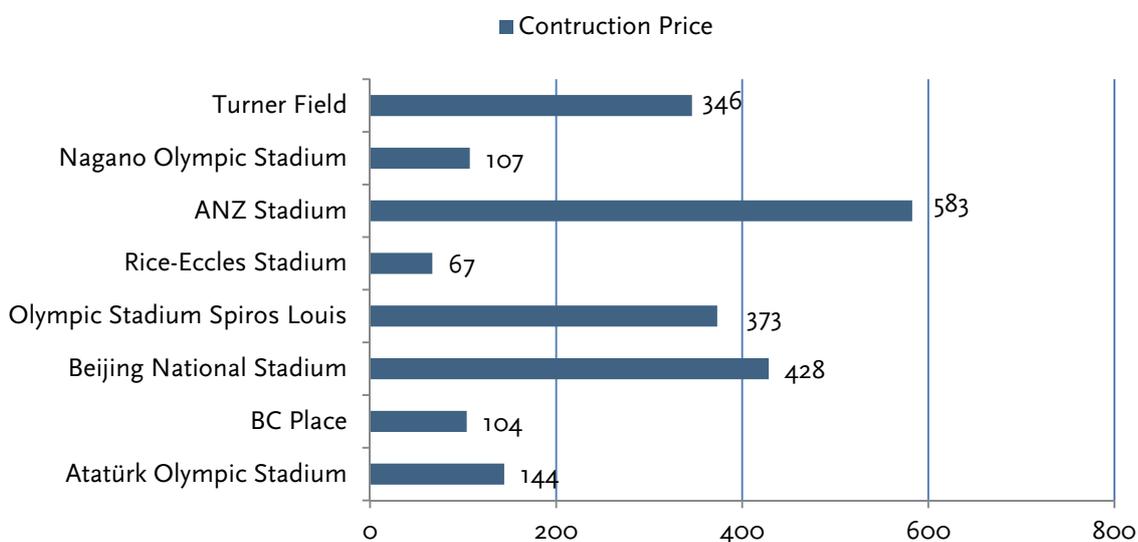


3. Olympic stadiums

We have included eight Olympic stadiums in the study and we have chosen to include venues for the Summer and Winter Games as well as stadiums that have been constructed as a consequence of an Olympic bid from a candidate city which ended up not being awarded the Olympic Games.

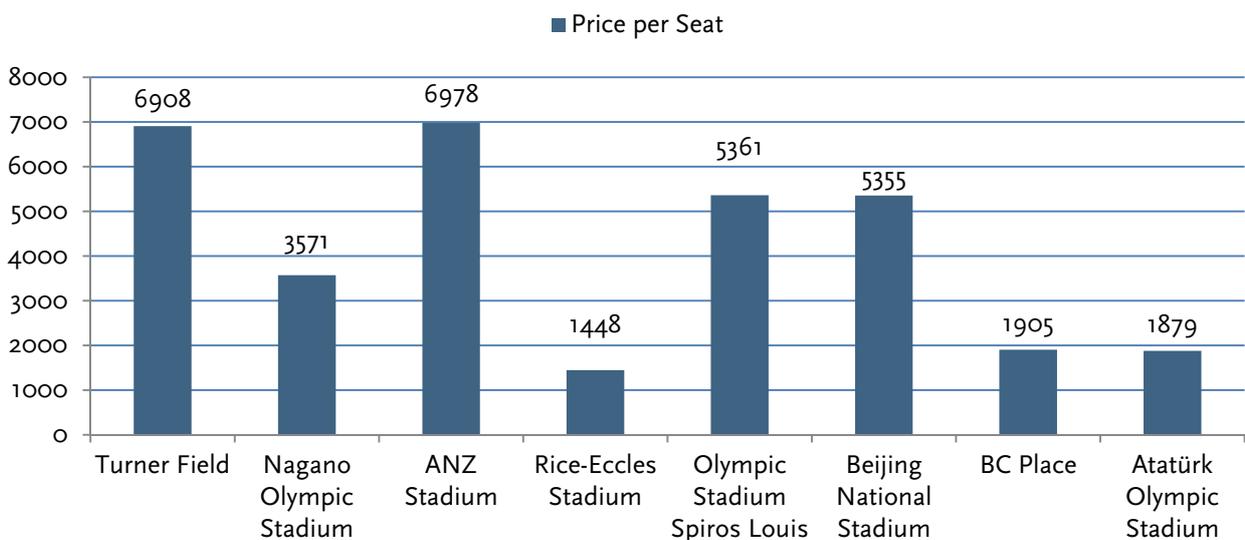
As the figures below show, the main stadiums for the Summer Olympics are much more expensive to construct and modernise than the corresponding venues for the Olympic Winter Games. The total costs of the Olympic stadiums are just over \$2 bn. giving an average price of close to \$270 million per venue.

