits of the mega-event (Nebel, 1983; Caterwood & Van Kirk 1992; Preuss, 2000; Rydell, Finding & Pelle, 2000; Baade and Matheson, 2002; Horne & Manzenreiter, 2004; Preuss, 2004).

Research at the firm level is mixed. Research on the effects of the Calgary and Nagano Olympics revealed only modest positive expectations for small firms (Whitson & Horne, 2006). Mount & Leroux (1994) found that medium and small businesses that had opened or added capacity in Calgary in the year before the 1988 Winter Olympics did not view the Olympics as good for business. Ritchie and Smith (1991) could not confirm lasting positive effects on tourism. Lancette (1996) found that the Atlanta Olympics did have a positive impact on individual firms, but only under certain conditions. Having strong operations prior to the event, for example, was a source of profitability for the duration of the event. Becoming an official licensee of the Olympics also played a positive role for the firms. For Atlanta participating firms, the success of the licensee during the event could lead to positive exposure with other sports licensors, providing entrée to other opportunities, including new ways to tap into the sports licensing industry. The Olympics also represented a

chance to reach new customers, beyond the initial target audience, which may likely have long-term consequences for ventures.

The most notable and comprehensive effort to study entrepreneurship in the context of the Olympics was conducted by Spilling (1996). In his examination of the Lillehammer Winter Olympic games of 1994, Spilling described the process of mega-event inception and execution. He viewed the announcement of the winning bid as a trigger. It signaled an immediate disequilibrium in the local market. Shortages emerged overnight and market constraints were evident in the construction business, hospitality and hotels, tourism, and marketing resources. In response to the new opportunities, new firms, actors, and resources were forthcoming. A wide range of businesses were affected (Roche, 2000). The entire entrepreneurial climate changed in response to the new dynamic environment.

All mega-events have some central organizing authority. For example, the Indianapolis 500[®] race has the Indianapolis Motor Speedway, and World Cup Soccer has FIFA[®]. The central authority creates and enforces the rules for companies who seek to participate in the event. In the case of the Olympics, there are multiple authorities involved. The IOC is the international umbrella organization. The national Olympic Committee represents the country hosting the event, and it delegates its authority to the national organizing committee from the time of the winning bid announcement through the wrap-up of the event. For the Chinese Olympic Committee this entity was BOCOG (Beijing Organizing Committee for the Olympic Games). In addition, in the case of Beijing, the municipal and regional governments also participated as the financiers of major construction and infrastructure projects.

These organizations and the networks they produce are organized as cartels. *Cartels* can be defined as combinations of independent organizations and businesses “whose object is to limit the scope of competitive forces within a market” (Gould & Ferguson, 1980). Cartel sourcing and contracting are not conducted (neither ex ante nor ex post) in a normal competitive market. While bidding and payments may be part of the process for admission to the cartel, the central authorities are not obligated to take the low bid, and there is no reason to think that these authorities are profit maximizers. There is convincing evidence of this for the Beijing Games (BOCOG, 2007).

Figure 1 shows the organization and market program for the Beijing 2008 Olympic Games. Among the organizations involved in the 2008 Olympic Games, the International Olympic Committee (IOC) is the dominant governing body. The IOC is both global and permanent, and it maintains control of the international commercial interests of the games through its management of The Olympic Partner program (TOP). Created in 1985, the TOP is the only sponsorship program with the exclusive worldwide marketing rights to both the winter and summer Games. TOP members are large multinational corporations (e.g., Coke, McDonald's, General Electric), that provide expertise and capital (about \$40 million each) to support the games. In return, these organizations receive certain rights and benefits, including the use of the Olympic 5-ring trademark. The IOC also certifies official suppliers to the games. These large multinational corporations provided goods and services to the IOC and the BOCOG for fees. Included in this group are firms like Mizuno (clothing) and DaimlerChrysler (ground transportation). Only large multinationals can qualify for the TOP or Suppliers programs.

----- Insert Figure 1 about here-----

The BOCOG was the primary, albeit temporary, organizer of the Beijing games. It was an amalgamation of the interests of the Chinese Olympic Committee, the municipal government and authorities of the city of Beijing, and the national government's interests. BOCOG was made up of 26 functional areas of control and 5 divisions. It operated in conjunction with the IOC, and followed the IOC's rules, policies, and protocols. Within BOCOG there were many functional groups that had within their scope of responsibilities the potential to promote entrepreneurship. For example, *Construction and Environment* needed to hire contractors for building projects and clean-up activities. *Security* employed outside firms to monitor Olympic sites, and patrol areas where athletes lived and congregated. Private firms as well as public security forces were hired.

The functional area which had the most potential to promote new ventures and entrepreneurship in the Beijing area was *Marketing*. Marketing had control over the multi-tiered Sponsorship program, which included the Partners, Sponsors, Suppliers, and Franchisees associated with the Olympics (see Figure 1). The official domain for the activities of Marketing was:

“responsible for all fund-raising activities associated with the 2008 Beijing Olympic Games, the conduct of marketing activities which include the sponsorship program, licensing program and the ticketing program, [and] the implementation of the IOC's Marketing Plan within the jurisdiction of the Chinese Olympic Committee” (BOCOG, 2007).

