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WORLD CUP 2010: SOUTH AFRICAN ECONOMIC PERSPECTIVES AND PERSPECTIVES POLICY CHALLENGES INFORMED BY THE EXPERIENCE OF GERMANY 2006

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World Cup 2010: South African economic perspectives and policy challenges informed by the experience of Germany 2006

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Abstract:
The paper provides a first *ex post* analysis of the financial burden and economic benefits of the World Cup in Germany 2006. On the usual cost-benefit measures, the experience of WC 2006 appears to be in line with existing empirical work on large sporting events and sport stadia which rarely identify significant net economic benefits. The paper also argues that the "event benefit" or "feel-good factor" of sport events should no longer be neglected in cost-benefit studies of large sporting events, even though these effects are likely to be underestimated *ex ante* due to their possible experience good character. These lessons from Germany 2006 provide a context for analysing the potential risks and benefits for South Africa, the World Cup hosts in 2010. The paper aims to open a discussion on policy decisions, often at the level of urban planning and architecture, that might improve the balance of costs and benefits for sport events and stadia. To that end the paper attempts to initiate a discussion on the economic effects of "iconic buildings".

1. Introduction

Hosting a large international sport event promises not just the excitement of the event and media exposure for the host nation, but also the expectation of a positive return on the considerable investment associated with hosting these events. This is also true of the largest of these events, the FIFA (Fédération Internationale de Football Association) World Cup; and this is true for the 2006 hosts Germany which, though the largest economy in Europe, would nevertheless have hoped for a net benefit from hosting the World Cup (WC). The need for a positive net benefit from hosting the WC is even more urgent for South Africa, the host nation for the next WC in 2010. Though South Africa is also the largest economy in its region, it is the world's poorest region, and even within South Africa the challenges of economic development are acute.

Against the background of the empirical evidence of former World Cups and other large sport events which shows only limited positive effects on their local economies,[1] this paper examines the recent WC experience in Germany and offers comparisons and contrasts with the plans for the South African WC, at least to the extent that the latter plans are known. The paper highlights the potential for intangible benefits from hosting the WC with reference to a "feel-good" factor, in addition to both *ex ante* and *ex post* calculations of the usual economic benefits. These tangible and intangible effects are combined with the available information from South Africa to derive approximate cost benefit analyses for the World Cups 2006 and 2010. A final section attempts to initiate a discussion on the potential legacy of iconic architecture and its potential to yield positive economic effects from hosting the WC in South Africa.

2. Untangling the costs and benefits associated with the World Cup

From an economic point of view, and under present institutional arrangements, hosting a football WC can be viewed as a right which (the football federation of) the host country buys from FIFA. To maximise their revenue from this sale, FIFA organises a competitive auction in the form of bids by potential host nations. As a monopolist facing a competitive group of bidders, FIFA is able to extract much of the financial benefit of hosting the tournament from the bidding countries.

1 Cf. the literature quoted in table A1 in the appendix.

FIFA and the host nation sign a contract that regulates the flow of benefits associated with the tournament. In South Africa this "price" paid for hosting the WC and the likely negligible direct economic benefits have only recently entered the public debate. Most of the contractual obligations are similar to those enforced in Germany 2006, where these were also the source of public discontentment. For example, one such obligation concerned advertising, within a one-kilometre radius of the stadium and along all major access roads, is restricted to FIFA-endorsed enterprises, with all profits channelled to FIFA. Further, the host cities were required to set up (fenced-off) fan parks in which the same advertising conditions applied, for example restricting the supply of beer to the official FIFA partner, Budweiser. Other requirement include: the provision of dedicated lanes on highways for FIFA officials and teams, offices with unlimited telephone and internet access and other communication equipment, catering, and so on.

Due to the institutional structure of the World Cup (described above) the financial consequences of hosting the tournament can be analysed separately for FIFA and for the host country.

2.1 FIFA

Starting with FIFA: the major revenue stream of the world cup (€ 1.8 billion for WC 2006) is the television and marketing rights to which FIFA lays claim. Other revenue sources include the sale of VIP tickets (€ 170 million), which was used to finance a € 170 million contribution to the German Organising Committee (OC) (see below). Major expenditures by FIFA include payment to 32 participating teams in the form of prize money and compensation for travel and preparation costs (€ 222 million). In sum, FIFA´s reported costs for the WC 2006 were about €530 million (N.N., 2006c), while FIFA earned a profit of some €1.4 billion. FIFA uses the latter to finance, *inter alia*, its development programmes.