Figure 3.1: Construction price Olympic stadiums 1996-2010 (million dollars)



All prices in 2010 dollar value

Figure 3.2: Price per seat Olympic stadiums 1996-2010 (dollars)



All prices in 2010 dollar value

One of the explanations why the stadiums for the Olympic Summer Games are more expensive to construct is that the capacity in general is significantly higher for those venues than for the Winter Olympic venues. Often it is also necessary for the hosts of the summer Olympics to build a main stadium, because the majority of the candidate cities do not have a stadium which is big enough and provides running tracks. These problems are not present at the Winter Olympics. The stadiums that are used for the opening and closing ceremonies at the Winter Olympics do not have to take any specific sport on the Olympic program into account. None of the main venues for the Winter Olympics, which are included in this study, have hosted an Olympic sport. They were constructed for ceremonial purposes.

Of the eight Olympic venues included in the study, only the Beijing National Stadium lacks a permanent anchor tenant. The other venues have one or several tenants. However, there is a big difference between the venues in the extent to which the tenants utilise the stadium and the number of other events taking place in the stadium.

1996 Summer Olympics, Turner Field, Atlanta in USA

Construction price: 346 million

Capacity: 49,586

Attendance in 2010: 2,510,119

World Stadium Index: 50.6

After the Olympics the local baseball team, Atlanta Braves, chose to remove the running track, lower the capacity and convert the Centennial Olympic Stadium, now Turner Field, into a ballpark for baseball.¹³ The investment cost \$40 million, equal to \$54 million in 2010 value. It has proven to be a successful investment in terms of attendance and over the past three seasons up until the time of writing the stadium has hosted more than 80 baseball games per season, including the annual game between the college teams Georgia and Georgia Tech.¹⁴

In the past seasons the stadium attracted over 2.5 million spectators, and the many baseball games per season had of course a significant impact on the attendance figures. Major League Baseball (MLB), the league in which Atlanta Braves play, is the most popular league in the world in terms of the total number of spectators. Had the Braves not chosen to convert the stadium into a ballpark that met the local needs, the venue could have had some of the problems another big stadium in Atlanta, Georgia Dome, which has seating for more than 70,000 spectators, is facing.¹⁵

1998 Winter Olympics, Nagano Olympic Stadium, Nagano in Japan

Construction price: 107 million

Capacity: 30,000

Attendance in 2010: 17,828

World Stadium Index: 0.6

¹³ <http://www.nytimes.com/specials/olympics/0730/oly-stadium-braves.html>

¹⁴ <http://www.georgiadogs.com/sports/m-basebl/spec-rel/042810aab.html>

¹⁵ <http://www.gadome.com/about/Default.aspx>

After the Winter Games in Nagano in 1998, the Olympic stadium has primarily been used for baseball, both professional and amateur. But the stadium is also used for the Nagano Olympic Commemorative Marathon, where the runners cross the finish line inside the stadium.