From its inception in 2003 until the end of the Games, Marketing was responsible for providing an all-encompassing variety of events and opportunities. It was also charged with protecting the rights, benefits, and privileges of all sponsoring corporations, the COC, and the Chinese Olympic Teams. The structure of the sponsorship tiers paralleled the structure of

the IOC tiers. Partnership and sponsorship were purchased through donations and contributions to the BOCOG. The firms applying for these tiers were also vetted by a committee. The committee had an 8-step process, one which it could enforce or not according to its own determination, to approve firms for participation in the tiers. The overall investigation covered financial status, quality control management, design ability, production capacity, environmental protection, anti-counterfeit measures, marketing strategy, after-sale services, and logistical capability. Licensees had to have had the financial ability to pay guarantees and royalties on time. Licensees were protected against counterfeiting organizations by the Regulations on the Protection of Olympic Symbols. (Decree No. 245, State Council of the PRC, 2002). Finally, the contract term length varied, and contract renewals were subject to prior performance. The self-proclaimed goal was to find satisfactory, reliable, and honorable partners. It was not to maximize income (BOCOG, 2007). Tang Yonghong, Licensing Division chief of BOCOG's Marketing effort, was quoted as saying, "...making profit was not the key point, but promoting the Olympic culture, brand and concepts to more people [was]..." (Lei Lei, China Daily, 2006).

Internal rents

The concept of rent is elusive and hard to define because it has a number of subtle distinctions, but as Baumol (1983) insists, the lack of definitional consensus should not be a barrier to theory development. Our examination of resources and mega-events is focused on the general category of economic rent. This is a measure of market power and competitive advantage (Barney 2001). It is the difference between what a factor of production (land, labor, capital, management, entrepreneurship) is paid, and how much it would need to be paid to remain in its current use. This is also known as Paretian rent. Resources not currently

in use that are brought into existence specifically as a result of an opportunity (e.g. new venture creation) earn what is known as Ricardian rent (Wessel, 1967). Although these are clearly different definitions, both are relevant for our purposes because entrepreneurship can mean either creating a new venture and bringing new resources into existence, or bringing existing resources into new combinations and uses (Schumpeter, 1934).

Internal rents are the private benefits earned by the firm (Lavie, 2006). These are earned by the resources owned and controlled by the firm (non-shared), or in combination with the resources of others (shared). Internal rents can be Ricardian or even quasi-rents. Since quasi-rents are a function of complementarities, these complementarities can be either positive or negative (Lavie, 2006). Mega-events provide two streams of these internal rents for entrepreneurs: scarcity and time compression.

Scarcity. The magnitude of resources needed to meet the demands of the mega-event is enormous. This produces a market characterized by scarcity. Organizations with responsibilities to build, create, configure, and execute the event must source resources: physical, financial, technological, organizational, intellectual, human, and even reputational resources, and put them to work on the various projects of the event. This increase for factor inputs raises prices throughout the market by shifting up and steepening the supply curve and increasing marginal costs. It also shifts the demand curve for products and services. Businesses are able to capture a larger part of consumer surplus under these conditions.

For example, the Beijing area had long lagged other China business centers like Shanghai and Guangzhou in terms of commercial development. Infrastructure amenities like roads and highways were under-built. Office space, hotel rooms, and retail centers were needed. Between 2007 and 2008, 15 new shopping centers were built with over 12 million

square feet of retail space. Over 13,000 hotel rooms came onto the market along with 15 million square feet of office space. Construction costs increased and prices for retail space increased even faster. “The city is expanding at such a pace it is creating new business opportunities every day,” said Edwin Fuller of Marriott International (Cortese, 2008). The immediate scarcity in real estate and retail space created internal rent possibilities for firms in these industries. This can be summarized in the following proposition:

Proposition 1a: Increased demand for scarce factor inputs by mega-events creates both Ricardian and Paretian rents for entrepreneurs.

Time compression. The second factor is time compression. Scarcity has the effect of shifting the demand curve for input factors up and out, and shifting the supply curve up as marginal costs increase. Time compression causes the demand curve for input factors to steepen and become less elastic. Higher prices emerge across the market. The need for speed creates and protects competitive advantage (Porter 1980, Stalk, 1988, Hitt, Keats, & DeMarie 1998; Grant, 1999; Jennings & Houghton, 2002; and Lele, 2005).

Time compression has two components to it. The first is the limited window of opportunity that businesses had to apply to BOCOG for various licenses and sponsorships. The IOC chose Beijing seven years before the games were to begin. BOCOG then had to set a timetable for completing construction and sourcing goods and services (Preuss, 2004). Firm dates for qualified bids in most product and service categories were announced in the business media and on the BOCOG website (BOCOG, 2007). Companies had to be ready to act as soon as the announcement was made. This was especially true for the projects that had

to begin first, like infrastructure and construction. A readiness capability to act fast enabled these firms to win contracts and earn internal rents.

The second source of time compression was the limited amount of time the organizers had to stage the event. All business activities were on a deadline, and had to be completed and ready for the opening ceremonies. Firms that had the capabilities to perform quickly and on-time were awarded contracts and roles in the event. In the imperfect market of the mega-event, these firms re-directed existing resources to the Olympic effort, or if the capabilities and resources were not yet employed, new ventures were created to exploit these opportunities. Entrepreneurs who possess these dynamic capabilities (Eisenhardt, 1989; Eisenhardt & Martin, 2000) can manage in this dynamic environment, and produce results earn above average returns (Timmons, 2003). Therefore, we can summarize:

Proposition 1b: Time compression demands by mega-events create both Ricardian and Paretian rents for entrepreneurs.

