



Qatar 2022 World Cup Benefit-Cost Analysis

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Abstract

Contenders to host 22nd world Cup were Qatar, Australia, Japan, South Korea and USA. Qatar won the bid to host the 2022 World Cup to the surprise of everybody. Qatar is a tiny country in Middle East with a population of 1,690,000 (Qatar 2022 World Cup bid, 2011). In this paper it will be attempted to shed light the benefit cost effect of 2022 World Cup to the Qatar's economy.

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1. Introduction

Contenders to host 22nd world Cup were Qatar, Australia, Japan, South Korea and USA. Qatar won the bid to host the 2022 World Cup to the surprise of everybody. Qatar is a tiny country in Middle East with a population of 1,690,000 (Qatar 2022 World Cup bid, 2011). Controversy erupted with some accusing Qatar of bribing FIFA officials. Controversies aside, the motivation for Qatar to host this monumental event needs some investigation. It is an interesting test case for an economic viability study of big events like the World Cup hosted by tiny nations like Qatar. In this paper it will be attempted to shed light the benefit cost effect of 2022 World Cup to the Qatar's economy.

Qatar is a rich nation with resources to fund the World Cup. It is reportedly the richest country on the planet in 2010 from 3rd in 2009. Qatar's GDP per capita (based on purchasing power parity) last year was \$88,222. GDP will expected to grow to 116,200 in 2016 according to IMF, considerably high compared to Luxembourg \$81,466 and in contrast United States has a GDP of just \$46,860 (List of countries by GDP (PPP) per capita, 2011). Crude oil production and Refinery is the main industry in Qatar.

Qatar will have to spend more money than Germany 2006, South Africa 2010, and Brazil 2014 to host World Cup mainly because they have fewer sporting facilities and infrastructure. They have to build 9 new stadia and expand three more. They have to invest on infrastructure roads, railways, and airport. Hotels have to be built for the spectators coming to the World Cup.

As part of the goals Qatar stated for the preparation of the World Cup, a road improvement and expansion program which includes the \$687 million Lusail Expressway, Doha Expressway, Dukhan Freeway, and the Doha Bay Crossing will cost Qatar \$20 billion. There will also be a construction of rail network which will cost additional \$25 billion. The rail network includes a construction of a metropolitan railway in Doha, a high-speed rail link between New Doha International airport, Doha city centre and across the proposed Qatar-Bahrain causeway into Bahrain, in addition to a freight line that will link up with the wider GCC rail network.

2. World Cup History

The Executive Committee of the FIFA Congress in Amsterdam on 28 May 1928 decided to stage a world championship organized by FIFA every four years (History of FIFA - The first FIFA World Cup™). The first FIFA World Cup was played in 1930 in Uruguay. Only thirteen teams participated even though sixteen countries were expected to participate. Only four European countries participated because of economic difficulties at that time. The second World Cup was in Italy. The World Cup was briefly interrupted 1942 because of Second World War. It was later continued in 1950. The participating countries increased from 16 to 32. Qatar being a host will qualify automatically for the tournament. Participants by continent are 5 from Africa, 5 from South America, 13 from Europe, 3 from North America, 5 from Asia and the host country.

Table 1 Participant Countries source: (PREVIOUS FIFA WORLD CUPS, 2011)

Year	Host Country	Participants	Winner
1930	Uruguay	13	Uruguay
1934	Italy	16	Italy
1938	France	16	Italy
1950	Brazil	16	Uruguay
1954	Switzerland	16	Germany
1958	Sweden	16	Brazil
1962	Chile	16	Brazil
1966	England	16	England
1970	Mexico	16	Brazil
1974	Germany	16	Germany
1978	Argentina	16	Argentina
1982	Spain	24	Italy
1986	Mexico	24	Argentina
1990	Italy	24	Germany
1994	USA	24	Brazil
1998	France	32	France

2002	Korea/Japan	32	Brazil
2006	Germany	32	Italy
2010	South Africa	32	Spain

As evident from the table above, Qatar stands out as an outlier compared to previous host countries in both small in size, remote in location compared to the other tournament host's global reputation.

In FIFA World Cup a total of 64 games will be played, 48 games 1st round, 8 games 2nd round, 4 games quarter finals, 2 games semi finals and 2 games for 3rd place and final that is a total of 48 group games, 15 knockout games, and the third place games.

3. Qatar's Soccer History

The population of Qatar including guest workers is 1,690,000. Because of Qatar's size the existing stadia will not be enough to host world cup. It is expected that Qatar has to spend enormously to build new and expand the existing stadia. As shown in Table 2, Qatar will build nine new stadia and expand three more to meet the requirement stated by FIFA.

Qatar football association is formed in 1970. It organized the first Qatar league in 1972-73. Local soccer leagues in Qatar are Sheikh Jassim Cup, Qatar Stars league, Qatar Stars Cup, Reserve League, Emir Cup, AFC Championships, Heir Apparent Cup, Second Division, Grassroots, Aspire Teams, U19 League. Its national teams include First Team, U23, U21, U17, U14, and Futsal Beach Team.

Qatar is now the leading GCC nations in the FIFA rankings at 92, rising 8 places in one year. GCC nations include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE. It has never qualified for FIFA world cup but won Gulf Cup twice in 1992 and 2004 both times as host. Qatar qualified for the Asian Cup finals in 1980, 1984, 1988, 1996, 2000, 2004 and 2007, and as hosts for 2011. It has also qualified to the 1984 and 1992 Olympic Games soccer tournaments. The U-17 team won Asian Cup one time and finished as a runner up in 1981 FIFA World Youth Championship finished in Germany.

Despite all these accomplishments Qatar cannot utilize 12 stadia planned for the World Cup constructed because of its population size. The maintenance cost will be cumbersome. There are reports that Qatar will utilize removable structures and will be disassembled and shipped to be utilized in poor countries.