The main tenant is the semi-professional baseball team Shinano Grandserows, which plays in the Baseball Challenge League. The league was founded in 2007 and includes six teams. Unlike the Atlanta Braves, Shinano Grandserows has a more leisurely schedule playing only 11 games in 2010. In terms of attendance the contrast is even bigger. Throughout the whole season, Shinano Grandserows only had around 18,000 spectators, which is relatively poor for an arena of Nagano Olympic Stadium's size.

2000 Summer Olympics, ANZ Stadium, Sydney in Australia

Construction price: 583 million

Capacity: 83,500

Attendance in 2010: 1,195,696 (2006)

World Stadium Index: 14.3

ANZ Stadium in Sydney, Australia, has had, as shown by the figures above, both the highest construction price and the highest price per seat. Just as Turner Field in Atlanta, the stadium in Sydney chose to remove the running track after the Olympics and reduce the stadium's capacity. The intention in Sydney was similar: to meet local sporting needs and to be able to host as many events as possible. Both rugby and Australian Rules football, which are not on the Olympic programme, are considerably popular in the country, and no less than five teams belonging to these sports use ANZ Stadium as their home ground. Athletics has, apart from the Olympics and the World Championships, difficulties in attracting larger crowds to the stadiums so the removal of these tracks in Atlanta and Sydney after the Games was not surprising.

As ANZ Stadium did not wish to participate in the study, the latest available and reliable data about the stadium's total attendance figures is from 2006. In 'Idrættens største arenaer' (2007) the authors state that ANZ Stadium had nearly 1.2 million spectators in 2006.¹⁶

Just like Rice-Eccles Stadium in Salt Lake City and Turner Field, ANZ Stadium has up to now not held an international or continental major sporting event since it hosted the Olympics. However, 2015 will be a significant year for Australia, as two major sporting events will be held in the country.

The country will for the first time host the AFC Asia Cup,¹⁷ the equivalent of the UEFA Euro and Copa América, and ANZ Stadium is expected to be the tournament's final venue.^{18 19} The other major event, the

¹⁶ Almlund, U., S. Bang & H. Brandt (2007): Idrættens største arenaer – fra OL til hverdag. P. 15

¹⁷ <http://www.the-afc.com/en/news-centre/news/32028-australia-to-host-2015-afc-asian-cup>

¹⁸ <http://www.austadiums.com/news/news.php?id=461>

¹⁹ <http://theworldgame.sbs.com.au/asian-cup/news/1015189/Cities-fight-for-Asian-Cup-motza>

Cricket World Cup, will be jointly hosted by Australia and New Zealand²⁰ and ANZ stadium is likely to be one of the potential venues.²¹

Australia was one of the candidates to host 2022 FIFA World Cup, where ANZ Stadium, according to the Australian application, would have hosted either the opening match or the final.²² However, FIFA decided to award the event to Qatar, which prevents a possible World Cup in Australia in the foreseeable future due to FIFA's rotation policy. Australia is a member of the Asian Football Confederation, along with Qatar, so it is not eligible to host the World Cup until two championships after another country in its confederation has hosted the event. Australia also applied to host the FIFA Women's World Cup in 2011, but later decided to withdraw its application.²³

2002 Winter Olympics, Rice-Eccles Stadium, Salt Lake City in USA

Construction price: 67 million

Capacity: 46,178

Attendance in 2010: 332,482

World Stadium Index: 7.2

Rice-Eccles Stadium hosted the opening and closing ceremony of the Winter Olympics in Salt Lake City in 2002. Two stadiums had previously existed on the site where Rice-Eccles Stadium was built, and when Rice-Eccles was completed in 1998 it replaced the Rice Stadium. The new stadium has a capacity of 46,178 and cost about \$66 million to construct. Four main partners shared the investment, including the Salt Lake City Olympic Committee and the University of Utah.²⁴

The stadium is owned and operated by the University of Utah and the anchor tenant is the American football team Utah Utes, which plays in the American College League NCAA. However, the team played only six home games in 2010 and only three other events took place in the stadium. Although the Utah Utes' games are usually well attended, 45,459, the total attendance number for the stadium is quite low due to the limited number of Utah Utes games and other major events.