2.2 Country level

The potential benefits of hosting the tournament are also multi-dimensional, including: direct pecuniary benefits associated with activities at the time of the tournament,

expenditure by tourists[2], teams, the media, and the Organising Committee; second, longer term benefits from the capacity constructed for the tournament and to accommodate, transport and entertain the visitors; possible technological and human capital spill-overs from this investment; and, finally, non-pecuniary benefits associated with hosting the tournament, including political gains, image effects[3] (Jasmand and Maennig, 2006) and a potential "feel good" factor. However, in contrast with FIFA, the host country faces a considerably larger burden of expenditure.

2.2.1 Expenditure and financing at the country level

Hosting a World Cup tournament requires investment in facilities and infrastructure and organisation expenditure. In the case of WC 2006 the latter amounted to a budgeted sum of € 430 million by the German OC, a breakdown of which is provided in table 1.

Preliminary reports of the OC show that the budget was more than adequate (DFB, 2006). The OC made a profit of € 135 million, partly due to the near capacity sales of match tickets resulted in € 20 million of additional income.[4] After taxes on the profit (43,7 million. €)[5] and a partial payback of the contribution from FIFA (€ 40,8 million), a surplus of € 56,6 million could be distributed form the OC to the German Soccer Association (DFB) and the German Premier League (DFL).[6]

While the financial information relating to World Cup 2010 remains sketchy at this stage, one problem is becoming obvious, i.e.: the South African plans to sell the 2,7 million tickets for a sum of R4,6 billion, resulting in an average ticket price of more than R1960 (€230 at R7.35:US$). Indeed, the OC proposed ticket prices of between 16 und 170 €

2 Expenditure from tourists is primarily centred in the accommodation and catering sectors, transport and retail (merchandise and souvenirs). In a macro-economic analysis of the additional impulses for the World Cup region with correct with and without cases, the expenditure of the local World Cup spectators ought not to be included, since they would pursue other activities involving expenditure if the World Cup were not taking place. Hitherto no indication exists that the local population spends more during the World Cup than it would otherwise.

3 For a description of the methods for the quantification and monetarisation of this kind of image effect cf. Maennig and Feddersen (2002).

4 It is worth mentioning that the national marketing programme which included six national partners yielded no more than € 60 million. The FIFA Marketing Programme and its exclusivities left little room for national sponsors.

5 In addition to profit taxes, more than 40 million € of value added tax out of the sales of tickets had been transferred to public authorities.

6 DFB will hand over 20 million € to its regional federations and some amounts to the national sports federation etc.

(qualification rounds) and 70 und 853 Euro for the final (Deister, 2006). With a South African unemployment rate of about 27% and median monthly incomes of R2000 these ticket prices seem to be ambitious. The entrance fees at SA´s premier league are usually at about R20.[7]

In addition to the expenditure listed in table 1 the host country has to finance a number of other major expenditure items, which in the case of WC 2006 included: (i) Security at a expense of about € 90 million which was wholly financed from public funds; and (ii) the image campaign "Land of ideas" which had a budget of some €10 million and was co-financed by public and industrial funds and (iii), the cultural programme associated with the WC cost some €30 million[8] and was financed by issuing a WC gold coin for which the Treasury covered the cost of production and distribution and compensated the Bundesbank for the difference between selling price of the gold coin and the valuation of the gold in the Bundesbank's reserves.[9]

Turning now to investment in the host country: Table 2 shows that in Germany around R12.5 billion (€1.4 billion) was spent on stadia, albeit in twelve World Cup locations.[10] Table 3 shows the planned expenditure on the 10 stadia that will be used in South Africa 2010.

It is important to consider the source of finance for this investment as the type of financing can have direct and indirect economic effects.[11] More than 60% of the expenditure of the 12 WC 2006 stadia was financed by the clubs and other private investors. The share of public finance (40%) is further reduced to 25% if Berlin and Leipzig are excluded.[12] This low share of public contribution stands in sharp contrast to the previous FIFA World Cup in Germany (1974) when 100% of the stadia investment was publically financed. The South African situation is closer to that of WC 1974, with public funding the major source of finance for tournament related investment.

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7 Information by Mr. Alex Maheri, ama soccer solutions, February 15th, 2006.

8 See also Dengel (2006) for the expenditure estimates for the rest of the paragraph.

9 Cf. Maennig (2003) for the scopes and limits of such special financial measures.

10 See www.stadionwelt.de and www.fc-hansa.de. For the 2002 World Cup, South Korea spent nearly US-$ 2billion, and Japan at least US-$ 4 billion for the stadia (Baade and Matheson, 2004: 345).

11 In general, an increase share of private investment increases the multiplicative income and employment effects of stadia investments (Ahlert, 2001).

12 The federal government wanted to make sure that a second eastern German city would be host and decided to contribute € 51 million to Leipzig in that regard. In Berlin, the Federal Republic owned the run-down Olympic stadium of 1936 and the city of Berlin refused to contribute to the financing or to take over the possession of the stadium before it was renovated.

