

Lasting Effects of Major Sporting Events

Holger Preuss

Institute of Sport Science, Johannes Gutenberg-Universität Mainz, Germany

<preuss@uni-mainz.de>

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What used to be called sports events have today developed into "Mega Sports Events" and, in line with this development, new approaches for research within the field of sports sciences, widely understood, have appeared. The Olympic Games and the football World Cup have shown the way as more and more sports events aim for the stars. It has been called gigantism, less frequently megalomania, the result of the noble contest between organizing cities or countries, of ever trumping one's predecessor in grandeur and everything else concerning the event in question. But needless to say, there is more to this than simple competition between events. Large-scale sports events – and not only the largest – have significant impact for the organizers, both in the long and the short run, even though they last only for a week or two. In addition, the largest events are enormously expensive to arrange, but in return bring global media exposure with effects and a value that cannot be achieved in any other way.

Professor Holger Preuss is one of these new sports scientists, who focus on the organization around larger sports events rather than on different aspects of the practicing of sports or the competition itself. What are the deliberations behind the decision to bid for a large sports event? What should the revenue be in order to legitimise substantial public investments, when resources are scarce and social and other needs acute? The title of Professor Preuss's article holds the answer: Investments in a sports event has to bring positive effects for the city/country/population, effects that last much longer than the event itself. Such effects can, among other things, be short term financial profit re-invested for long term benefits; investments in infrastructure that last long after the competitions and contribute to enhancement of local productivity; effects of advertising for the city/country as a tourist destination, not only for sports tourists. Holger Preuss explains how these positive effects are achieved – while the negative are avoided – in his well written and solidly argued article, which also offers a substantial list of relevant literature on these issues.

1. Introduction

Major sporting events are extremely expensive to host. The fact that they last only two to four weeks justifies the claim of public authorities to create long lasting effects from the investments into an event. Recent Major sporting events such as the Football Euro in Por-

tugal or the Olympic Games in Athens have proven that there is also a negative legacy besides all positive outcomes from staging an event.

Not only for the public authorities is a positive legacy of importance but also for the international sport bodies. There are three reasons for this. First, a positive legacy avoids public blaming of the international sporting body and provides evidence why the event had been good for the host city/country. Second, it justifies the use of scarce public resources for permanent or temporary event infrastructure ensuring that all necessary event structures for the event are ready on time (Preuss & Solberg, 2006). Third, a positive legacy motivates other cities/nations to bid for future events.

This paper will contribute to the controversial discussion of the investment of scarce public resources in major sporting events. Often only the economic impact of an event is seen, which is caused by the demand side of an economy. It is also worthwhile to consider the event-related changes (supply side) of a host city. Just recently the *European Sport Management Quarterly* published a special issue on mega sport events. It is important to consider the positive and negative legacy of major sporting events when discussing the opportunity costs of resources spent for an event. This paper provides a definition of legacy. Then it will be indicated how legacy might be measured and what elements a legacy are formed of.

2. What is “legacy”?

In literature an immense variety of so called ‘legacies’ from sport events can be found. Unfortunately there is no satisfying definition of ‘legacy’ available.

Table 1 *Positive and negative legacy in literature*

Positive

- new event facilities,
- general infrastructure,
- urban revival,
- international reputation,
- increased tourism,
- improved public welfare,
- additional employment,
- local business opportunities,
- corporate relocation,
- city marketing,
- renewed community spirit,
- inter-regional cooperation,
- production of ideas
- production of cultural values
- popular memory
- education
- experience and know-how

Negative

- high construction costs,
- investments in non needed structure,
- indebtedness of public sector,
- temporary crowding problems,
- loss of permanent visitors,
- property rental increases,
- only temporary increases in employment and business activities
- socially unjust displacement

Sources: Ritchie & Aitken (1984); Haxton (2000); Lenskyj (2000 & 2002); Moragas, Kennett & Puig (2003); Kasimati (2003); Preuss (2004); Cashman (2005); Vigor, Mean & Tims (2005); Kesenne (2005).