Table 2 Stadia and seat capacity in Qatar. Source (Qatar 2022 World Cup bid, 2011)

Stadium	City	Status	Capacity (Before)
Lusail Iconic Stadium	Al Daayen	New	86,250
Khalifa International Stadium	Doha	Expansion	68,030 (50,000)
Sports City Stadium	Doha	New	47,560
Al Kohr Stadium	Al Kohr	New	45,330
Al Shamal Stadium	Ash Shamal	New	45,120
Al Wakrah Stadium	Al Wakrah	New	45,120
Umm Salal Stadium	Umm Salal	New	45,120
Doha Port Stadium	Doha	New	44,950
Education City Stadium	Al Rayyan	New	45,350
Al Gharafa Stadium	Al Rayyan	Expansion	44,740 (21,282)
Al Rayyan Stadium	Al Rayyan	Expansion	44,740 (21,282)
Qatar University Stadium	Doha	New	43,520

4. Methodology

As in most cases of economic study funded by the government, the methodology used in this analysis is Benefit-Cost ratio method. The following considerations were made:

- A Social discount rate of 4% will be considered for this analysis based on risk free rate for private investments as stated in “Guidelines and Discount Rates for benefit-cost Analysis of Federal Programs” (Sullivan, Wicks, & Koelling, 2010).
- Costs related to bid preparation to host the world cup are considered as sunk costs.
- The analysis is done for 15 years period.
- Twenty years SL depreciation is used for hotels salvage value calculation.
- Revenues coming from tourism, ticket sales, local spending, are considered in this analysis.
- Only costs related to World Cup preparation are considered in this analysis. The costs considered here are costs to be spent on stadia, operational costs, and hotels which are related to the 2022 World Cup.
- Intangible benefits such as PR boon are not considered in this analysis.
- Salvage value of hotels constructed will be included in this study. Many of the hotel rooms will be used after the World Cup by guests visiting the country. But still it will be a tall order for Qatar to have many visitors that can use the 80,000 rooms that will be constructed for the World Cup.

5. Stadia and Infrastructure

Qatar is facing several huge challenges as they prepare to host the World Cup in 2022. One of the biggest is the intense sun during the summer months. During June and July temperatures hover above 37 degrees Celsius and can soar up to 50 degrees Celsius on the hottest of days. Consequently, when Qatar got the bid there had been discussion of holding the event during a different part of the year to ease the troubles that the powerful heat would bring. Those talks were quickly squashed and it was decided to continue with the tradition and hold the World Cup in June. Being that plans would continue as scheduled, Qatar has come up with some unique and

state of the art ways to keep players and fans alike comfortable despite the sweltering temperatures.

Qatar not only must battle high temperatures as it prepares for the World Cup in 2022, but it also has to construct enough stadiums to support all the matches that will be played simultaneously and the fans that will be attending each game. There will be hundreds of thousands of soccer enthusiasts that have potentially travelled for thousands of miles to watch their favorite teams in action. Qatar has to safely and comfortably accommodate the immense crowds that will pack into the stadiums. They plan on doing this by renovating three pre-existing stadiums and building nine more. With stadiums that are ultramodern and contain technology that has never before been seen, this is a very tight timeline. The first stadium is to be built by 2015 in order to test out design and technology and the rest are to be completed in the years to follow.

Beyond the challenge of building stadia to house the games is providing several modes of transportation for the fans to arrive. Given that Qatar is a very small country with a total population of just 1.7 million, it is not equipped for the amount of traffic that will be flooding their country. To accommodate the huge spike in people and thus traffic, Qatar claims in their World Cup bid that they will spend \$20 billion alone on expanding the freeway system. This will include building a new crossing along the bay, a couple new expressways and a new freeway. If that wasn't enough, they claim in their World Cup bid that they will spend approximately \$25 billion on a new railway, metro system, freight link and express link from the brand new airport to the city center of Doha, the capital city. The new airport cost about \$13 billion according to recent estimates and is now prepared to handle the influx of passengers that will be traveling to the small country in the coming years (Smith, 2011). It is now estimated that the New Doha International Airport can handle as many as 50 million passengers and 320, 000 takeoffs each year (CW Staff, 2010).

Fans will also come by boat to the port city to watch the World Cup and in response Qatar is building a port in Economic Zone 3, Al Wakra, which will cost a \$7 billion to construct. This port will be connected to the mainland by a bridge that extends 8.5 kilometers long. Not only will spectators be able to disembark on this port, but they will be able to use the cruise ships as a place to stay as the cruise ships will be permitted to dock at this location (CW Staff, 2010). Even more exciting is the Qatar Bahrain Friendship Bridge that is going to be built between the two

countries and it is expected to take about 51 months to complete. This bridge will be the longest in the world measuring at 24.85 miles length; there is even talk of adding a railway to the bridge. This new bridge will alleviate the difficulty of tourists needing to obtain a visa from Saudi Arabia in order to get to Qatar by land from Bahrain, which has proved to be difficult in the past. This also symbolizes the friendship between the two countries which were once close to war (Qatar Friendship Bridge..., 2011).

Since the stadia will be situated in a 60 km radius around Doha the new metro line that will be built should suffice for transportation once spectators are in the city. The metro will consist of four different lines and 98 different stations which will connect the stadia, hotels, venues and FIFA Fan Fest zones; this will make it easy for the fans to get around the city. Additionally, ticket holders will be able to ride public transportation to these areas for free. An unexpected benefit of the games being held in such a small area is that it will keep transportation costs fairly low (CW Staff, 2010).