The inversion of public and club investment in Germany between 1974 and 2006 reflects fiscal reality in Germany, i.e.: strained public finances on one side and strong and dynamic financial positions of the Bundesliga soccer clubs on the other. Both facts contribute to a reluctance of the general German public and, consequently of the policy makers, to spend more public funds for "soccer millionarios".

German clubs have also become more willing to invest in stadia[13] due to their encouraging experience of "novelty effects", i.e.: the increase in comfort, improved view and better atmosphere in new or renovated stadia regularly lead to significantly higher spectator figures for the clubs, at least for a certain period.[14] In Germany the novelty effect for the 1974 and 2006 World Cups translated into a average growth of some 10% (and maximum growth of more than 30%) in spectator numbers (Feddersen, Maennig and Borcherding, 2006).

The income effects of the clubs should be even larger than the increase in attendance since new stadia lead to higher average price levels, especially in the VIP- and business seat areas. In addition there are (increased) naming rights income, and income from other events which hardly could take place in less modern and prestigious stadia.

In addition to the € 1.4 billion invested in stadia around € 2 billion was spent on WC related infrastructure in Germany.[15] It is significant that these cost exceeded the stadium costs despite the fact that the infrastructure that is relevant for large-scale sporting events (motorways and motorway junctions, railway platforms, car parks) already existed to a relatively high degree in Germany. There is thus every reason to pay the highest attention to the infrastructure costs, which are unlikely to be any lower than stadium investments.

A very different picture is unfolding with respect to the ten stadia planned for WC 2010 in South Africa. The information in table 3 indicates a total investment of R10 billion on stadia for which government is almost exclusively accountable on presently available information. This is sharply higher than the US$112 million (i.e. R818 million) which the

13 Interestingly, in the USA, where the private sector usually takes a larger role than in a European economy, the pendulum has started to swing the other way towards greater public subsidies. Whilst in the years from 1990 to 1999 around 57% of the costs for new Major League Sports facilities were publicly financed, this figure rose in the years 2000 to 2005 to 67% (Long, 2005). The franchise system of the US Major League Clubs allows the clubs to put political and/ or economic pressure on the host cities to spend public funds.

14 Cf. e.g. Noll 1974; Coffin 1996; Quirk 1996; Quirk/ Fort 1992, Kahane/ Shmanske 1997; Clapp/ Hakes 2005 for the USA.

15 Maennig and Buettner (2006) identify €1.6 bn for 10 out of 12 WC host cities.

South African delegation budgeted for stadium investment at the time of the tournament bid (i.e. during 2004) (FIFA, 2004b: 65).

Since 2004, the South African government has substantially increased the budgeted amount for investment in stadia and related infrastructure. In the October 2006 Medium Term Budget Policy Statement the Minister of Finance budgeted R15 billion to finance world cup related investments, of which R8.4 billion is earmarked for stadia and R6.7billion for infrastructure (Manuel, 2006). Though these budgeted allocations are much higher than previously allowed, they fall short of the Minister of Transport's recent claim that transport infrastructure to an amount of R14.9 billion would be required leading up to the WC (though presumably not all of this would be directly associated with the tournament) (Phasiwe, 2006). Further, the total amount officially budgeted for does not yet cover the likely budgets for the stadia that have been reported in the South African media.

The more recent budgets for the South African tournament are much closer to the experiences in Germany, South Korea and Japan 2002.[16] And there a number of factors which would explain further difference in the final investment bill expressed in a common currency, such as: possible exchange rate distortions, different labour costs, different technical requirements,[17] different political structures and different fiscal circumstances.[18]

2.2.2 Ex ante estimates of economic benefits

There are a number of different methods for estimating *ex ante* the potential benefits of hosting the WC, including: scenario analysis, surveys of decision makers in relevant sectors and formal econometric modelling using, for example, computable general equilibrium (CGE) models. These methods have also been implemented to measure the economic impact of World Cup 2006 and to forecast the likely impact of WC 2010. One

16 For the World Cup 2002, South Korea spent nearly US-$ 2bn, and Japan at least US-$ 4 bn for the stadia (Baade and Matheson, 2004: 345).

17 The climatic conditions in Germany for example meant that all the spectator areas had to be roofed. In the case of a large number of "arenas" the decision was taken to build completely roofed stadia or stadia with retractable roofing. In South Africa this is only envisaged in Cape Town.

18 Note that the German public deficit is at more than 3% of GDP and public debt is significantly over 60% of GDP, whereas South African public deficit is at less than 1% of GDP and public debt is significantly below 40% of GDP.

of the first scenario studies for Germany 2010 (Rahmann et al, 1997), was commissioned by the DFB (the German Football Association). They traced scenarios for a decade following the tournament based on the number of WC venues (which were undecided at the time) and the spending behaviour of the World Cup tourists. Up until just before the WC these authors were quoting a positive economic impact of €1.5 billion as their "best guess".