Aware of the variety and importance of legacy, the IOC initiated a congress on “The Legacy of the Olympic Games: 1984-2000” in 2002 (Moragas et al., 2003). It attempted to define legacy, but the participants “found that there are several meanings of the concept, and some of the contributions have highlighted the convenience of using other expressions and concepts that can mean different things in different languages and cultures” (p. 491). Cashman (2005) adds to this hesitancy by stating the

word legacy, however, is elusive, problematic and even a dangerous word for a number of reasons. When the term is used by organising committees, it is assumed to be entirely positive, there being no such thing as negative legacy when used in this context. Secondly, it is usually believed that legacy benefits flow to a community at the end of the Games as a matter of course. [...]. Thirdly, legacy is often assumed to be self-evident, so that there is no need to define precisely what it is (p. 15).

Cashman (2005) collected a variety of evidence about legacies. He identified six fields of legacies: economics; infrastructure; information and education; public life, politics and culture; sport; symbols, memory and history.

However, this rather qualitative definition needs a broader perspective. Etymologically the word legacy means “property left by will” (Harper, 2001). Looking at the literature about the legacy of sport events this definition is not satisfactory for two reasons: First a property belongs to someone, while an event “left over”, such as image, motivation or knowledge is not the property of the event organisers, nor is it that of politicians or sport federations. In other words, some legacy (e.g. positive image) is a public good. Second, the legacy of sport events also covers structures that were not intended to be left “by will”; such as oversized sport arenas or socially unjust distribution of money or debts. Events also cause legacies which are not planned, such as positive/negative externalities. Therefore, the etymological definition of ‘legacy’ does not fit the context in which it is used in event literature.

A general definition of legacy should be independent from qualitative examples. For this three legacy dimensions can be identified: First, the degree of planned structure; second, the degree of positive structure; third, the degree of quantifiable structure. A definition considering these dimensions is: “Legacy is planned and unplanned, positive and negative, intangible und tangible structures that were/will be created through a sport event and remain after the event.” In the following the word “structure” is used in this context.

The dimensions build a cube. This “legacy cube” can be split in eight smaller cubes. A holistic evaluation of a major sporting event would be necessary to identify all legacies. Although, most pre-event studies and bid committees focus on only one subcube (planned, positive, tangible) (see Cashman, 2005, p. 15).

3. How to measure event legacies?

The measurement of a legacy should start with the changes events create. A review of the literature shows that the legacies of events are multidisciplinary, dynamic and defined by local and global factors. Most papers only describe single event legacies; even if a particu-

lar legacy is proved scientifically, the reproduction of that legacy is prone to error (Solberg & Preuss, 2006). The legacy varies for different cities, events and times.

1. *Same Event in Same City* (e.g. Olympic Games two times in one city): The same event creates different legacies if staged twice in one city. Due to the permanent development of an event (increasing gigantism, other need of structures, growing global interest, etc.) the event needs different structures when staged in the same city at another time. Even though many of the structures needed for an event were set up during the first time when the event was staged, other structures are required for the second time (e.g. see Schardt (2006) comparing the Olympic Winter Games in Innsbruck 1964 and 1976). Not only does an event develop over the time, but the world also changes. Thurow (2004, pp. 31-56) describes three revolutions that change the world: First, the national economy will be exchanged by a global economy. Second, socialism will be exchanged by capitalism. Third, industrialized economies will be exchanged by knowledge-based economies, consisting of micro electronics, computer sciences, telecommunication, etc. Rapid world development affects, and changes, both cities and major sporting events. Therefore, the same event staged for a second time in the same city finds different conditions and requires different structures.
2. *Different Events in Same City* (e.g. several world cups in Paris): Different events create different legacies if staged in the same city. Different structure requirements, different social interests, different media exposure, different spaces needed, etc., means major sporting events create different legacies by nature. However, some legacies are the same and can be used for other events.
3. *Same Event in Different Cities* (e.g. Asian Games in different cities): The same event creates different legacies in different cities. Due to the structure a city offers and the goals pursued, especially by local politicians, different legacies are created (Preuss, 2006). The high degree of freedom in deciding on activities (“optional measures” in Fig. 1) to leverage a legacy (Chalip, 2000) makes the same event create different legacies. For example, the Winter Olympics in Innsbruck 1976 did not attract foreign investments such as Grenoble 1968 (Chappelet, 2006), and Atlanta 1996 could not reach the same tourism attractiveness as Barcelona 1992. Furthermore, cities have different structural strengths and weaknesses when winning a bid competition. Therefore, some cities have to build more structures while others can stage an event without major investments.