2004 Summer Olympics, Olympic Stadium Spiros Louis, Athens in Greece

Construction price: 373 million

Capacity: 69,618

Attendance in 2010: 1,234,379

World Stadium Index: 17.7

The Olympic Stadium in Athens, Olympic Stadium Spiros Louis, was built in 1982, but underwent significant renovations for the Summer Olympics in 2004. Thanks to two of the largest football clubs in

²⁰ http://icc-cricket.yahoo.net/events_and_awards/CWC/overview.php

²¹ <http://www.cricketworldcup2015.in/venues>

²² <http://www.fifa.com/mm/document/tournament/competition/01/33/74/50/b3ause.pdf> p. 11

²³ <http://www.fifa.com/aboutfifa/footballdevelopment/news/newsid=614495/index.html>

²⁴ <http://utahutes.cstv.com/trads/utah-trads-ricestadium.html>

Greece, Panathinaikos FC and AEK Athens FC, who use the stadium as their home ground, the Olympic stadium has a fairly high attendance number.

The stadium is not ideal for football matches as its running track has been kept. But as the two clubs' plans to build their own stadiums have not been fulfilled, and considering the current condition of the Greek economy, it is likely that for at least the next couple of years the two clubs will continue to play their home games at the Olympic Stadium Spiros Louis, which is owned and operated by the OAKA and the Greek government.

Both clubs are among the most successful and popular football clubs in Greece, and collectively they had just over 1 million home spectators during the 2009/10 season. The stadium has also been relatively good at attracting significant sporting and cultural events over the years. Since 1982, the stadium has hosted three UEFA Champions League finals, a final in the now defunct UEFA Cup Winners' Cup, IAAF World Athletics Championships, the Olympic Games and numerous concerts by major artists. However, there is not much competition from other venues in Greece to host major events, which gives the stadium the best opportunity to host major artists when they are passing by on their tours.

In recent years, several modern football stadiums have been built around Europe, and the Olympic stadium in Athens could be challenged in the future when it comes to attracting a final in any of the European Cups, UEFA Champions League and UEFA Europa League or UEFA Euro if it does not have major renovations.

Greece jointly applied with Turkey to host UEFA Euro 2008²⁵. If their application had been successful, Spiros Louis Olympic Stadium would have been the final venue²⁶, but instead the joint bid from Austria and Switzerland was awarded the event. Four years later, Greece once again applied to host UEFA Euro,²⁷ but this time the event went to Poland and Ukraine. Spiros Louis Olympic Stadium would have most likely been the final venue as the stadium was still, by far, the largest football ground in Greece.

2008 Summer Olympics, Beijing National Stadium, Beijing in China

Construction price: 428 million

Capacity: 80,000

Attendance in 2010: N/A

World Stadium Index: N/A

It is rather difficult to obtain data regarding attendance at events that have taken place at the Beijing National Stadium in 2010. The information we have found indicates that the stadium had 19 events during 2010 and the majority of these were sporting events. Although there have been relatively few events on the pitch, the venue had, according to our sources, a net income of 370 million RMB in the period April 2008 to January 2010, which is equivalent to approximately \$54 million. More than \$14

²⁵ <http://news.bbc.co.uk/sport2/hi/football/europe/1321498.stm>

²⁶ http://www.scotland-mad.co.uk/feat/edz4/greeceturkey_euro2008_78131/index.shtml

²⁷ <http://edition.cnn.com/2004/SPORT/football/11/11/euro.greece/index.html>

million of the net income was from ticket revenue from stadium tours. From the day the stadium opened in 2008 there have been about 13 million people who have taken a stadium tour.