More optimistically still, did the German Hotel and Catering Association and the Postbank (two organisations that were closely involved in the tournament) calculate their scenarios. The former proposed a figure of €3.4 billion based on the assumption of 3.3 million foreign visitors, spending an average of €150 to €200 per day (Unterreiner, 2006). The Postbank, a major sponsor, was even more upbeat, predicting an overall effect of €9 to 10 billion (or 0.5% of German GDP), with €6 billion the result of investment, €2 to 3 billion due to spending by residents and €1 billion as a result of spending by the 1 million foreign visitors assumed (Postbank, 2005a, b, 2006a, b).

An even greater net effect followed from a scenario analysis by Ahlert (2001). Building on an assumption of constant spending by foreign visitors of around €1.8 billion and modelled under various scenarios for the level of state investment, the type of financing and possible displacement effects, Ahlert (2001) calculated positive net effect of up to €7.8 billion.[19]

Scenario analyses have also been used to predict the likely economic impact of World Cup 201 in South Africa. For example, an early study by Grant Thorton (2004) calculated a net economic gain of R21.3 (€2.4 billion) billion for the South African economy, based on 230,000 foreign tourists arriving for the tournament and staying for an average of 15 days and construction costs totalling R12.7 billion (€1.4 billion) (Grant Thornton, 2004). Relative to current South African GDP this would correspond to a 1.5% increase in GDP.

Surveys of relevant decision-makers in relevant businesses offer an alternative method for calculating the potential impact of hosting the World Cup. Two such surveys were conducted in Germany, but the results have not narrowed the considerable range of estimates regarding the World Cup's economic impact. First, the GfW (2004) survey expected a volume of investment of €5.5bn, though it was unclear whether that meant

19 More recently, the same author offered a much lower estimate of around €624 million for the multiplicative effect on German GDP (Ahlert, 2006).

"additional" investment. Second, in the survey undertaken by the Deutscher Industrie- und Handelskammertag (German Association of Chambers of Industry and Commerce) (2006), 15% of the member enterprises replied that they expected positive effects for their enterprise, 83% expected no net effects, with 2% expecting negative effects. The enterprises that expected positive effects identified additional demand by consumers/tourists, public spending contracts, improved infrastructure or other aspects, e.g. a better image for Germany, as the reasons for their positive expectations.

While similar surveys have not yet been published for South Africa, the literature does offer a CGE based econometric forecast of the likely impact of the World Cup (Bohlmann and van Heerden, 2005). Based on an assumed 10 percent addition to the capital stock of the construction and transport industry, a capital-augmenting technological change in construction of 5 percent and a capital-augmenting transport technological change in the transport industry these authors calculated a positive impact of 0.94% of GDP (in the long term) and the creation of some 50,000 jobs.

2.2.2 Ex post estimates of economic benefits

Though these *ex ante* forecasts for both the German and South African World Cups are modest when compared with predictions for other tournaments[20], they still seem optimistic when compared with the economic impact calculated by *ex post* studies of large sports events. Table A1 in the appendix gives an overview of econometric analyses on the effects of sporting events such as the Olympic Games, sports leagues such as the Major Leagues in the USA and/or sports stadia. The majority of these studies suggest that the sporting events or sports stadia have little or no significant impact on regional income and/or employment. A number of works, particularly those of Coates and Humphreys, even arrive at significant negative effects.

To our knowledge, only very few studies find significant positive effects *ex post*. Baim (1994) finds positive employment effects for Major League Baseball and Football for 15 cities in the USA. Kang and Perdue (1994) find that the Olympic Games of Seoul 1988

20 For the WC 2002 in Korea and Japan, the Dentsu Institute calculated ex ante, that the Japanese share of the World Cup would generate a combined total of Yen1,400bn (at that time around $11bn) to produce a long term boost to the economy of Yen 3,300 bn, equal to 0,6% of japans GDP.20 Korea Development Institute even calculated a total investment of $2,6bn for South Korea, of which $1.54bn were used up by the stadia.. The Korean expenditure impulse was estimated at $6,2bn, the total impact for the Korean GDP even at 2,2% (Szymanski, 2002). For the World Cup 1994 in the USA, an additional income of more than US-$4bn had been calculated (Goodman and Stern, 1994).