Relationship rent creation and capture

Within the resource-based theory (Wernerfelt, 1984, Dierickx & Cool, 1989; Barney, 1991; O'Conner, 1991, Amit & Shoemaker, 1993, Alvarez & Busenitz, 2001, Butler & Priem, 2001, Alvarez & Barney, 2004), relationship rents are a well established source of rent creation and capture (Dyer & Singh, 1998; Lavie, 2006). *Relationship rent* can be defined as “the supernormal profit jointed generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partner” (Dyer & Singh, 1998, 662). Relational rent accrues to the relationship or the alliance. Frequently and intentionally,

however, entrepreneurs are most interested in appropriating some or all of the relationship rent for themselves. Lavie (2006) terms this *appropriated relational rent*.

When the central organizing authority of a mega-event begins the process of executing the event, it deliberately limits access to the network through its processes and protocols. It thereby creates a cartel. The companies that are awarded sponsorships, contracts, licenses, franchises, and property rights become members of or gain access to the rent-generating Olympic cartel. The rent is created by the cartel, but as we will see, firms attempt to capture this rent for themselves. In fact, companies are quite aware that they are joining a limited access cartel and encourage the central authority to limit the number of participants to as few as possible (Economist, 2008).

Relationship rents and network rents are forms of quasi-rents (Dyer & Singh, 1998). Quasi-rents are rents generated by complementarities (Alvarez & Barney, 2004). One firm's superior marketing added to another's efficient logistics can produce competitive advantages that earn quasi-rents. One firm's technical innovation added to the Olympic branding machine can produce a blockbuster product. Resources that firms contribute to a relationship are called *shared resources*. These are resources intentionally committed and jointly possessed (Lavie, 2006). Those that are held out from a relationship are designated non-shared. Relationship rents accrue to the relationship. Network rents accrue to the network, or the multiparty aggregation of businesses and organizations. The Olympic network, the entry gates of which are controlled by the IOC and BOCOG, is an example.

Economic rents and quasi-rents created by firms and networks also must be captured by them. Tactics and strategies designed to capture or appropriate rents are called *isolating mechanisms* (Rumelt, 1984). There are, however, leakages because it is nearly impossible to

capture all the rent created. Firms will try to appropriate relationship and network rent for themselves (Lavie, 2006).

For example, Sohu.com became the first internet sponsor for the Olympics by paying about US \$30 million in 2005 (Ye & Fowler, 2007). This nominally competitive bid gave Sohu.com the rights to be the exclusive BOCOG website. This seemed fairly straightforward. BOCOG and Sohu.com entered into an exclusive agreement to create and capture value by running the official website. But Sohu.com claimed additional rights and tried to appropriate these rents. They claimed that since the website would broadcast the games, they should control access to the international television rights. They claimed that because the official Olympic symbols appeared on their website, they had exclusive control of this symbol (the running man character). And they claimed that no other website could carry Olympic content. These claims were challenged later by many parties, and Sohu.com was forced to concede in many areas (China Stakes, 2008). But the attempt is characteristic of firm rent seeking behavior and the attempt to capture relational rents.

Dyer and Singh (1998) identified four sources of relationship rents. These are: *Specific Assets*. The contribution of specific assets not available from another source. For example, American start-up WIN Products, Inc. was designated as the official detergent of the U.S. Olympic Committee (USOC). It produces an innovative and unique soap that makes smelly workout clothes fresh. The official USOC designation brought WIN to the attention of Nike, and a relationship with Nike was formed. The relationship with Nike gave WIN access to hundreds of retailers and distribution in sporting goods retailing giant Dick's Sporting Goods. In exchange for the contribution of its innovative products to USOC, all parties, including the athletes, gained from the relationship. But WIN appropriated much of the gain

because it gained national attention, increased distribution power, received endorsements from well-known network actors, and associated with actual athletes who loved the product. Relative to the other relationship members, WIN was the smallest and weakest. It had the most to gain and made the most of its opportunity (Kang, 2008).

Knowledge sharing routines. The IOC has over 100 years of experience generating and implementing routines, processes and protocols that successfully met its goals. For example, many international firms provide their products and services to provide the security for the Olympics. As they share their knowledge with each other, and the IOC and BOCOG, new knowledge is created for the relationship. Some of this knowledge is appropriated by the individual companies for their own benefit. Divisions of companies like General Electric, IBM, Honeywell, Siemens, Panasonic, and LG all participated along with governmental authorities and the People's Liberation Army. These firms and others combined their resources to produce a new level of system security that set the bar for future mega-events. They also took their new knowledge home with them when the event ends (Roberts, 2008).

Complementary resources and capabilities. As seen above, firms combined their resources with resources of other enterprises or the Olympic authorities, to produce new products, services and systems. These resources complement each other and can generate relationship rent. For example, the Bank of China (BOC) entered into an innovative licensing agreement with BOCOG to put the FUWA (the five Friendlies) on their new Olympic Growth Account. BOCOG received a small amount of income for each account opened. The products were marketed to young people under the age of 18. Depositors of 30,000 Yuan or more also received limited edition deposit receipts with FUWA graphics. These became collector's items. Two hundred lucky account holders also received free event tickets through a lottery.

This market activation program of BOC will extend long beyond the mega-event as these bank accounts continue to receive deposits (China Daily, 2008).