According to an article in *Chinatown Sports Science*²⁸ the stadium's operating budget in 2009 was just over 187 million RMB, or a little over \$27 million, and this budget will not rise significantly over the next ten years. The operating numbers are similar to numbers printed in the *China Daily*, which indicates that the annual operating expenses are just over \$22 million.²⁹

The stadium is owned by the Beijing State-Owned Assets Management Co. Ltd (BSAM) and the China International Trust and Investment Company (CITIC Group), both of which have clear links to the Chinese government. CITIC Group is also an operator of the stadium. The football team Beijing Guoan FC, which is tightly connected to the co-owner and operator of the arena, CITIC Group, has a priority to play in the venue, but has so far chosen to play its matches at the Workers Stadium.³⁰

2010 Winter Olympics, BC Place, Vancouver in Canada

Construction price: 104 million

Capacity: 54,320

Attendance in 2010: 1 million (2009)

World Stadium Index: 18.3

BC Place hosted the opening and closing ceremony of the 2010 Winter Olympics in Vancouver, Canada. In 2009-2011 the stadium, originally constructed in 1983, went through a complete renovation for 565 million Canadian dollars³¹, equivalent to \$548 million, approximately \$194 million more than initially expected.³² The redevelopment of the stadium was done in two phases. The first phase, which cost more than \$103 million, was done before the Olympics and included new public spaces, new restrooms, updated media facilities, kiosks, new seating for people with disabilities and new lighting and signs.³³

The second phase, which was the most costly, began after the Olympics were over. This phase included the installation of a new roof that can be opened and closed in twenty minutes. Other major modifications were a new pitch, new screens, new sound system and new seats. The last phase cost about \$445 million and the stadium reopened in September 2011.³⁴

As the stadium was closed due to the renovations after the Olympics, no attendance figures for 2010 are available. However, the venue has confirmed over 231 event dates in 2012. Only a fraction of these events

²⁸ *China Sport Science*. Vol. 30, No. 1 2010

²⁹ http://www.chinadaily.com.cn/metro/2010-06/30/content_10039597.htm

³⁰ http://translate.googleusercontent.com/translate_c?hl=da&rurl=translate.google.dk&sl=zh-CN&tl=en&u=http://fcguoan.sina.com.cn/fixtures-

³¹ <http://www.theglobeandmail.com/sports/football/bc-place-to-be-gussied-up-in-time-for-2011-grey-cup/article1781720/>

³² <http://www.canada.com/vancouvernews/news/westcoastnews/story.html?id=c5dd17do-de39-4019-98cc-b70a6e50d73e>

³³ <http://www.winnipegfreepress.com/sports/football/bombers/two-stadiums-similar-sagas-134483063.html>

³⁴ *Ibid.*

are reserved for the main tenants: the football team Vancouver Whitecaps, which plays in Major League Soccer, and the American football team BC Lions, which plays in the Canadian Football League. The majority of the confirmed events are either concerts or other major gatherings.

According to Duncan Blomfield, Marketing and Communications Manager at BC Place, the venue had about 200 event days per year until the start of the renovation in 2009, and each year had approximately one million visitors.

Atatürk Olympic Stadium, Istanbul in Turkey

Construction price: 144 million

Capacity: 76,092

Attendance in 2010: N/A

World Stadium Index: N/A

The Atatürk Olympic Stadium in Istanbul is clear evidence that the motto “build it and they will come” is questionable.

Turkey and Istanbul have applied to host the Summer Olympics four times (2000, 2004, 2008 and 2012) without success.³⁵ After their unsuccessful bids for the Games in 2000 and 2004, former International Olympic Committee (IOC) president Juan Antonio Samaranch recommended that Turkey and Istanbul should demonstrate tangible improvements to display their determination to the IOC.

That this recommendation resulted in the construction of Atatürk Olympic Stadium cannot be confirmed, but Atatürk Olympic Stadium was nevertheless built soon after and since then Istanbul has had another two unsuccessful Olympic bids. Despite its previous failures, Turkey's Prime Minister, Recep Tayyip Erdogan, confirmed in July 2011c that Turkey and Istanbul had once again submitted an application to host the Olympic Games 2020.³⁶

Turkey has not only had unsuccessful Olympic bids but also unsuccessful bids to host UEFA Euro. As mentioned above, Turkey and Greece had a joint bid to host the UEFA Euro 2008. Atatürk Olympic Stadium was supposed to host the opening game³⁷ if the joint bid with Greece became a reality. Turkey also applied for UEFA Euro in 2016, but once again the bid was unsuccessful.³⁸ According to the Turkish UEFA Euro 2016 application³⁹, Atatürk Olympic Stadium was supposed to host group matches, the last 16 matches, quarter- and semi-finals and the final.