Tired fans will need a place to rest their head after a long and grueling day of cheering on their favorite teams. Currently, there are 100 properties in the region that can accommodate guest which isn't nearly enough to meet the 60,000 person minimum requirement ordered by FIFA. To make transportation the most convenient for the soccer fans, all hotels will be within 20 kilometers from the stadiums (CW Staff, 2010).

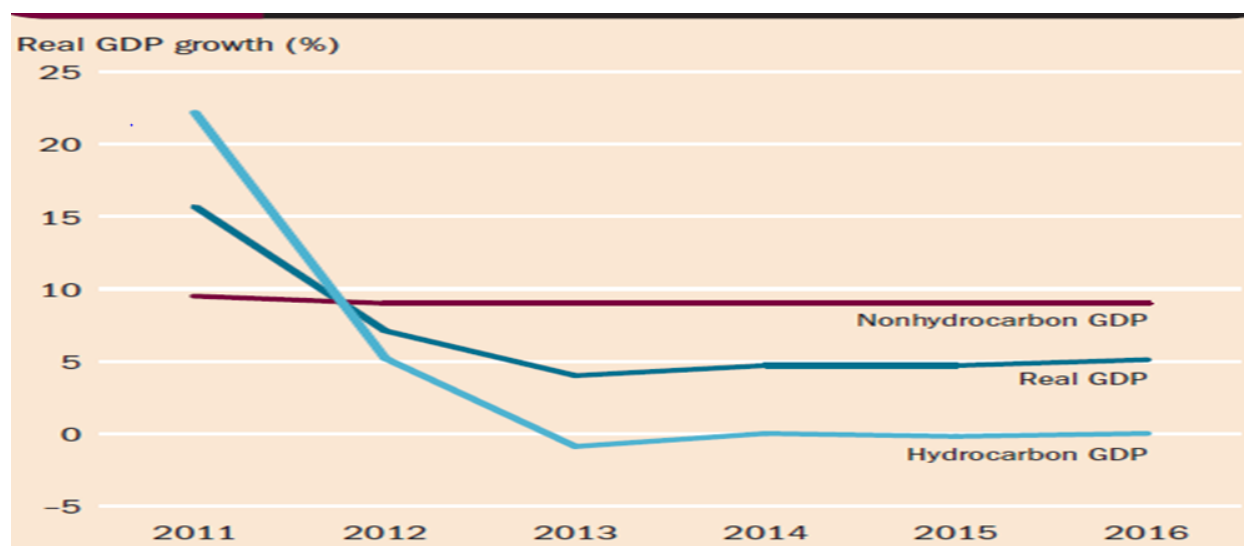
6. World Cup 2022 Costs and Qatar's Development Strategy

Qatar economy is dependent on hydrocarbon sector. It dominates all aspects of Qatar's economy. It is believed that this sector will continue to dominate Qatar's economy for the foreseeable future. But Qatar hopes and plans to branch out into new areas.

As stated in Qatar's National Development Strategy (NDS), the country aims for robust expansion of the non-hydrocarbon economy which will help support aggregate GDP growth. It aims to grow transport and communications, along with business and financial services. The plan is to have a steady grow in construction which helps to improve manufacturing performance. As

shown in Figure 2, it is expected to have an average of 5% aggregate GDP growth with virtually no contribution coming from hydrocarbons (Qatar National Development Strategy, 2011).

Figure 1 Qatar GDP 2011-2016. Source (Qatar National Development Strategy, 2011)



Demand for various services is growing up and caught up with physical investment in Qatar. And lack of infrastructure is seen as a bottleneck, which contributed to high project costs and inefficiencies. The country hopes to tackle this problem across a broad front in the coming decade.

Therefore hosting the FIFA world Cup presented an opportunity for infrastructure development. FIFA 2022 World Cup will undoubtedly strengthen the structure and performance of Qatar's non energy sector but the question is will the investment be significant relative to the size of the economy. Revenues from tourism, ticket sales, and other source of direct revenues from FIFA 2022 World Cup will not justify a huge investment in infrastructure which Qatar is ready to spend. But Qatar needs infrastructure development with or without the World Cup and the investment should be evaluated to its impact on macroeconomic longer term development impact.

Research on national brand image impact from Olympic Games as well as World Cup indicates that host countries have the chance to project their image to the world and the potential to boost

their national economy. One study investigated residents' perceptions on impacts of the 2002 World Cup that was held in Korea and Japan, using survey and factor analysis method. Some results of that revealed that housewives tended to perceive the impacts of the soccer event more positively than other occupation groups. Another study (Berkowitz et al. 2007) presents China's case to improve its image across the globe from 2008 Olympic Games. In case of China, with its guarded image and manufacturing based economy, has received additional foreign direct investment following the Olympic Games and has continued to emerge as a world power; however, it is difficult to attribute this growth directly to hosting the Olympic games.

Creating a new brand image is difficult. However, the World Cup offers a branding opportunity just as the Summer Olympics did for China. Qatar now set up a series of plans in an aim to promote the country as a high-quality leading leisure, business, sport, education and cultural destination in the global marketplace (Hazime 2011). A simple Google News' search reveals the evolution of the presence of Qatar in the internet news from 1990 to 2010. We can capture indirectly the brand image of Qatar using netnography. It shows that Qatar has been growing were visible for the internet after the year 2000.