Effective governance. Good management can lower transaction costs. One component of transaction costs in a relationship is the monitoring of the contract. For sponsors of the Beijing Olympics, their exclusive association with the event in their product category is a primary concern and cost. The BOCOG had a labor intensive but very effective way to deal with this, and BOCOG absorbed all the cost. It hired thousands of inspectors and gave them rolls of tape. Whenever they saw a non-sponsor's logo name in view, they covered it with tape. If the tape was removed later, they went back and taped it again. They also diligently protected sponsors from "ambush marketing" by which non-sponsors attempt to associate themselves with the Games (Dean, 2008).

Relationship rents can also be negative if the shared resource of one or more of the parties is a negative complementarity. For example, in the Tour de France, the negative reputation of the racers who have tested positive for stimulants and doping practices are a negative resource for their sponsors (Economist, 2008). They combine their poor reputation for sportsmanship and their subsequent event disqualification with the good reputation of the sponsor, and cause the sponsor to both lose their investment in the event sponsorship and also fail to boost their products and services with ineffective marketing activation promotions. In the case of the Beijing Olympics, related firms, for example, might have produced shoddy products that could taint the reputation of the alliances and the entire network, thereby negatively influencing the focal firm's own products. Similarly, corruption with the Olympic organizations could have tainted the entire network and all organizations within it. This happened in the case of the Salt Lake City Games of 2002. In the run-up to the games, it was

discovered that bribes had been solicited and paid and that the bidding process had been corrupted (Longman, 1999). The entrepreneurial venture, through its association with the network, then gains negative reputational resources, hindering its ability to extract rents.

Summarizing, here are the propositions concerning relationship rent.

Proposition 2a: Relationship rents are created when specific assets that cannot be easily replaced are contributed by the enterprise to the relationship.

Proposition 2b: Relationship rents are created when knowledge sharing routines are generated and shared by parties in the relationship.

Proposition 2c: Relationship rents are created when complementary resources and capabilities are contributed by parties in the relationship.

Proposition 2d: Relationship rents are created when effective governance systems and practices reduce transactions costs for parties within the relationship.

Proposition 2e: Relationship rents can be negative when one or more of the resources contributed to the relationship is a negative complement to the other resources.

Promoting and inhibiting appropriated relational rent

Relational rents accrue to the relationship. However, firms are frequently interested in appropriating these relational rents, and can do so under certain conditions (Lavie, 2006).

Relative absorptive capacity is the degree to which the focal firm can learn from the alliance partner, in this case the BOCOG and IOC. Both of these Olympic organizations offer examples of how to promote and market products and services in the mega-event environment. The more the venture can absorb these lessons, and apply them to both its

Olympic and non-Olympic business, the better able it can appropriate a larger share of the relational rents. This is somewhat analogous to Spilling's (1993) description of the events as a "learning process." Firms that can learn from the IOC, BOCOG, and other well-established members of the network, like the TOP participants, should earn higher rents. This can be summarized by:

Proposition 3a: The appropriation of relational rents (by the focal firms) will be positively associated with its relative absorptive capacity.

The *relative scale and scope of resources* shared will also influence rent appropriation. The entrepreneurial firms best positioned to benefit from the relationship with the BOCOG were those firms that did not already possess the resources that the BOCOG offered (Dyer & Singh, 1998). The more varied the partner's resources, the greater the complementarities, therefore, the less likely sharing of redundant resources. For example, if a local entrepreneurial supplier working with the BOCOG gains resources which are already internally held by the entrepreneurial venture, there is much less to be gained from the alliance. There is little benefit from the redundancy. However, if the entrepreneurial firm has fewer resources relative to its larger partner (e.g., the BOCOG), it is more likely to extract benefits from the shared resources. Therefore, the smaller the scale and scope of the venture relative to the BOCOG (and other Olympic partners), the greater the relational rents to the venture. This can be summarized by:

Proposition 3b: The appropriation of relational rents (by the focal firms) will be positively associated with its smaller scale and scope of resources.

The quality of the *contractual agreement* between the alliance partners is also likely to affect the firm's ability to appropriate rents. A good contract protects both partners from misappropriation, and lays out a method for partitioning rents and profits from the relationship. A favorable contract may provide a level of exclusivity within the network. It also details the legal remedies to assure compliance. Therefore, the more favorable the terms of the contract, the higher the rents from shared resources:

Proposition 3c: The appropriation of relational rents (by the focal firms) will be positively associated with contract contractual provisions that are in its favor.

However, no contract is foolproof. There are frequently loopholes after the contract is signed, including the possibility of *relative opportunistic behavior*. The party with the most aggressive opportunistic behavior will be able to appropriate more relational rents for itself. High levels of cheating or defecting from previously established arrangements, however, may lead to increased monitoring and policing costs. These transaction costs can then lower the net relational rents for all parties. Therefore, the higher the potential for opportunistic behavior by either party, the lower the total rents that may be earned. This can be summarized as:

Proposition 3d: The appropriation of relational rents (by the focal firms) will be positively associated with its opportunistic behavior.

Proposition 3e. Total relational rents will be lower if all parties to the relationship exhibit aggressive opportunistic behavior.