Both uniqueness and complexity of events in a fast changing environment make it difficult to seriously trust in benchmarks.

3.1 The “Top-Down Approach” to measure event legacy

Doubtlessly there is a strong transitory economic event impact, but without being an economic legacy. On the supply side an event also induces economic changes of the city. The question is, whether these event-related changes affect any economic variables that lead to economic growth.

It is difficult to isolate the event-related changes from the general metropolitan development (Baade & Matheson, 2002). In theory one only needs to compare the economic variables of a city/region, which staged the event with the same variables of the city/region not

staging the event (the so called “without case”) (Hanusch, 1992). The event legacy is the difference between the “event case” and “without case”. However, this is a static approach. A better method would be to consider the alternative development “control case” the city/region would have without the event taking place (Hotchkiss et al., 2001; Baade & Matheson, 2002; Oldenboom 2006). Then the legacy is the difference of the “event case” and the “control case”. In practice the use of this approach is not a trivial task. The data of the “control case” is not available, because the future of the regional economy in the absence of a sport event is unknown. However, there are two methods common to determine the “control case”:

The first method is to collect data of cities with similar structure and size in the same macro economy for a certain period. The average development of the other cities builds the “reference case”. The statistical tool is called “differences-in-differences”. The shortcoming of this method is to select the “reference cases” without systematic differences. Unfortunately, for event legacy measurement we do not have a group of “host cities” that can be compared with a relatively homogeneous group of other cities. Therefore any single non-event-related special development of the individual host city would wrongly be considered as an event-related legacy. Due to the unique and complex structure of cities it is most likely that in changing environment even similar cities develop in different ways.

The second method to calculate the “control case” is to look at the growth path of a city, in other words its long-term development. The “control case” can be predicted by trend calculation. The event legacy would be the difference between the “control case (trend)” and the “event case”. The shortcoming of this method is again that certain circumstances can influence the trend. For example foreign direct investments could create an upswing of the local economy or a crises such as September 11 or SARS can decrease tourism.

The identification of a legacy by using “reference cases” (DD) or “growth path” (trend calculation) is better than guessing but still highly error prone. However, Baade & Matheson (2002, p. 136) used a complex regression model when trying to determine the employment attributed to the Olympics in 1984 and 1996. They considered external and internal factors to isolate the major event’s impact and carefully reviewed the history of cities to incorporate each potentially significant change into their model. As a result they could only find a small transitory economic impact of the Olympic Games from Atlanta 1996 on employment (p. 142). Similar results were found by Sterken (2006). For mega events Baade & Matheson (2002) comment:

The host economy has to make changes to accommodate the event. This hurricane of economy activity can have a permanent impact only to the extent that its infrastructure demands translate into permanent uses that build on resident capital and labour rather than substituting for them (p. 145).

This is a very crucial point to classify event legacy, which will be discussed in the next chapter.

3.2 The “Bottom-Up Approach” to measure event legacy

The top-down approaches did not satisfactorily measure event legacy. Another way is to evaluate all lasting structure of a major sporting event bottom-up. The bottom-up approach

is based on the long-term development path of a city. Therefore this approach considers the development of a city without the event (“without case”), but not the alternative development of the city in the absence of the event (“control case”).