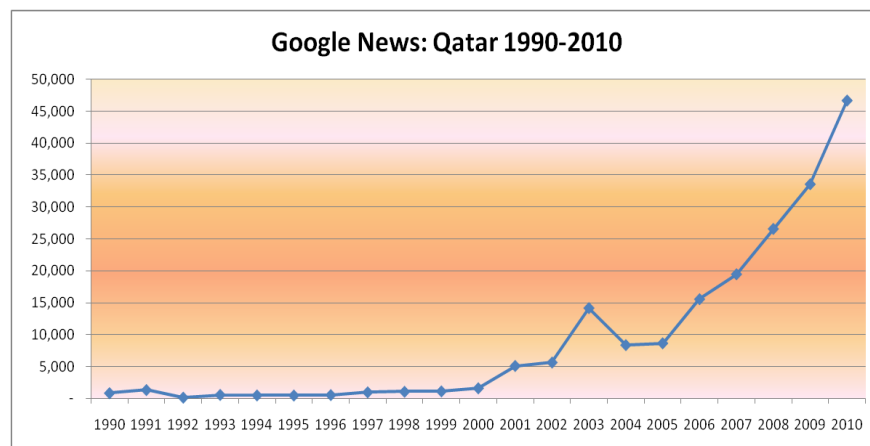


Figure 3 Hitting Number of “Qatar” in Google News 1990-2010

World Cup will help Qatar in its economy diversification ambitions. It could also help to close gaps in Qatar's capabilities by securing knowledge and technology transfer but could not justify a \$50 Billion investment. It is clear from Qatar's National Development Strategy (NDS) that Qatar needed this infrastructure for its development ambitions. In fact Farouk Soussa, Citibank's

chief economist for the Middle East, concludes that the actual investment exclusively related to the tournament is likely to be at most \$10 Billion and probably far closer to \$4-5 Billion (Dorsey, 2011). This amount will be spent on stadia and to accommodate visiting fans.

The other infrastructure investment, road network, rail network and airport expansion though will contribute to the success of the World Cup is part of \$250 Billion Qatar intends to invest in its economy. In fact Qatar was already developing its infrastructure, including a \$15 billion to upgrade its airport, a light railway, new roads, a bridge linking Doha to Bahrain and to increase its hotel capacity prior to and independent of its winning the right to host the 2022 World Cup (Dorsey, 2011).

Table 3. Number of operational hotels in Qatar

Category		Number of operational hotels					Number of rooms				
		2005	2006	2007	2008*	2009*	2005	2006	2007	2008*	2009*
1-Star	Hotels	3	5	3	2	2	75	120	59	40	40
2-Star	Hotels	4	5	5	11	11	193	235	321	552	552
3-Star	Hotels	17	15	18	15	17	782	856	846	964	1084
4-Star	Hotels	7	8	10	11	13	1212	1063	1347	2155	2760
5-Star	Hotels	4	6	7	12	15	1241	1487	1783	3056	4059
Total		35	39	43	51	58	3503	3761	4356	6767	8495

Source: (Hazime 2011)

James M. Dorsey, a correspondent for a bleacher report, in his report titled “World Cup 2022 Will Produce PR Boon for Qatar, but Little Economic Benefit” indicated that only 4% of the total \$250 billion investment will be World Cup related expenditure over the next decade. Out of \$250 Billion \$94.5 billion is slated for infrastructure.

Therefore there are two choices to do the economic analysis in Qatar 2022 World Cup. One is to ignore completely the infrastructure investment since it is, though helpful, done independent of Qatar’s winning hosting FIFA 2022 World Cup; the other is to include the cost and benefit of the infrastructure investment to the Qatar’s economy in the analysis. As the benefits of the infrastructure development for Qatar’s economy requires a separate detailed study and not the central idea of taking the economic analysis regarding the benefits of a World Cup, the former approach is used in this analysis.

7. Revenues and Costs

Ticket Sales (Revenue)

The anticipated revenues from ticket sales can be estimated from ticket sales in South Africa 2010 and the forecasted sales in Brazil 2014. As in 2010 world cup in South Africa, FIFA will make available 3.3 million tickets during 2014 world cup in Brazil (FIFA 2014 Ticketing). It was also reported that 96 % of the tickets were sold in South Africa (FIFA Ticket sales 2013). Ticket sales revenue in South Africa was \$300 million. Qatar will not be much different. With the inflation of 3% it is estimated that in 2022 ticket sales revenue in Qatar will be \$427 million. However, most of this revenue will go directly to the FIFA organization and not be retained by Qatar.

The actual contributions from FIFA contribution to Qatar Local Organizing Committee will be \$322 million based on and estimate from FIFA's contribution to South Africa which was \$226 million (FIFA 61st Congress, 2011) and 3% inflation. This ticket sales revenue and FIFA contribution will be spent by the LOC for organizing the games. South Africa spent almost all of the ticket revenues and FIFA contribution by the LOC. It was used for stadium operations consisting of temporary structures in the stadia, power bills, security, for volunteers and for local Government payment. Other expenses by the LOC includes personnel cost, transport, and information technology services. Benefits to the local economy from this spending will be considered in this paper as most of this money will be spent locally. The benefit to the local economy is estimated to be \$640 million.

Incomes from TV broadcasting rights, marketing rights, hospitality rights, and licensing rights will not create revenue for Qatar; proceeds from these areas will go to FIFA coffers creating no benefits to the host country even though costs are borne by the host country. FIFA claims that this revenue will be used for development work around the world and everything it does in the four years between World Cups. Therefore it will not be considered as a benefit here. Below FIFA's and LOC's revenue and expense is shown. The table was extracted from FIFA 2010 Financial Report (FIFA 61st Congress, 2011).