led to 1 million additional arrivals and US$ 1.3 billion additional income from tourism in Korea. Hotchkiss, Moore, Zobey (2003) find significant positive employment effects on regions in Georgia (USA) affiliated or close to Olympic activities of the Atlanta Olympic Games in 1996, but they did not find significant wage effects. Jasmand and Maennig (2006) found positive income effects for German regions which hosted the Olympic Games of 1972, but no employment effects. Tu (2005) finds significant positive effects of the FedEx Field (Washington) on real estate prices of its neighbourhood. Finally, Carlinho and Coulson (2004) examine the 60 largest MSAs in the USA and find that having a NFL team makes the cities "enjoy" rents which are 8 percent higher[21] – but wages which are not higher.[22]

The only two econometric studies published so far which consider football World Cups confirm the generally sober view on the economic effect of large sports. Szymanski (2002) collected data on the twenty largest economies measured by current GDP over the last thirty years, many of which have hosted the Olympic Games or the World Cup at least once during that period. Using a simple regression he comes to the conclusion that the growth of these countries was significantly lower in World Cup years.[23] Baade and Matheson (2004) show that for the 1994 World Cup in the USA, 9 of the 13 host cities suffered declines in growth. Overall the 13 locations suffered losses on balance of over US$ 9 billion.

21 Many non-economists would interpret such rents as a case against sports. By contrast, Carlinho and Coulson used the economist's idea of compensating differentials to interpret their findings as an argument for Mayor League Sports: the NFL presence makes the cities so much more attractive that the inhabitants are ready to pay more rents (although not having higher incomes). Taking the criteria of compensating differentials to the extreme, some of the "negative" findings of e.g. Coates and Humphreys could be interpreted as positive. And, even more embarrassing: the mentioned "positive" effects on income etc could be interpreted as negative.

22 In addition to econometric analysis with "realised data", there are studies for perceived benefits. Studies that examine the effects on an ex-post basis after the conclusion of the World Cup are rarer. Kim and Patrick (2005) analyse Seoul residents´ perceptions on impacts of the 2002 World Cup. Using a factor analysis, they found that residents positively perceived the impacts on the factors "tourism resource development and urban revitalisation", "image enhancement and consolidation", "economic benefits", and interest in foreign countries or their cultures". They also found a negative perception on "disorder and conflict", "traffic problem and congestion", and "negative economic perception", whereby the authors attribute the latter to the concerns about public costs for the investment or future utilization of the ten new soccer stadia after the World Cup. They found that females, especially housewives, generally had a more positive perception. They also found that the perception may vary over time. Three months after the event, "World Cup fever became diluted" (p. 37). Kim, Gursoy and Lee (2006) also arrive at unsatisfactory perceived economic results, but by contrast to satisfactory cultural results. Stadium costs, which were perceived as high, are explained via social exchange theory in connection with the economic benefits, perceived as unsatisfactory.

23 No significant effects at all are registered for the Olympic Games.

2.2.3 Ex post calculations of economic benefits for World Cup 2006

Though it might still be too early to complete a thorough *ex post* evaluation the effect of WC 2006, some preliminary data for Germany 2006 seems to support this sober view. Business in the following sectors that have reported positive impacts of the WC, but are of fairly small importance to the German economy include: beer breweries (N.N., 2006e), producers of tabletop football (Ritter 2006), money exchange offices, aviation services which fly small private airplanes (Klesmann 2006) and producers of soccer merchandising.

Business in certain sectors, industries and firms of bigger economic significance also reported positive effects. For example, the airport of Frankfurt reports a 1.7% increase in the number of passenger from July 2006 compared to the year before (N.N. 2006l). The national railway company Deutsche Bahn and local transport enterprises report additional activities (N.N. 2006m and Neumann 2006). Data on taxi drivers income vary from "+80% on match days in Munich" to "-20% during WC period in Berlin".[24]

German hotels experienced a decrease of 2.7 percentage points in occupancy compared with June 2005. In Berlin the occupancy rate dropped by 11.1 percentage points and in Munich by 14,3 percentage points (N.N. 2006n), illustrating the hazard of crowding-out effects on normal tourism expressed by some of the authors listed in table A1. However, hotel managers were able to compensate for the decline in occupancy by raising prices, on average by 4.8% compared to June 2005 (see figure 1). The combined effect of a lower occupancy rate and higher prices left 41% of hotel managers satisfied that they had fulfilled their WC expectations. In contrast, only 20% of the mangers of restaurants etc. claim to have had their expectations fulfilled (N.N. 2006k).

Merchandise sales data for the second quarter of 2006 shows an increase relative to the first quarter of 2006 and with respect to the second quarter of 2005[25] and while the reported effects sometimes appear to be high in absolute numbers, they are much less striking when compared to trend values. Further, it is difficult to identify the increments

24 17 Taxi federations in WC cities or – in the case of small WC cities, where no city federation exist – of WC regions have been contacted by email on July 15, 2006. Four federations answered by email, one by a telephone call. One did not have any information, one thought the effects to be insignificant, one though the effects to be less than 5%. The data from our collection might not be representative, but is well in line with other more pessimistic reports (N.N., 2006b).