Major sporting events fit – more or less well – in the development plans of host cities. The structures required for the event, the “event structures”, affect the city development in four ways.

1. The development of a city without any relation to the event should not slow down through the effort to build event structures. Athens 2004 is a case where Olympic investments cast a damp over general city development due to high public debts. In general there is a risk that scarce resources get re-distributed to serve event structure. This is potentially a negative event legacy.

2. Some parts of the city change, which is needed for both the event and the development of the city in the “without case”. It is debatable if these structures are event legacy or not. That is the point at issue between supporters and opponents of mega events. However, independent of the controversy, this development creates three other event legacies. The city develops faster, a consensus of politicians help to budget money from the public sector (Preuss & Solberg, 2006) and parts of the structures will be financed by autonomous resources.

3. The structures of the city that are only needed for the event, but not in the long-term, should be built as temporary in order to avoid a negative legacy. This does not mean that these structures should be provided cheap and of low quality. Externalities and spill-over effects may serve other positive legacies in the target system. For example, oversized roads avoid transportation problems and therefore negative press on transportation. Huge spectator stands please citizens to purchase tickets and therefore create positive atmosphere.

4. By analysing the environment, trends and all structures required for the event, the opportunities and risks for the long-term development become visible. This is a positive legacy. Grievances, shortcomings and gaps of the city loom and can be embedded in the development strategy.

What makes this bottom-up approach complex is that one structure can serve different conflicting goals in a target system. For example, to improve the attractiveness of a city to increase post-event tourism requires great media coverage, perfect event organisation and impressive sport facilities. But some facilities might not be needed in the long-term, while the improvement of the image can be a long-term goal. In this case a strategy is needed on how to construct the facility in a way to attain a positive image.

4. ‘Event Structures’ and their meaning for ‘location factors’

Irrespective of the need of structures in a long term perspective, the successful staging of a major sporting events require specific conditions. All ‘event structures’ that exist after the event change the quality of ‘location factors’ in a positive or negative way. A set of specific ‘location factors’ forms a site. Each city has a different quality of ‘location factors’ and therefore is more or less attractive as a site for living, tourism, industry, fairs, congresses or sport events.

Mega cities are in global competition to attract economic activity to their city (Sassen, 1996). If, as a result of the direct economic event impact, there is a lack of an event legacy, the question arises how sport events can develop ‘location factors’ that position a city better for this global competition. This may be possible by strategically embedding an event in broader processes of development (Ritchie, 2000).