Firms rely on *relative bargaining power* to gain advantages when initiating and

developing the alliance relationship. BOCOG Marketing appeared to have the preponderance of bargaining power relative to the suppliers, licensees, and sponsors, as it is the only recognized official Olympics organization among the group. However, the typical dimensions of relative bargaining power are still relevant. Switching costs, differentiated products, salience for quality, and so on, enhance the bargaining position of the firms (Porter, 1980). Therefore, firms engaged in alliances with the BOCOG varied in respect to bargaining power, and those with a stronger position were able to extract additional rents from the relationship:

Proposition 3f: The appropriation of relational rents (by the focal firms) will be positively associated with stronger relative bargaining power.

Spillover rent

Spillover rents are the unintended benefits that accrue to a firm through its association with other similar firms, co-opetitors, and horizontal partners within the Olympic network. When the focal firm cooperates strategically with other similar firms, these partners share their resources with each other. There may be gains for the focal firm from increasing its knowledge base or skills (the learning race), opportunistic action (the Trojan horse), and superior bargaining capability (Lavie, 2006, p. 647). For example, entrepreneurs who may not have known each other before participating in the Olympic network could come together for another project and earn (inbound) spillover relationship rents. Or an entrepreneur may have learned global level skills and marketing from the IOC and apply these to her own business. The enterprise subsequently has dynamic capabilities, and earns a temporary spillover rent from these (Eisenhardt & Martin, 2000). As with relational rents,

however, the actual appropriation of the spillover rents depends on these firm-specific elements. The capacity for firm learning, the type of firm behavior, and the amount of relative power among the firms will all influence where the realization of spillover rent. This is summarized by:

Proposition 4a: The greater a venture's absorptive capacity, the greater the spillover rent appropriated to the venture from the firm's and the shared Olympic network resources.

Proposition 4b: The more aggressive the licensee and vendor's opportunistic behavior, the greater the spillover rent appropriated to the venture from the firm's and the shared Olympic network resources.

Proposition 4c: The stronger the venture's bargaining power, the greater the spillover rent appropriated to the venture from the firm's and the shared Olympic network resources.

There are also non-shared resources that are embodied, for example, in the improved infrastructure of Beijing and its surrounding areas, better policing of trademark and licensing protections, and the increased purchasing power of the Beijing workers and consumers. These are externalities to the firm, and represent the hopes of the promoter for regional growth and development. In addition, incidental spillover rents can also flow to the BOCOG and the city of Beijing, in the form of increased firm capabilities and technological substitution benefits of firms upgrading their plant and equipment. As with relational rents, whether a firm actualizes the spillover rents from the shared resources depends on three

elements. Following the logic of Lavie (2006), the spillover rents will depend on the firm's capacity to learn, type of behavior, and power to negotiate:

Proposition 5a: The greater a venture's absorptive capacity, the greater the spillover rent appropriated to the venture from non-shared Olympic resources.

Proposition 5b: The more aggressive the licensee and vendor's opportunistic behavior, the greater the spillover rent appropriated to the venture from non-shared Olympic resources.

Proposition 5c: The stronger the venture's bargaining power, the greater the spillover rent appropriated to the venture from non-shared Olympic resources.

Lastly, the IOC and the National Olympic Committees have been through this process before. They have guided and advised the BOCOG on ways to protect Olympic resources from aggressive appropriation. BOCOG implemented a tenacious set of rules designed to protect its network gains. Among these were a strong set of exclusive rights, a limited number of top tier sponsorships, a clearly defined branding approach, a visible policing and monitoring presence, and the enforcement power of the state (BOCOG, 2007). This is expressed by:

Proposition 6: The stronger the isolating mechanisms employed by the BOCOG, the lower the spillover rents appropriated by suppliers and licensees.

Innovation and entrepreneurial rents

Innovation can be a source of value creation and entrepreneurial rent (Schumpeter, 1934; Brazeal & Herbert, 1999; Cho & Pucik, 2005; Steglitz & Heine, 2007). The mega-event stage and venue is ideal for the introduction of innovations. First, the vast scope and scale of the mega-event frequently demands both network and firm-level innovations in order to solve the many problems posed by staging the event. For example:

- The Bird's Nest, the main venue for the Olympics, reveals how knowledge sharing involved between organizations can spur creativity and innovation. The venue, designed by Swiss architects Herzog & Meuron, Swiss, included a unique steel structure design demanding innovative construction methods. This prompted Chinese construction companies to learn new welding techniques. In fact, these precise welding methods had never before been used in construction. While access to these techniques may have been available before, there was no reason for the local organizations to pursue this learning. The Olympics provided this reason. As this is such a new technique, the Chinese companies who have learned it have become the international experts (Li, 2008).
- The rise, risk and fear of global terrorism led Beijing to spend \$6.5 billion on security during the games. General Electric was one of the most involved organizations in this effort, providing security to 168 buildings in Beijing (Roberts, 2008). While specifics about the security techniques were not made public, given the sensitivity of this type of service, the risk and potential devastation of a terror attack implies that Beijing would have required the latest technological advances from its suppliers. The suppliers delivered; no attacks occurred. Companies like GE, whose innovations in