25 Cf. N.N. (N.N., 2006h). These reports might to ex post polls where 27% of the interviewed persons answered that they consumed more during the WC than they do normally (N.N., 2006f). The percentage of persons who claimed to have consumed less is not reported though.

with the WC.[26] Figure 2 shows the raw and seasonally adjusted data for National merchant sales from January 1997 until august 2006 and statistical testing indicate no significant changes on a monthly basis.[27] Further, higher sales only translate into greater profits if costs are contained, and initial reports from two of the worlds biggest soccer merchandise producers indicate that improved turnover was outweighed by rising costs, leading to lower profitability associated with the WC (N.N., 2006d, i).

The Federal Employment Office has claimed that the World Cup created at least 25 000 and perhaps as many as 50 000 jobs, though most of them on a temporary basis (N.N., 2006g). If accurate these would imply increases in the number of people in paid work of between 0,06% to 0,12%. Figures 3a-c show that employment indeed increased on national level in the beginning of the year 2006 but trend calculations and seasonal adjustments by the Federal Office of Statistics indicate that this is more a harmonic continuation of the business cycle of the last five years. Indeed, the largest (seasonally adjusted) increases in employment took place in the first five months of 2006. In June and July 2006, the WC months, employment grew less dynamically.

For South Africa the scope for post-tournament usage of the new large stadia seems modest.[28] The exceptions are Ellis Park in Johannesburg and Loftus Versfeld in Pretoria both of which are home to some of the largest football and rugby teams. The future of the new stadium in Cape Town remains unclear if the provincial rugby team is unwilling to relocate from their present venue at Newlands. Under these circumstances there is little private financing forthcoming for the WC stadia in South Africa and they would not have been built without the WC. In this case, the investment expenditure is equal or at least similar to investment costs, leading to problematic benefit/costs ratios.

A further factor that might raise the cost of hosting WC unexpectedly is the state of the business cycle and the state of the property market in South Africa at the time of writing

26 For example, the increase in beer sales has to be seen against the background of an increase in beer demand, by May 2006 (and well ahead of the WC), of 8% compared to the year before.

27 The data was adjusted using the X-12 programme. Regressions including a constant, a time trend and dummies for May, June, July 2006 did not indicate significant WC effects, nor did dummies for the combination of June and July or for May until July 2006.

28 Although there is considerable local interest in soccer, especially amongst black South Africans, the attendance at soccer matches, even in the first league, is comparatively low at around 5000 on average, as is average income in this group of population (information by Alex Maheri, ama soccer solutions, February 15th, 2006). In the German Bundesliga, average attendance in the season 2005/6 was 45 000 per match. It should be noted that the 20 stadia built for the WC 2002 in South Korea and Japan today are almost only used for informal markets and s on, as there is little use by the Japanese and the Korean premier leagues, where attendance is too low, see Unterreiner (2006) and Horne (2004).

and as the various construction projects have to be initiated. The South African economy is presently experiencing its longest post-War expansion but in recent months imbalances both domestically (large and rising household debt) and externally (a large current account deficit) have grown more acute and policy makers at the South African Reserve Bank have begun tightening the instruments at their disposal. But the result of this long upswing and the associated property boom is that building costs have risen sharply, and even dramatically so, in some parts of the country (for example, Funke, Kißmer and Wagner, 2006). Further, there is realistic concern about the ability of the local construction industry to manage the construction of stadia, the Gautrain, the King Shaka airport in Durban, the De Hoop Dam, without potentially risky implications for the external accounts (Capazorio, 2006).

However, a further two conditions are likely to cause particular problems in South Africa where the economy is currently growing at a rate of five percent per year: during the entire period of the tournament, no construction work is permitted in the host cities. And the cities have to provide reserve capacity for electricity generation to compensate for any capacity shortfalls (a frequent phenomenon in South Africa).[29] The Cape Town newspaper the "Weekend Argus" summarized the situation as follows: "According to the contract it appears that the potential economic benefit will not go to the host cities and that local business will not profit from it".

2.2.4 Quantifying "intangible" benefits

The *ex ante* and *ex post* studies mentioned so far have neglected the "event utility" (benefit from experiencing the WC in one´s narrow, in the following also: "feel-good factor") of the population in the host country. In an *ex ante* contingent valuation method (CVM) study Heyne and Süssmuth (2006) evaluate the feel-good factor by asking 500 persons about their willingness to pay to stage to World Cup in Germany.[30] The average

29 The additional consumption of electricity by the stadia, media centres and hospitality areas was calculated at about 13 million KW, Bundesminister des Inneren (2006: 15).