- FIFA in its report acknowledged total revenue \$3,655 million

- TV broadcasting rights \$2,408 million
- Marketing rights \$1,072 million
- Hospitality rights \$120 million
- Licensing rights \$55 million
- Expenses \$1,298 million
 - Prize money \$348 million
 - Contribution to LOC \$226 million
 - TV production costs \$214 million
- Local Organizing Committee revenue \$526 million
 - Ticket sales \$300 million
 - Support from FIFA 226 million
- Local Organizing Committee expenses \$516 million
 - Stadium Operation \$260 million
 - Temporary structure \$89 million
 - Power supply \$87 million
 - Security \$22 million
 - Volunteers \$14 million
 - Payment to Government \$23 million
 - Personnel Cost \$58 million
 - Transport \$34 million
 - Information Tech \$26 million

Tourism (Revenue)

The economic effect of tourism in Qatar 2022 can be estimated based on the total economic impact of sports fans at a comparable sporting event, such as the 2008 World Cup in Germany. In table 3 below, the figure reflecting economic impact from tourism includes hotel revenue, national income and retail sales. (Allmers and Maennig, 2009).

Table 3 Tourism Impact on Qatar Economy

Event	Total Economic Impact From Tourism Spending	2022 Equivalent Economic Impact (assume 3% Inflation)	# Tourists	Economic Impact Per Tourist 2022 USD	Reference
World Cup--Germany 1998	\$ 900,000,000	\$ 1,829,700,000	700,000	\$ 2,614	Swantje Allmers and Wolfgang Maennig (2009)

All tourist economic figures have been converted to 2022 USD assuming a 3% inflation rate over a 24 year period. From this figure, the average contribution per tourist can be determined; in this estimate, the average contribution is found to be \$2,614 per tourist. Assuming similar tourist attendance in Qatar in 2022, the total adjusted immediate economic impact from tourists attending the games can be estimated to be 1.83 billion USD.

Near Term Job Creation (Revenue)

Based on previous studies from previous Olympic and World Cups, an estimated number of jobs created from global infrastructure and transportation support for global sporting events can be assessed; historical job growth data is shown below in Table 4.

Table 4 Jobs Created on Olympic Events

Summer Olympics	New Jobs	Period	Number of Years	Jobs/Year	Reference
Summer Olympics--Atlanta 1996	77026	1991-1997	7	11003.7143	Zhang and Zhao 2007
Summer Olympics--Sydney 2000	90,000	1994-2006	7	12857.1429	Zhang and Zhao 2007
Summer Olympics--Seoul 1988	336,000	1982-1988	6	56000	Zhang and Zhao 2007
Summer Olympics--Barcelona 1992	296640	1987-1992	7	42377.1429	Zhang and Zhao 2007
Average				30559.5	

Assuming that approximately 30,000 new jobs will be required for each of the 7 years leading up to the World Cup, potential stimulus of the Qatar economy could be expected. However, the population of Qatar is estimated to be 850,000 in 2011 with an unemployment rate less than 1% (www.indexmundi.com, 2011); the country is expected to rely solely on foreign workers for the required labor for infrastructure development. Qatar only collects income tax from foreign workers, at a flat rate of 10%. Revenue from the World Cup arising from this temporary job growth utilizing foreign workers is minimal and disregarded from this analysis.

Stadia (Costs)

The cost of the stadiums alone is set to be around four billion dollars which will include renovations to the old stadiums as well as the construction of nine new stadiums. In order to accommodate all the fans, each stadium will hold at least 43,000 people (FIFA World Cup..., 2011). Among the many stadia being designed, Sports City Stadium is receiving a lot of attention. It is said to be the most modern stadium of its time for because it's environmental, technology savvy design. It can hold over 46, 000 people, has a partly retractable roof and pitch, climate control and it also has a transformable seating bowl. Furthermore, it will be able to have plenty of use after the World Cup has ended (Jordana, 2010). The other stadia that are being developed are just as fascinating and modern. There are currently a handful of other designs that each incorporates different themes that Qatar wants to highlight at the 2022 World Cup.

Hotels (Costs)

Qatar plans to build 130 more properties which should hold 80,000 persons exceeding the minimum by 20,000. These new constructions will be in the form of hotels and apartments for Qatar's fast growing tourism industry and for guests that will be staying in the country during the length of the games. Most of the establishments will be completed by 2016. (CW Staff, 2010). The total estimated cost for hotel construction is \$3 billion. But only \$1.2 billion cost for hotel construction is included as it is directly related to the FIFA 2022 World Cup.

Operational Local Organizing Committee (Costs)

Based on South African World Cup ticket revenues, the Local Organizing Committee expenses including temporary stadium operations consisting of temporary structures in the stadia, power bills, security, for volunteers and for local Government payment, personnel costs, transport, and information technology services are estimated to be \$620 million. (FIFA 61st Congress, 2011)

Security (Costs)

The security for such a large event is a critical cost that must be considered in any analysis. Crowd control, stadia security, immigration security and increase police presence is estimated to be \$10 million.

Stadia Removing (Costs)

Qatar is such a small country that many are concerned about building such modern and complex stadia for the World Cup will be a waste because they won't be put to good use after the crowds leave the country. The solution is to dismantle 22 modular stadiums that teams will use for practice as well as some major matches and donate them to countries that are developing their sports programs. This will contribute Qatar's legacy and also ensure that many of the buildings will continue to get used those who really need them (CW Staff, 2010). It is also said that they will disassemble some of the larger stadiums as well and donate them to countries that are in need. This act of generosity said to have possibly been a large factor in Qatar winning the bid for 2022 World Cup (Smith, 2011). The estimated cost for removing the stadia is \$15 million.

8. Results and Discussion

A summary of all financial data, separated into costs and benefits are shown below in Table 5 and Table 6. A costs benefit-cost analysis method is used to analyze the economics of Qatar's World Cup in 2022.