³⁵ <http://www.gamesbids.com/english/bids/ist2012.shtml>

³⁶ <http://www.insidethegames.biz/olympics/summer-olympics/2020/13679-turkey-prime-minister-confirms-istanbul-bid-for-2020-olympics>

³⁷ http://www.scotland-mad.co.uk/feat/edz4/greeceturkey_euro2008_78131/index.shtml

³⁸ <http://news.bbc.co.uk/sport2/hi/football/europe/8711016.stm>

³⁹

http://www.uefa.com/MultimediaFiles/Download/MediaRelease/uefaorg/MediaReleases/01/48/83/27/1488327_DO WNLOAD.pdf p. 3

The football club Istanbul Buyuksehir Belediye Spor Kulubu (IBB) uses the stadium as its home ground. However, the competition is fierce in Istanbul with teams like Fenerbahce SK, Galatasaray SK and Besiktas JK. IBB is the least popular team among the Istanbul teams in the top division.

IBB is also another example of the problems we had in obtaining exact data on the total number of spectators per season/year. Neither the club nor the Turkish Football Federation (TFF) have information regarding the attendance number for IBB on their official websites, and despite requests to the two parties, they have not been willing or able to answer.

However, our source in Turkey and the Turkish newspaper 'Haber3' points out that at a normal game in 2010 IBB had around 200 spectators.⁴⁰ According to 'Hürriyet Futbol' the average had risen to 4,000 in 2011.⁴¹

Although the club has increased its average, the numbers of spectators at a regular game confirm that IBB has very low attendance figures in relation to the venue's capacity.

Conclusion on Olympic stadiums

If you only look at the Olympic venues included in the study in terms of big events, Atatürk Olympic Stadium is the poorest investment. Having spent nearly \$150 million in construction costs with no major event in return, the largest stadium in Turkey could be seen as a major failure and a poor public investment. Turkey and Atatürk Olympic Stadium have so far, despite numerous attempts, not hosted any major international sporting events and its next opportunity could be to host the Summer Olympics or UEFA Euro in 2020 – 18 years after the stadium was opened.

Its price per seat in relation to GNI per capita is, however, low, and results in a relatively low GNI Index, which may be positive for a stadium that is used by a football team with relatively low attendance figures. But the stadium is nevertheless underutilised. For instance, even though the Turkish national football team chose to play their home games at several different venues in their qualifying series for the 2010 World Cup and the 2012 European Football Championship, Atatürk Olympic Stadium was not one of them. Most of the events taking place in the stadium are connected with the football team IBB, which is the main tenant. But as the team has a low average attendance, it does not have a major influence at the total attendance number.

⁴⁰ <http://www.haber3.com/turkler-tv-taraftari--556356h.htm>

⁴¹ <http://hurarsiv.hurriyet.com.tr/goster/printnews.aspx?DocID=19541776>

Table 3.1: Overview Olympic stadiums 1996-2010

Name	Construction Price	Price per Seat	World Stadium Index	Events	GNI Index	Ownership
Turner Field, Atlanta (USA)	\$346,052,868	\$6,908	50.6	85	0.15	Private
Nagano Olympic Stadium, Nagano (JPN)	\$107,127,879	\$3,571	0.6	11	0.10	Public
ANZ Stadium, Sydney (AUS)	\$582,685,890	\$6,978	14.3	44	0.18	Private
Rice-Eccles Stadium, Salt Lake City (USA)	\$66,888,036	\$1,448	7.2	9	0.03	Private
Olympic Stadium Spiros Louis, Athens (GRE)	\$373,209,963	\$5,361	17.7	49	0.20	Public
Beijing National Stadium, Beijing (CHN)	\$428,406,780	\$5,355	N/A	19	0.71	Public
BC Place, Vancouver (CAN)	\$103,843,500	\$1,905	18.3	200	0.05	Public
Atatürk Olympic Stadium, Istanbul (TUR)	\$144,238,715	\$1,879	N/A	46	0.12	Public
Average	\$269,056,704	\$4,176	18	58	-	-