30 Heyne and Suessmuth (2006) asked the following hypothetical question: "Shortly before the WC significant security problems (in the German stadia) have been discovered. There is an acute danger of terrorism as at the Olympics of Munich 1972. FIFA thus has decided to reallocate the WC the Switzerland, where – due to the preparations for the Soccer European Championships 2008 – all preconditions are fulfilled. Neither match dates nor TV reports will be negatively influenced. The WC 2006 could take place in Germany only if the security could be guaranteed during the tournament. The budget of the Organising Committee is exhausted though. The costs for additional measures, as

willingness to pay was around € 3.15 which, for 82 million inhabitants in Germany, results in an estimate of an economic value of the feel-good factor of about € 260 million.[31]

This study was checked and extended in a classroom experiment with 75 Ph.D. students of different faculties who receive scholarships from the Catholic Cusanus-Stiftung[32] in Regensburg, Germany, on august 11th 2006 – one month after the end of the WC. The students were first informed about the concept of the economic benefit and the feel-good factor to be able to differentiate from other economic effects as e.g. additional income and employment effects. The students were also explicitly asked to abstract from the surprisingly good performance of the German national team during the WC and to assume that the team would have performed as well if the WC was held in neighbouring Switzerland, which has a similar climate, culture, language etc.[33]

The classroom experiments were to use a) to evaluate the feel-good factor on the basis of the second alternative of CVM, the willingness to accept. In addition the target was b) to check whether the "feel good" might be an experience good of which the expected utility is increasing after consuming/ experiencing it once.

To do so, a first (control) group of 37 students was asked to cast their minds back to the months before the start of the World Cup and to imagine the situation depicted by Heyne and Suessmuth where the WC might have been moved to Switzerland instead of Germany. They were asked to express which amount of money they would have been ready to pay to keep the WC in Germany. As in Heyne and Suessmuth (2006) the possible answers of the participants were standardised by leaving them the option to answer with € 0, >0-5, >5-10, >10-20, >20-30, or >30-50.34 In a departure from the study of Heyne and Suessmuth who presented as a last alternative ">70€" (and where

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e.g. Constructive adaptations of the stadia and the hiring of additional security personnel could thus only be financed via voluntary payments of the population.

31 The study and results by Suessmuth and Heyne should not be confused with the ones of Dohmen et al (2006) who asked Germans one and a half weeks before the WC and every day after a match with the German team about the current and the (in one year) expected economic situation on an individual and economy-wide level. They found the success of the German team significantly increased all four categories of economic expectations. Dohmen et al intentionally asked for tangible effects.

32 Due to the composition of the participants the classroom experiment does not claim to be representative.

33 Indeed, the welfare effects of a good performance of the German national team appear to be higher. Rätzel and Weimann (2006) find that a WC final with German participation would have caused a willingness to pay of € 747 Million The willingness to accept was even up to seven times higher.

34 The average values of minima and maxima were used for further calculations in both studies.

the value of €70 was used for further calculations), the participants with a willingness to pay of more than 70 € could name the exact amount they were willing to pay.

The average willingness to pay in our survey was €10.6, more than triple the result of Heyne and Suessmuth (table 4, 2nd column, 2nd row). The deviation was largely caused by two participants who answered that they would have had a willingness to pay of € 100. In the study of Heyne and Suessmuth, participants with a willingness to pay of more than €70 were counted as / restricted on €70. In a first correction the two participants with the WTP of € 100 were counted with a WTP of €70 as well. With this correction, the average WTP changed to 8,8. As an alternative correction, 5% of the sample, i.e. 2 participants with the highest WTP and 2 participants with the lowest WTP were "eliminated". The average WTP reduced to €5.96, now much nearer to the WTP found by Heyne and Suessmuth. The median value was – as in the study by Heyne and Suessmuth – zero. Thus, the class room experiment was largely able to reproduce the results of Heyne and Suessmuth.

The same group was also asked to express their hypothetical WTP with the knowledge of "today", one month after the end of the WC. The uncorrected WTP jumped to €26.5. With to accounting of Heyne and Suessmuth for WTP > €70, it reduced to €21.7, and by alternatively eliminating the 5% outliers on both sides, it reduced to €22.8. The most important message might be that the WTP after the experience of the WC was at least 248% that of the WTP before the event. Two interpretations are at hands: First, the 248% percent difference might be regarded a "normal" difference between an ex-post realisation and an ex-ante expectation value which is a weighted average of possible outcomes. Second, the expectation value might have been equal to the ex-post realisation of benefits. But because of the uncertainty of outcome and with risk-averse individuals, the willingness to pay was lower than expected value of the event utility connected with the WC. According to the second interpretation, the WC seems to be an experience good were demand or the willingness to pay increases after a first consumption which reduces uncertainty.[35] The potential downward bias of WTP assessments has to be taken into account for other[36] and/ or future assessments.