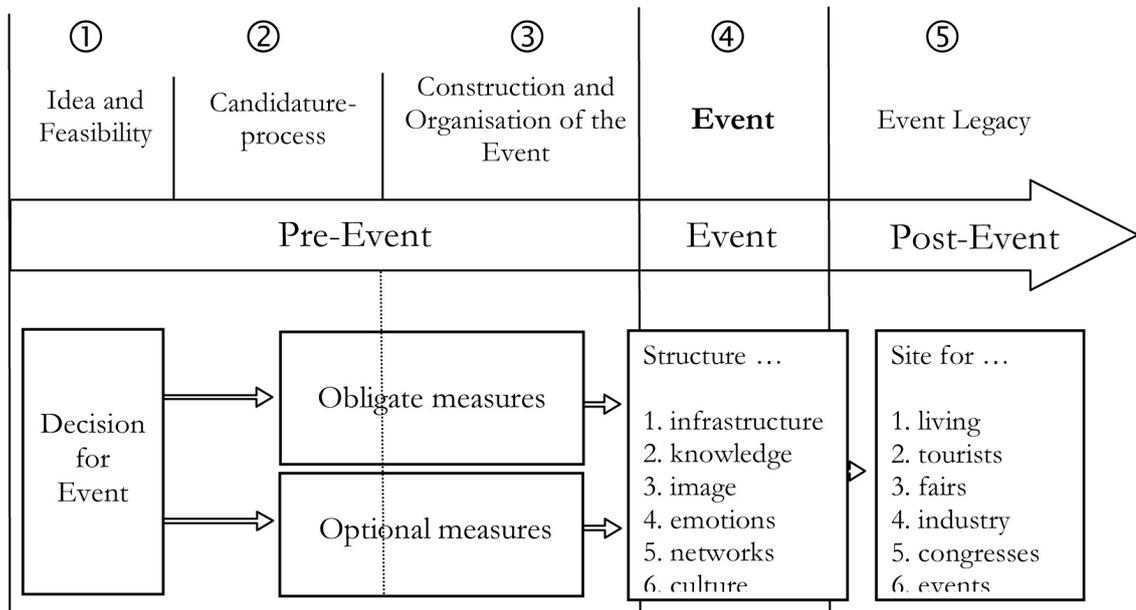


Fig. 1 *Process of Building up Planned Event Legacy*

The strategy of building an event legacy starts with the decision for a specific event (1). Major sporting events differ in terms of structures required, and cities differ in terms of structures they can provide. The strategy focuses on the additional structures an event creates and the long-term need for these structures. During the candidature process (2) some required structures (‘obligate measures’) as well as some ‘optional measures’ will be provided. By means of the ‘optional measures’ the city aims to be strategically best positioned in the bid competition (Preuss, 2000; McIntosh, 2003). Therefore these measures may not be sustainable. During the preparation for the event (3) the obligate structure is set up. ‘Optional measures’ can be embedded to improve particular ‘location factors’. During the event (4) all ‘event structures’ are present. (5) Some ‘event structures’ disappear or lose intensity, but others exist for a long time after the event. There are six ‘event structures’ usually preserved after an event.

4.1 Six ‘event structures’ of an event

4.1.1 Infrastructure

Infrastructure obviously means the sport infrastructure for competition and training, but also the general infrastructure of a city such as airports, roads, telecommunication, hotels, housings (athletes, media and officials), entertainment facilities, fair grounds, parks, etc. All infrastructure left after an event should fit into the city’s development. Today temporary constructions can avoid negative legacies such as oversized and extraneous facilities. Examples are a movable velodrome (Olympics, Atlanta 1996), a temporary 50m indoor pool

in a fair hall (FINA World Cup, Fukuoka 2001) or an athletic stadium transformed into a football stadium (Commonwealth Games, Manchester 2002). Szymanski (2002) supports this idea. He claims that all spending should be directed at the most productive activities (p. 3).

4.1.2 Knowledge, Skill-development and Education

The host population gains knowledge and skills from staging a major sporting event. Employees and volunteers achieve skills and knowledge in event organization, human resource management, security, hospitality, service, etc. Spectators and volunteers learn to use public transportation and are acquainted with environmental projects. They also gain greater knowledge about the history of their city and country, culture and other issues.

4.1.3 Image

Major sporting events have tremendous symbolic significance and form, they reposition or solidify the image of a city, region and country. Usually events create a positive imagery and the city and politicians can “bask in [its] reflected glory” (Snyder, Lassegard & Ford, 1986). On the other hand, the worldwide exposure of the event, the host city and its culture depends on the media representatives and cannot be entirely controlled by the organisers (Preuß & Messing, 2002). Negative incidences such as a bomb attack, hooligans, organizational shortcomings or just bad weather also influence the image of the host. Not only negative incidents, but also general bad attributes can be transported through a mega event to millions of potential visitors, customers or business partners. Exaggerated nationalism or unfair spectator behaviour spoils hospitality, and poverty and crime create doubts about a potential tourism destination.