Table 5 Costs in Millions

Costs	NPV (4%)	Total	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024- 2026
Stadia	\$ 2,904	\$4,000	\$30	\$40	\$60	\$80	\$100	\$200	\$600	\$800	\$1,000	\$1,000	\$75	\$15	\$-
Hotels	\$ 819	\$1,200	\$ -	\$ -	\$-	\$ -	\$ -	\$ -	\$-	\$100	\$300	\$600	\$200	\$-	\$-
Operational Costs LOC	\$402	\$620	\$-	\$-	\$-	\$ -	\$-	\$-	\$-	\$-	\$ -	\$-	\$620	\$-	\$ -
Security	\$6	\$10.00	\$ -	\$-	\$-	\$-	\$ -	\$-	\$-	\$-	\$ -	\$-	\$10	\$ -	\$ -
Stadia removing and Shipping	\$9	\$15	\$-	\$-	\$-	\$-	\$ -	\$-	\$-	\$ -	\$ -	\$-	\$ -	\$15	\$-
Total cost	\$ 4,142	\$5,845													

The estimated stadia costs total \$4 billion dollars with the investment cost distributed over the 10 years prior to the World Cup for design, planning and eventual construction. The estimated hotel costs total \$3 billion dollars, again with the investment levels required growing in the years leading up to the World Cup. Operational costs of the Local Organization Committee total \$620

million, taken in the year 2022 for planning and execution of the event in 2022. Direct security costs for the event total \$10 million for the event, with removing costs considered in the year 2023. Since Qatar does not intend to finance any of this investment, with cash for the expenditure coming directly from the state, no financing costs are considered in the analysis

Table 7 Benefits in Millions.

Table 6 Benefits in Millions

Benefits	NPV (4%)	Total	2012	2013	2013- 2019	2020	2021	2022	2023	2024	2025	2026
Tourism	\$1,828	\$3,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,000	\$ 500	\$ 500	\$ 500	\$ 500
Hotel Income	\$292	\$450	\$-	\$-	\$ -	\$ -	\$ -	\$450	\$ -	\$ -	\$ -	\$ -
Hotel Salvage	\$533	\$960	\$-	\$-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 960
Local Spending	\$259	\$400	\$-	\$-	\$ -	\$-	\$-	\$ 400	\$ -	\$ -	\$ -	\$ -
Tickets and FIFA contribution	\$415	\$640	\$-	\$-	\$ -	\$-	\$ -	\$ 640	\$ -	\$ -	\$ -	\$ -
Total Benefits	\$3,329	\$5,450										

B-C Ratio 0.80

The benefits considered in this analysis are the direct benefits of hosting the World Cup, discarding the potential long term marketing and public relations effects that are often difficult to quantify. Direct benefits for the Qatar economy include tourism income, estimated to reach up to \$3 billion based on past tourism expenditure and estimated increases in spending of tourists. Similarly, past data is considered for local spending (\$350 million) and hotel income (\$250 million) from past world cup data and estimated increases in spending. Direct exposure benefits of Qatar are realized in 2022, with the long term benefits of this exposure unknown.

Benefits and Cost analysis done for the Qatar 2022 World Cup shows a B-C ratio of 0.80. In this case the costs outweigh the benefits. It is obvious Qatar will have hard time to have a good return because it has to spend more than any other country for World Cup preparation because of its size. Even for countries who have already built infrastructures, hotels and stadia the benefits of hosting the World Cup remains controversial. For instance on America's bid for the World Cup, Dennis Coates on his paper titled "World Cup Economics: What Americans Need to Know about a US World Cup Bid" claims that despite the promise that World Cup will be a boon for America

it would actually be squandering precious resources (Coates, 2010). There are other reports on 2006 World Cup in Germany and 2010 World in South Africa that benefits from hosting World Cups are much lower than expected and it will be a boon to the host country was a myth.

The diverging claims to the benefits of the World Cups stem from difficulty quantifying the benefits. Intangible benefits are difficult to measure and so often they are not included in the economic analysis of public projects. For instance Qatar aspiring to diversify its economy which is dominated by hydrocarbons, the PR boon from the World Cup will be immensely important. The World Cup is watched by billions of people around the globe. It will also help in know how transfer and attract expatriates to live and work in Qatar the benefits of which is not included in this report.

Potential Long Term Benefits:

The risks for Qatar will be weather the fans will show up to watch the games. The major problem will be the harsh weather in Qatar which will be well over 120 degrees in summer. But Qatar is looking for technological solutions to control the temperature in the stadia. Unforeseen political instability in the Middle East will always remain to be a risk to the success of the tournament. But the fear that the skills and capacity of Africa and the Middle East will not be good enough to host the World Cup was quashed after the successful completion of FIFA 2010 World Cup in South Africa.

In terms of long term impacts, the analysis focused on the potential for increased business activity through exports, foreign direct investment and inward investment, arising from the international exposure generated by World Cup 2022. Instead of attempting to estimate the impact, this study assesses the potential trade and investment generated by hosting the World Cup via providing evidence from previous post evaluation reports of the Sydney and Atlanta Olympics.

Table 6. Sydney versus Atlanta – Business Activity Legacy Outcomes

Indicators	Operation Legacy Atlanta	Investment 2000 Sydney
Target Investors.	U.S	International
Businesses Attracted	Heavy industry	International Technology
New Establishments	42	45
Investment Value (US\$)	373 million Atlanta	260 million
Employees	6,700	1,150
Investment Per Employee	\$56,000	\$226,000

Source: The Economic Impact of the 2010 Winter Olympics and Paralympic Games

Also some studies attempted economic impact analysis based on previous post evaluation studies and survey data, this study only provide evidence via examining the experiences of other countries, to provide some perspective as to the size of the economic impact of the Qatar World Cup 2022.