All prices in 2010 dollar value

The stadium which clearly has the lowest known World Stadium Index is Nagano Olympic Stadium at 0.6. The reason why the stadium has such a low index is connected to the problem of finding a high profile tenant, which is indicated by the stadium's annual attendance numbers. In terms of the number of events held at the venue, the stadium's general utilisation is also below average.

It is possible that the stadium fills a local sporting need, but this need could most likely also be filled with a much smaller venue. If the local authorities had a sporting legacy plan for the Olympic Stadium, this plan has proven not to have worked very well. 17,828 spectators in total in 2010 for an Olympic venue is a number that is hard to beat – on the wrong end of the scale.

Another stadium that has a low index is Rice-Eccles Stadium in Salt Lake City. The low index is a result of the few annual events held at the stadium. The Utah Utes have a high average audience, but the team

only plays six home games per year. However, the investment cost was quite low resulting in a low GNI Index. The stadium's annual costs are only \$133,000⁴², and while the stadium is entirely funded by private funds⁴³, its potential negative results do not affect public finances.

A venue that has clearly done well since the Olympics is Turner Field in Atlanta. The former Centennial Olympic Stadium has an index of 50.6, which in comparison with the other Olympic venues is very high compared to the average index of 21.5 for Olympic venues. What has contributed to Turner Field's success is, without a doubt, its adaption to local sporting needs after the Olympics. No nostalgia for the Olympic stadium got in the way as Atlanta had any interest in letting the stadium stand as a monument of the Games. Another important aspect of its success is its anchor tenant. The Atlanta Braves play more than one game per week and attract more than two million spectators per season. However, baseball is not equally strong around the globe and cannot be seen as a universal solution.

A venue that seems to have chosen its own distinctive path is Beijing National Stadium. The stadium has no main anchor tenant, and has, along with Nagano Olympic Stadium and Rice-Eccles Stadium, hosted least number of events per year. There are no data available on its total attendance, which makes it impossible to calculate a World Stadium Index figure. Instead of having a permanent anchor tenant and several events per year, the Chinese have chosen to use the stadium as a tourist attraction, a historical and possibly also a political monument. This strategy had brought some success – 13 million people have taken a stadium tour since the stadium opened in 2008 and the 'Bird Nest' is well-known around the globe.

The GNI Index for Beijing National Stadium, however, is not a success. At 0.71 it is high and well above average for the Olympic venues. It could be argued that there is a connection between the high index and the way in which the Chinese chose to utilise Beijing National Stadium after the Olympics. The distinctive design of the stadium has certainly contributed to its high construction price, almost \$430 million, and the stadium is more of an excursion goal and a landmark symbol for China as a nation than a sports stadium.

Many of the Olympic venues have quite high construction costs, but is there a correlation between the amount of money invested and high attendance numbers? Yes and no. Turner Field in Atlanta cost nearly \$7,000 per seat to build, but has been the most successful arena in attracting spectators. Rice-Eccles Stadium has the lowest investment cost and also the lowest World Stadium Index of the Olympic venues. Although it is tempting to draw a conclusion that there is a correlation between the money invested per seat and the subsequent success of the venue, it is not possible to make this conclusion. The Olympic cases presented here are too few, and at the same time Beijing National Stadium, one of the most expensive stadiums per seat to build, has an (unofficially) low World Stadium Index, which furthermore contradicts this assumption.

⁴² <https://law.marquette.edu/assets/sports-law/pdf/sports-facility-reports/v12-college-facilities.pdf> p.49

⁴³ Ibid.