- detecting explosives, video surveillance, and other security measures provided a safe environment during the Olympics, were able to further develop their legitimacy as effective suppliers. Even for GE, considered by many as one of the most innovative organizations, participating in the innovative processes of a mega-event and gaining legitimacy will likely help the company break into the large, mainly untapped Chinese market. GE's participation has already resulted in garnering future revenue streams. GE was able to secure the contract for the new national broadcaster headquarters (CCTV) in Beijing, as well as the 2010 World Expo in Shanghai and Asian Games in Guangzhou, the latter two of which are considered mega-events (Roberts, 2008).
- ASK-TongFang, a French-Chinese technology company, was asked by the BOCOG to develop tickets which could not be counterfeited. The company embedded tiny computer chips in the tickets to help reduce forgery and provide greater security. The tickets for the opening and closing ceremonies, for example, included a bar code with the bearer's name and identification number, among other information. The technology allowed the Organizing Committee to know exactly who was attending the event, and where they were seated. This technology will eventually be used by companies to track products, and ASK-TongFang will generate entrepreneurial rents from this endeavor (Jana, Balfour, & Schwindt, 2008).
 - The Swiss watchmaker Omega had the opportunity to develop the most state-of-the-art timing system. Time measurement is a critical element for competitions such as swimming and sprinting. Omega received much attention and recognition as it created

the ultra-sensitive and extremely accurate touchpad for swimming: one able to record the one-hundredth of a second win by Michael Phelps (Jana et al., 2008).

Second, the global media covering the mega-event provided publicity and visibility for innovations such as the Omega timing system. This essentially free marketing encouraged firms to launch innovative product campaigns during the mega-event. For example,

- Johnson & Johnson (J&J) was a first time sponsor of the Olympics. This U.S. maker of pharmaceuticals was relatively unknown in China. But in an innovative marketing move and overall good deed, J&J took on the problem of a fungus that had attacked the famous terra cotta warriors of Xian. J&J invested years and hundreds of thousands of dollars researching molds on tiles and clay flower pots. They were able to identify over 60 varieties of fungus on the warriors, and began to cure the ancient soldiers. For this innovative effort, they received the important appreciation of Chinese officials and had their efforts publicized within China. The company hopes their efforts bolster their business in China as a result of this (Leow, Wang, & Crow, 2008).

Even the media itself innovated during this time. For example, to compete with Adobe's Flash, Microsoft Corporation partnered with NBC to introduce its new online video software, Silverlight, to the viewers of the Beijing Olympics. The 40 million people watching 2200 hours of live Olympic footage on the NBC website were able to sample the new technology, watching four videos simultaneously, with online commentary (Freifeld, 2008). By showcasing their new innovations by presenting the Olympics, Microsoft aimed to develop a large user base as well as partnerships with other companies in order to provide powerful web programs with rich media. While Microsoft would arguably be considered one of the most innovative companies, the mega-event, with its global reach and reliance on

media-driven products, provided an additional opportunity for the company to gain value from their innovative product, and produce potential rents (Sun, 2008).

Thirdly, the special needs of the athletic competitors and their personal sponsors propelled innovation. In the case of the Olympics, having the sponsored athlete win the event boosts the product on display. For example:

- By teaming up with the United States' National Aeronautical and Space Administration (NASA), for example, Speedo developed the Fastskin LZR suit to be used (and tested) by the fastest swimmers in the world in Beijing.
- Nike developed a 12-pound ultra-sound machine, precise enough to detect the tiniest of injuries (e.g., for a fractured foot due to an Olympic soccer match), yet light enough to transported easily among the venues (Reena, Balfour, & Schwindt, 2008).

The critical theoretical question is, “what is the locus of rent capture?” for these innovations. The outcomes can be captured in a 2x2 matrix. Figure 2 contrasts the nature of the resources used for the innovation (shared versus non-shared) with the firm's network position: an in-network company or out-of-network company.

-----Insert Figure 2 about here-----

Innovations that result from shared resources within the network can be termed *communal innovations*. For this the firm has combined its resources with those of either other participating organizations or the central organizing authority itself. The rents from these innovations, all things being equal, will fall to the network itself. If the mega-event is a repeating event, like the Olympics, then it is likely the innovation will be incorporated into the regular activities the next time the event is held.

Innovations that result from non-shared resources within the network are called *donated innovations*. The venture is using its own resources for the innovation and employing this innovation for the benefit of the event. In the absence of isolating mechanisms which would protect and appropriate rents from the innovation for the firm, this innovation passes into the public domain. However, in most cases it would be expected that the donating firm would try to protect its innovation, or at least attempt to capture the rent generated from the goodwill of the relationships.

Innovations that result from shared resources by firms outside the network are here called *ambush innovations*. This piggybacks on the term, “ambush marketing,” which in the context of the Olympics referred to firms that are not associated with the event, but still made large marketing investments (Dean, 2008). The public frequently thought these companies were official sponsors. Therefore, they were able to appropriate the reputation value of the Olympics for themselves. In this case they may also be able to appropriate the innovations created by employing shared resources.

Innovations that results from non-shared resources by enterprises outside the network can be called *private innovation*. The rents from these belong to the company that created the innovation, as long as the mega-event (network firms or central authority) does not attempt to appropriate it for its own. This can be summarized by:

Proposition 7: Four types of innovation result from the combinations of resource types (shared and non-shared) and network participation (in network organization or out-of-network). The capture of rents resulting from these innovations will depend on the isolating mechanisms employed and the intent of the parties.

We think that entrepreneurs are enthusiastic about participating, even when there is uncertainty about the locus of rent capture, because of *aspirational rent*. This new concept can simply be defined as “the hope for future rent creation and capture.” Entrepreneurs first must believe (hope) that the IOC is not setting profit maximizing rates and fees. Second, the entrepreneurs hope that there is enough relationship rent created and captured that is not priced in by the central authority. Third, there is the hope that the spillover effects will produce additional positive rent opportunities. Even if the network participants believed the central authority was behaving like a profit maximizer, there would still be the aspirations that positive rent could be earned.