Table 7. Economic impact studies of past games

Summer Olympic	Total economic impact	Impact as % of GRP	Tourists	New jobs	Period	Modeling approach
Sydney 2000	A \$6.5 bn(1996 prices)	2.78	NA	90000(Australia)	1994-2006	CGE
Atlanta 1996	US\$ 5.1 bn(1994 prices)	2.41	1.1m	77026(Georgia)	1991-1997	I-O
Barcelona 1992	US\$ 0.03 bn	0.03	0.4m	296640(Spain)	1987-1992	None
Seoul 1988	Won 1846 bn	1.40	NA	33600(South Korea)	1982-1988	None
Los Angeles 1984	US\$2.3 bn(1984 prices)	0.47	0.6m	73375(South California)	1984	I-O

Source : PricewaterhouseCoopers (2004)

The results of the economic impact study of the Korea-Japan FIFA World Cup 2002 which uses the International Input Output model for Korea and Japan for the econometric analysis, are presented below in the Table 6. Likewise of this result, if Qatar has I-O(input output) Table for this analysis, it can provide some economic impact result such as Gross output, employment, the multiplier effect and value added.

Table 8. Economic Impact of the FIFA World Cup - Korea and Japan

Indicator	Korea	Japan	Total
	US\$ billion (persons)	US\$ billion (persons)	US\$ billion (persons)
Gross Output	10.6	42.6	53.2
Value Added	6.5	21.2	27.7
Employment	251,040	319,713	570,753

Source: Jang, J-K Lee, and Ahn, “The Economic Impact of the 2002 Korea-Japan World Cup”, 1999

Potential Long Term Risks:

Event Execution Risks:

From an execution perspective, lack of experience is the biggest issue. This will be the first major event ever hosted by Qatar, it will be the first world class event hosted by any Arab country. The lack of experience and qualified personnel will be a challenge that needs to be addressed promptly. The FIFA branch of Qatar will need to hire consultants and perform research and development of their own workforce. They will have to hire experienced program managers in all areas, such as construction development for all the hotels and housing; infrastructure for all the roads, bridges, stadiums that need to be built; political to persuade local and especially foreign leaders to send representatives and support the efforts to show a force of unity in making the games successful; marketing to convince fans and other sponsoring organizations to participate in the venue; tourism to show the assets of Qatar, and offer to the visiting fans/teams more than just the games.

Attendance Risks:

The biggest challenge for a PM from a fans point of view is providing accommodations and entertainment to the fans. Once the game is over, what are the fans allowed to do. Are there tourist attractions to visit, or perhaps night life adult entertainment? If the fans are only allowed to watch the games and nothing else, their support will quickly evaporate. This could have very negative consequences for Qatar and future events in the Arab world. The whole point of FIFA world cup event is to unite all the countries of the world and share the joy and happiness of watching the best players in the world perform. It would not look positive if the stadiums are empty, or if there is little fans support from non-Arab countries.

Political/Regional Issue Risks:

The biggest challenge for the PM from a government point of view will be to adhere to local laws while trying to satisfy and serve an international community used to little to no religious interference. The Qatari government is controlled by very strong religious beliefs, when it comes to the FIFA world cup event, it hosts many countries from different religious backgrounds and it allows those countries to follow their religious beliefs. Will Qatar open its policies to accept

and allow multiple differing religious to publically profess and express their beliefs in public? Will Qatar prohibit all non-Muslim religions? How will the world react, will fans and governments boycott the games?

The well documented potential for success likely has equivalent but negative downsides if the World Cup effort is a failure; therefore, net gains or losses from the games cannot be forecasted or considered in this analysis. If the games are successful, Qatar could enhance its position in the global economy, resulting in benefits of tens of billions of dollars. Similarly, if the game fail (for instance, Qatar is not prepared for the games or security/terrorist/political issues cast a poor light on the country), Qatar stands to suffer additional costs of tens of billions of dollars from poor country exposure.

9. Conclusion

A previous study on the World Cup in Qatar 2022 completed by (Alyamani, et al., 2011) (Alyamani, et al., 2011) found a B-C ratio of 0.19. While this conclusion was clearly reinforced in research on the Qatar World Cup bid, it did not consider the distinction between the long term Qatar National Development Strategy and investments in the economy already planned during the World Cup timeframe. When considering this information, the financial analysis portrays a very different picture.

This analysis shows B-C ratio of 0.82. Since the B-C ratio is below 1 the project is not feasible. However, from the perspective of two authors analyzing the World Cup,

“[The World Cup] is about nationbuilding, it’s about infrastructure improvement, it’s about country branding, it’s about repositioning, it’s about improving the image of our country, and it’s about tourism promotion..... These are the things that drive not only our nation but the nations of the world.” (Allmers and Maennig, 2009)

But Qatar has even more at stake--Qatar is counting on a shift in the economic structure, attempting to diversify its economy which is currently dominated by hydrocarbons. As discussed earlier Qatar is investing to expand the economy to manufacturing, finance, and construction. The opportunity presented by hosting the World Cup for improved country image, worldwide exposure, and international advertising is driving the decisions of Qatari officials.

For instance one can see the sensitivity of the economic analysis to changes of benefits it could be seen that the benefits from the PR boon should be in the order of 20% more to push the B-C ratio over 1.

It will be difficult to expect a 20 % increase in benefits merely on public relations. But there is no doubt hosting the World Cup will place Qatar in world map in either a positive or negative manner. It is always wise to remember that Qatar managed to launch Al Jazeera Television Network in 1996 which later became hugely successful in the Arab world and gave Qatar an important leverage in Middle East politics way bigger than its size.