4.1.4 Emotions

Mega sport events give politicians a common vision to gain international prestige, citizens are emotionally involved and private industry is inspired to welcome an extraordinary and worldwide event. The pride of hosting such an event creates local identification, vision and motivation. An example is the Olympic Games in Seoul 1988 which created a national perspective, a feeling of vitality, participation, recognition, and an international perception of being modern and technologically up-to-date (Denis, Dischereit, Song, & Werning, 1988, p. 229). The Chinese are keen to demonstrate their increasing economic importance through the Olympics in 2008 (Lin, 2004).

Private industry is stimulated by the expected influx of money and a potential positive post-event legacy. This may change the readiness to invest instead of saving (Thurow, 2004).

The announcement of the event leads to a programme of anticipatory investment. Directly, or indirectly it is the catalyst for a number of ‘piggy-back’ events (which in turn promote further investment). And during the event itself, there is a boost to local demand. While all of these boost the local economy in the short-term, the key to any longer-term effects lies in whether and how these leave a permanent legacy in the infrastructure, or in industry competencies (Swann, 2001, pp. 2–3).

There are several evidences from Olympic Games that these anticipatory investments have taken place. Critically seen, some have created oversupply (Preuss, 2004; Teigland, 1996).

Negative emotions may also be caused if new event facilities use space of former workers' areas. Then citizens living there suffer from expropriation and relocation, but also from gentrification of their area, which leads to a loss of their social environment (Garcia, 1993, p. 260; Cox, Darcy & Bounds, 1994, p. 75; Lenskyj, 1996, p. 395; Preuss, 2006).

4.1.5 Networks

International sport federations, media, politics, etc., need to cooperate in order to stage an event successfully. Their interaction creates networks. In general events improve political networks, such as close partnership with the central government. In particular the greater knowledge of sport, networks between politicians and sport federations and the image of being a sport city increase the affiliation to sport. Grassroots coaching programs, facilities for schools, sport for all, and additional sport events may be the result.

4.1.6 Culture

Major sporting events produce cultural ideas, cultural identity and cultural products. Opening ceremonies especially include a cultural-artistic aspect which is a condensed display of the host country's culture. A positive cultural image, increased awareness, new infrastructure and additional tourist products, combined with the soft factor of better service quality have a great potential to increase tourism in the long-term (Solberg & Preuss, 2006). Barcelona for instance used the Olympics to transform its infrastructure to become a "cultural city" (Garcia, 1993). The cultural presentation educates the host population and forces them to address their history. For example, there was increased awareness of aboriginal history in Australia during the 2000 Sydney Olympic Games, and increased understanding of Mormon traditions in the USA during the 2002 Salt Lake Olympic Winter Games. However, it is critical that the cultural awareness betters the situation of these minorities. Another example is "The Spirit of Friendship Festival", which was launched for the Commonwealth Games 2002 and aimed to celebrate the Commonwealth, thus leaving a cultural legacy. "It was a nationwide programme [and was ...] set out to communicate the visual and performing arts and cultural traditions of countries in the Commonwealth" (Faber Maunsell 2004, p. 24).

4.2 Changes of sites through 'event factors'

As mentioned before, lasting 'event structures' which transform 'location factors' change a site and may lead to economic growth in the long-term (Fig.2).

Obviously there are six sites of a city that are affected by a change of 'location factors':

1. The tourism site is affected by 'event structures' such as infrastructure (tourist attractions, hotels, transport, etc.), image, knowledge in service industry and culture (more in Solberg & Preuss, 2006).
2. The congress site is affected by 'event structures' such as infrastructure (congress centre, upper class hotels), image, knowledge (event organization, bidding) and culture (more in Chalip, 2002; Solberg, Andersson & Shibli, 2002; Jones Lang Lasalle, 2001).