Aspirational rent explains why participating in the network may not be simply exploiting an arbitrage situation. Entrepreneurs believe that there will be some longer lasting effects from being in the Olympic and mega-event network. As Barney (2001) has observed, “a sustained economic rent reflects the creative and entrepreneurial ability of a firm to constantly discover how to generate value with their resources in ways that outside owners cannot anticipate.” It is an empirical question as to whether these hopes are realized, and aspirational rent approaches or equals actual rent. But we think this provides the framework for understanding firm motivation and post-event behavior.

DISCUSSION

This paper illustrates how a mega-event like the Beijing Olympic Games can affect a firm’s performance. The vast scale and scope of the mega-event disrupts the market, and

produces conditions of scarcity and time compression. Firms that can bring forth resources, products, and services that alleviate the scarcity can earn entrepreneurial rent. Firms that can meet the rigorous deadlines and meet the challenges of a narrow window of opportunity are also rent and value producers. The central authority of the mega-event, due to the limited access to the network, creates a cartel. Members of the cartel have increased opportunities for value creation and capture.

In this paper we build on resource-based theories of relational rent, shared and non-shared resources, and develop a framework describing how the network resources of the Beijing Olympics can enhance benefits for entrepreneurial ventures in the form of internal, relational, and spillover rents. The potential for these rent sources are likely to increase venture profitability, and spur new venture creation, growth, and development. We develop propositions to suggest how entrepreneurial firms may take advantage of an alliance with a mega-event by considering not only the quality of the alliance but also the elements which might influence the flow of resources to rents (e.g., learning, contracts, and partner behavior). The model expands our understanding of the relationship between a mega-event and entrepreneurial activities.

One question that arises is why the central authority does not attempt to capture as much of the rent generated from the event as it can. The IOC clearly leaves money on the table. It does not appear to maximize its profit or revenues when it sets rates for sponsorships, fees for licensing, or rights for broadcasting. Of course, the central authority does not lose money either, and it generally increases its fund balances from year to year. Our supposition is that the IOC is, rather than maximizing its own profits, maximizes the network's profits. By providing room for participant profitability and incentives for

participant entrepreneurship, the IOC extends the Olympic network's reach and influence.

The IOC is always cognizant of preparing for the next set of bids for the games and broadcast rights.

Given the tremendous clout and economic power that the IOC and other mega-event central authorities wield, why do entrepreneurs believe that rent creating and capturing opportunities exist? The fact that they do believe this is clear from the general enthusiasm firms have in participating as sponsors, licensees, and contractors. Yet since the IOC has the power to set both the prices it receives and the quantities it demands, it is in a position to act as a monopolist. This would seem to be a barrier to network participation. Yet firms continue to be enthusiastic about participation due to aspirational rent.

What are the implications of this model for the actors in the network? What can entrepreneurs and corporate innovators do to make the most of the mega-event opportunities?

Network entrepreneurs benefit the most if they have the capabilities to appropriate the gains generated. Increased internal rent is a function of both shared and non-shared resources. The entrepreneur must be prepared to capitalize on complementarities. Where the entrepreneur is weak, the network should be strong. When the entrepreneur needs access, the network should provide access. If the entrepreneur requires technological know-how, the network should possess members with the know-how. These resource gaps can be filled with network resources and then applied to the non-shared assets of the venture, thereby increasing their value too.

Relational and spillover rents are also enhanced by superior capabilities. Absorptive capacity (ability to learn), negotiating skills, and aggressive opportunity capture-ability are organizational resources. Entrepreneurs who are satisfied with winning the rights to use the

emblems, symbols, and iconography of the mega-event will not completely capitalize on the alliance unless they prepare and develop their organization. As licensing contracts and the rights to use the characters expire, the network benefits will evaporate unless the firm has built the structures and skills needed to take the benefits into the future.

What are the implications for the mega-event organizers and the organizing committees of the Olympic Games? Increasingly, these events are under attack for failing to provide the total package of economic benefits promised. By doing a better job of helping network participants generate gains and then keep those gains, the organizers mitigate this charge. They can do this without jeopardizing their own network gains by focusing on helping entrepreneurs build the skills and resources required for future gains. Organizers need to protect themselves from intellectual property crimes and illegal opportunism. But they should find ways to nurture and encourage their entrepreneurial partners to be better businesses when the mega-event is completed.

Lastly, what of the entrepreneurs who are not part of the formal resource network, but who instead piggyback on the network without sharing any resources? A small example might be a restaurant that has no formal ties with the Olympics yet offers a special “Olympian Menu” for the duration of the games. This is a leakage from the point of view of the Olympic network. But it is still a positive economic opportunity for the restaurant entrepreneur. Will this opportunity more or less expire when the mega-event is completed? Do the non-aligned firms generate continuing rent opportunities? Can they build organizational capabilities and dynamic resources without participating in the network? Or is it just a promotion?

The mega-event also produces ideal conditions for innovation. By combining the

concepts of shared and non-shared resources with the element of network participation, we introduce a 2 x 2 matrix that illustrates four different types of mega-event innovation. These are called communal, donated, ambush and private innovation. Communal innovation produces rents for the network. Donated innovation will end up in the public domain. Ambush innovation is an attempt by the firm to appropriate the rent created by the event for the private firm. Rents created by private innovation should be captured by the private enterprise, unless mega-event isolating mechanisms capture some of this. In the end, the question of who will capture the rents from the innovation remains unresolved.