10. References

- FIFA. Q&A Version 1. 2014 FIFA World Cup. Retrieved November 18, 2011 from, http://www.fifa.com/mm/document/tournament/ticketing/01/53/63/65/2014fwcticketing_questions_version2_findoc.pdf
- FIFA. FIFA World Cup Ticket sales in 2013. Retrieved November 18, 2011 from, <http://www.fifa.com/worldcup/news/newsid=1530027/index.html>
- FIFA 61st Congress. FIFA Financial Report 2010. Retrieved from, [http://www.fifa.com/mm/document/affederation/administration/01/39/20/45/web_fifa_fr2_010_eng\[1\].pdf](http://www.fifa.com/mm/document/affederation/administration/01/39/20/45/web_fifa_fr2_010_eng[1].pdf)
- Qatar 2022 world Cup bid (2011). In Wikipedia. Retrieved November 21, 2011, from http://en.wikipedia.org/wiki/Qatar_2022_FIFA_World_Cup_bid
- Gibson, O. (2010, 31 May 31, 2010). World Cup 2010: A coming out for that will make a mint for FIFA. Retrieved November 1, 2010 from, <http://www.guardian.co.uk/football/blog/2010/jun/01/world-cup-2012-south-africa-fifa-legacy>
- History of FIFA - The first FIFA World Cup™. In FIFA.com. Retrieved November 18, 2011, from <http://www.fifa.com/classicfootball/history/fifa/historyfifa4.html>
- PREVIOUS FIFA WORLD CUP. In FIFA.com. Retrieved November 18, 2011, from, <http://www.fifa.com/worldcup/archive/index.html>
- Qatar General Secretariat for Development Planning. Qatar National Development Strategy 2011-2016: Printed by Gulf Publishing and Printing company Doha. Retrieved from, http://www2.gsdp.gov.qa/www1_docs/Qatar_NDS_reprint_complete_lowres_16May.pdf
- Alyamani, et al., “Qatar to invest \$50B hosting FIFA World Cup 2022 – A Cost or Benefit? Engineering and Technology Management Working Paper, Portland State University, 2011
- Dorsey, J. World Cup 2022 will produce PR boon for Qatar, but little economic benefit. Retrieved from, <http://bleacherreport.com/articles/577705-world-cup-2022-will-produce-pr-boon-for-qatar-but-little-economic-benefit>
- Sullivan, W., Wicks, E., & Koelling, C. (2010). *Engineering Economy* (15 ed.): Pearson Education, Inc. pp(427).
- Coates, D. (2010). World Cup Economics: What Americans Need to Know about a US World Cup Bid http://www.umbc.edu/economics/wpapers/wp_10_121.pdf

- List of countries by GDP (PPP) per capita. (2011). In Wikipedia. Retrieved November 21, 2011, from [http://en.wikipedia.org/wiki/List_of_countries_by_GDP_\(PPP\)_per_capita](http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)_per_capita)
- "World Architecture News." World Architecture News, Official Home Page, Architecture News, Architecture Jobs. Web. 01 Nov. 2011.
<http://www.worldarchitecturenews.com/index.php?fuseaction=wanappln.projectview>
- "FIFA World Cup 2022 and Its Impact on Qatar Economy." Morison Menon | Incorporation Services | Business Consulting | IT Consulting | HR Consulting | Property Consulting. Web. 01 Nov. 2011. <http://www.morisonmenon.com/fifa-world-cup-2022.php>
- Jordana, Sebastian. "Sports City Stadium for Qatar 2022 / Populous | ArchDaily." ArchDaily | Broadcasting Architecture Worldwide. Web. 30 Oct. 2011.
<http://www.archdaily.com/96896/sports-city-stadium-for-qatar-2022-populous/>
- "The Qatar Friendship Bridge: The Longest Bridge in the World." QatarVisitor.com. Published by Qatar Visitor. Web. 31 Oct. 2011.
<http://www.qatarvisitor.com/index.php?cID=413&pID=1260>
- Disson, Sion. "WorldArchitectureNews." World Architecture News, Official Home Page, Architecture News, Architecture Jobs. Web. 02 Nov. 2011.
<http://www.worldarchitecturenews.com/index.php?fuseaction=wanappln.projectview>
- CW Staff. "22 Qatar 2022 World Cup Facts for Contractors | ConstructionWeekOnline.com." Construction Week Online Middle East | ConstructionWeekOnline.com. Web. 30 Oct. 2011. <http://www.constructionweekonline.com/article-10407-22-qatar-2022-world-cup-facts-for-contractors/2/>
- Smith, Pamela Ann. "Qatar: Getting it Right?" Middle East. May 2011. Issue 422, p. 46-48. Online Database.
- Watson, Thomas. "Soccer in Sun and Shadow." Canadian Business. 25 Apr. 2011. Vol. 84, Issue 7, p. 20-20. Online Database.
- S. Allmers and W. Maennig, "Economic impacts of the FIFA Soccer World Cups in France 1998, Germany 2006, and outlook for South Africa 2010," Eastern Economic Journal, vol. 35, no. 4, pp. 500-519, 2009.
- Y. Zhang and K. Zhao, "Impact of Beijing Olympic-related Investments on Regional Economic Growth of China: Interregional Input?Output Approach," Asian Economic Journal, vol. 21, no. 3, pp. 261-282, Sep. 2007.
- Index Mundi (2011, January 1). "Index Mundi" [Website]. Available:
<http://www.indexmundi.com> (URL)
- L. Hall, J. Pope, M. Brown. (2010, April 23). Qatar: "The Qatar Update - Supplement - Tax Law No. (21) of 2009 – Key Provision" [Website]. Available:
<http://www.mondaq.com/article.asp?articleid=95778> (URL)

Berkowitz, Pere, George Gjermano, Lee Gomez, and Gary Schafer. 2007. "Brand China: Using the 2008 Olympic Games to enhance China's image." *Place Branding and Public Diplomacy* 3(2):164-178. Retrieved (<http://www.palgrave-journals.com/doi/10.1057/palgrave.pb.6000059>).

Hazime, Hanan. 2011. "From city branding to e-brands in developing countries : An approach to Qatar and Abu Dhabi." *African Journal of Business Management* 5(12):4731-4745.