3. The fair site is affected by 'event structures' such as infrastructure (fair grounds, hotels, transport, etc.), image, knowledge (event organization, bidding) and networks to lobby for the site.
4. The site for better living is affected by 'event structures' such as infrastructure (transportation, pedestrian zones, entertainment facilities, parks, etc.), emotions and culture.
5. The business site is affected by 'event structures' such as general infrastructure, knowledge (organization, service, security, etc.) skilled labour, image, networks (more in Chang (2001); Sananhuja (2002); Kim, Rhee, Yu, Koo & Hong (1989); PricewaterhouseCoopers (2002, p. 66); Spilling (2000).
6. The sport event site is affected by 'event structures' such as general infrastructure, sport infrastructure, knowledge (organization, bidding), event skilled work force, image of being a sport city, emotions and networks.

Economic growth based on improved 'location factors' does not directly appear as being event-related and therefore it is difficult to measure. Here, also the bottom-up approach is insufficient in providing further help. However, the findings bring new arguments to the discussion whether major sporting events lead to productive investment to develop a city.

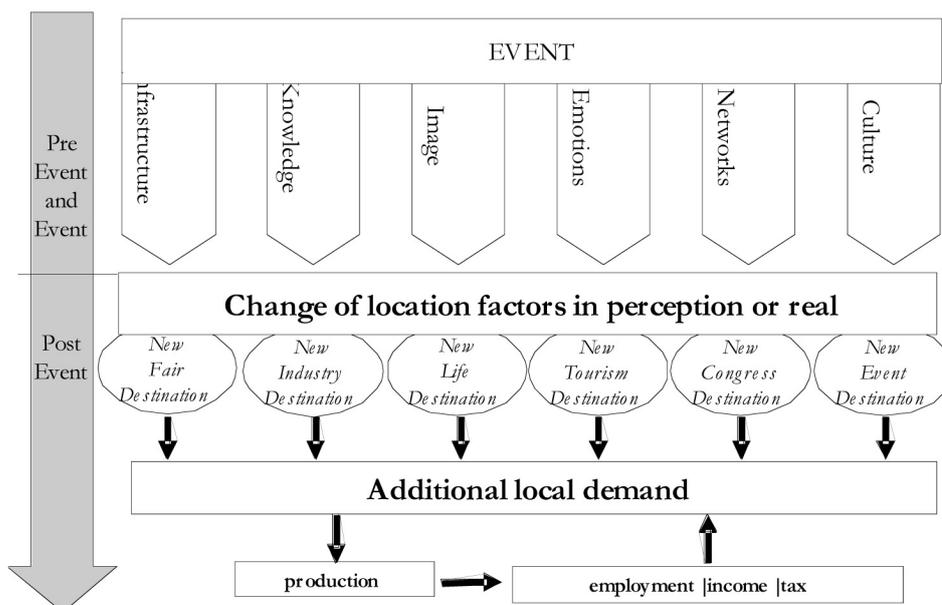


Fig. 2 *Impact of event structure on location factors and its economic relevance*

5. Conclusion

Academic discussion about both, the legacy and the economic impact of major sporting events shows that it is not clear if the staging of a major sporting event is an efficient way of investing scarce public resources. One group of academics claims that major events attract autonomous resources and causes a least a huge short-term consumptive shock. This shock motivates politicians and enables them to restructure and modernise a city in

a shorter period of time than normal. The event-based accelerated development of a city is called ‘event-strategy’. The other group of academics warns that events do not increase long-term economic growth in an efficient way. They argue that the ‘event-strategy’ implies inefficiency by hasty planning, establishment of unneeded structures and the risk that ‘event structures’ are poorly planned. Therefore, public resources should be better invested in alternative projects.

What became clear by this paper is that not only the demand driven output of an event has to be considered as the economic impact. The changes of the cities’ productivity through a change of location factors also have to be considered in this discussion. However, if and how a “better” location really contributes to higher productivity in a long term becomes visible only years after the event ended. It is therefore difficult to measure these effects, because they are not isolated from other (regular) development. The second issue which became clear is that there are always investments in structures that are not needed for a particular group in a long term. The question is to what extent these investments are needed and how important this group is. The better the event factors and event related infrastructure fits in the long term development of different locations of a city, the better is the staging of a major sporting event.

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