As with any research endeavor, there are limitations. We developed a theoretical model; we did not, however, test it. Testing the model will not be easy. Measuring rents will be a difficult process because of the need to separate asset class and resource allocation. Our intention is to empirically test this model to uncover the non-shared and shared resources which do lead to rents, and the factors which play the most important role in the rent appropriation. This type of future research will provide a deeper and richer understanding of the mega-event entrepreneurial relationship.

Despite these limitations, our model adds value to our comprehension of the relationship between mega-events and entrepreneurial activity by comprehensively exploring this phenomenon. Our model helps fill an important gap in our understanding of the overall economic impact of a mega-event. Research in the area of mega-events consistently shows their unprofitable nature. However, there is a significant lack of the consideration for entrepreneurship in the discussion and debates about the long-term economic impact of a mega-event like the Olympics. Our paper helps fill this gap by proposing a framework in which entrepreneurship is not only dramatically influenced by this type of event, but also

may play a critical role in the development and preparation process. Only continued research will enable us to develop our understanding even further, and continue to increase our appreciation for the entrepreneurial implications of mega-events, and in particular, the Olympic Games.

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Figure 1: The Organizational and Market Program in the Beijing 2008 Olympic Games

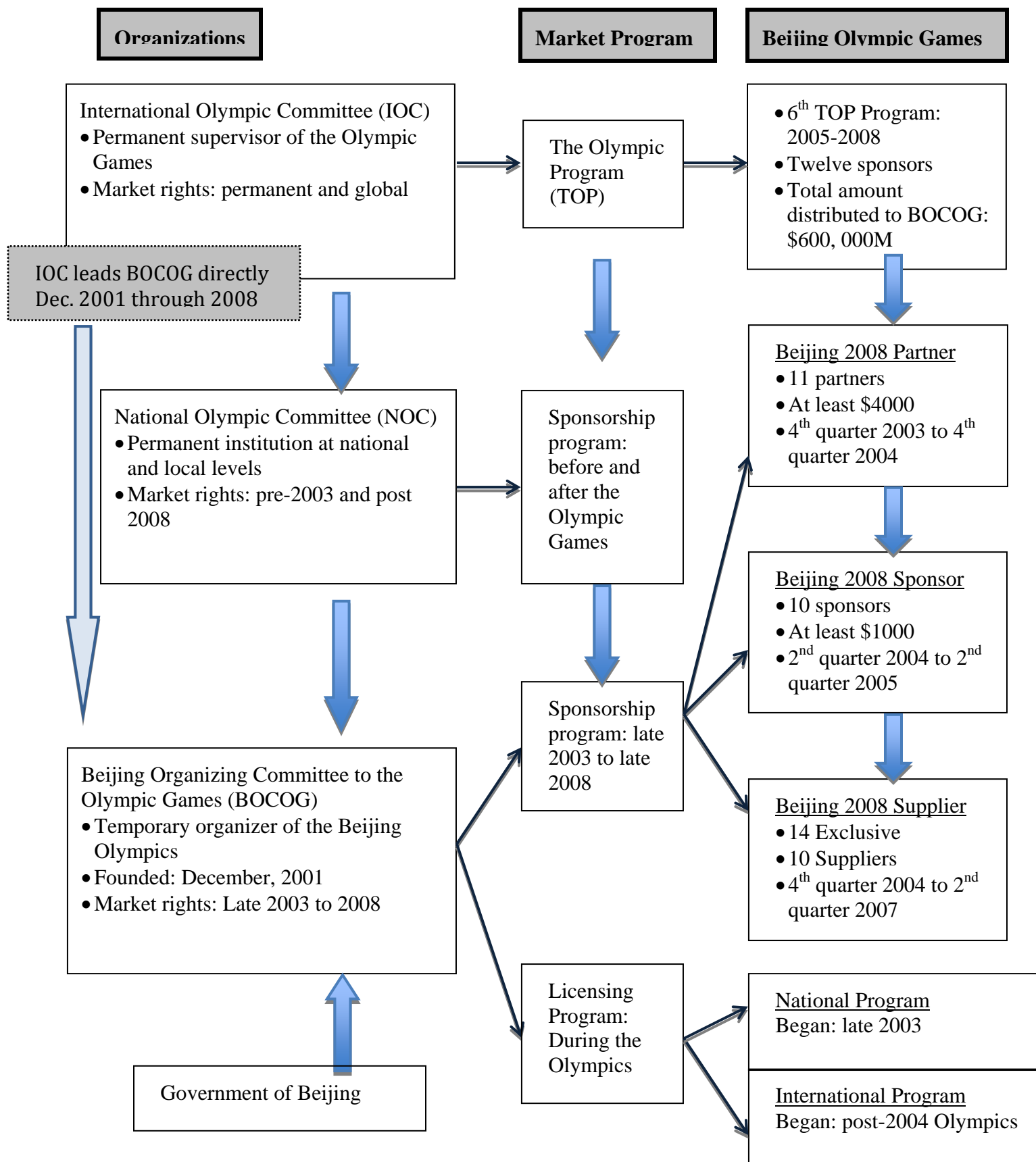


Figure 2. Four types of mega-event innovations

	Shared resources	Non- shared resources
In-network firm	communal innovation	donated innovation
Out-of-network firm	ambush innovation	private innovation