35 A macroeconomic importance of experience goods was first mentioned by explaining hysteretic effects in international trade after exchange rate misalignments, see e.g. Baldwin and Krugman (1989).

36 For an assessment of the WTP for intangible benefits for the Summer Olympic Games of 2012 in London cf. Atkinson, Mourato, Szymanski (2006). The WTP is significantly higher in this study than in the case of WC 2006. The assessed WTP of 22 £ by Londoners and 11-12 £ by people from Manchester and Glasgow could be aggregated to yield a national British benefit of £ 2 billion.

In a second variation on the study of Heyne and Suessmuth, a second group of participants was asked how much a third authority would have to pay them to personally accept the relocation of the WC form Germany to Switzerland. The results are shown in column 3 of table 4. The willingness to accept (WTA) was at least 220% of the WTP, consistent with other studies which use both alternatives to evaluate contingent values

To sum up, the results of Heyne and Suessmuth thus should be taken as an estimate of the lower bound of the contingent value of the feel-good factor. Comparing the feel-good WTP before the event with the WTP after the event or with the WTA before the event leads to an increased feel-good utility by a factor of at least some 2.5. Using this factor, the national value of the feel-good factor of € 260 million of Heyne and Suessmuth increases at least to €640 million. Compared to the other economic effects describe above, the feel-good is amongst the most significant.

3. Disappointing WC effects: Iconic architecture and urban economics as a way out of?

To condense these arguments into a systematic economic analysis, it has first to be recognised that not all of the above mentioned investments for stadia and infrastructure should be counted as "costs of the World Cup". To illustrate the point, the WC stadia in Hamburg and Gelsenkirchen had been constructed before the FIFA-decision to host the tournament in Germany was taken.

But even the investments in stadia, which took place after the decision, cannot be fully attributed to the World Cup. A striking example is the Munich arena: The Munich clubs "FC Bayern" and "1860" had been based in the Olympic stadium since 1972 and have long struggled for a more modern stadium which would allow more comfort and atmosphere, especially for VIPs and the business section. However, monument protection and the wish to keep the track and field infrastructure of the 1972 Olympics in tact meant that this could not be realised within the Olympic stadium.

Though the two clubs were willing to carry the financial burden of a new stadium they did not receive public support due to fears that such a move would leave the Olympic stadium unused, an effect called "Coliseum"-fears. It was only after Franz Beckenbauer, president of the OC of the WC and Vice-president of Bayern München threatened that Munich would have severe disadvantages in the OC´s selection process of host cities that

a public poll finally opened the door for the new stadium. While the WC tournament followed shortly after the completion of the arena, it was neither the cause nor the reason for its construction. A similar argumentation applies for all 12 WC stadia, perhaps with the exception of Leipzig.

In general, costs of stadia should be understood as that part of the consumption of resources which arises from the creation of a certain economic output over a given period. The production processes at the time of the tournament caused a consumption of resources in the form of losses in the value of the stadia, usually depicted as depreciations in cost calculations. For example, the stadia renovated or constructed for the World Cup 1974 in Germany did not fulfil the needs of the clubs some 30 years later. Under the assumption of linear depreciations, the costs are some 3,3% p.a. of the investment expenditure. This equals some 0,6% or € 9 million for using the 12 WC stadia for about 10 weeks. The clubs owning the stadia received € 1,5 million each in rent payments from the OC of the World Cup (DFB, 2006) which has been included in the OC´s budget depicted in table 1.

A similar argumentation applies for the above mentioned transport infrastructure if it was built in a sustainable way, i.e. providing benefits in connection with future uses of the stadia.

In sum, a German cost benefit analysis could look like this: the organisational costs of some € 430 million have been financed by revenues. Although investment expenditure for stadia and infrastructure was at some €3,4 bn., the relevant WC costs are negligible. National income and employment effects are insignificantly different from zero. The feel-good effect is some €260 million or a multiple of it. Depending on whether the direct organisational and investment effects, and the indirect national income and the feel-good effects are aggregated on a gross or a net basis, the cost benefit analysis results in a highly efficient or an insufficiently activity: In the first case, the benefit/cost ratio is at about 260/0, in the second at about 690/430. Compared to a German GDP of about € 2442 billion the gross effects of some € 690 million at maximum are negligible anyway and thus do not stand in contrast to the empirical findings on the effects of large sport events mentioned in table A1.

Two arguments might be important with respect to the missing positive effects – and its limited transferability to the South African case: First, Germany and many industrialised countries (on which the studies in this literature are based) enjoy very ample provision of

sports. In Germany for example there are 127 000 sports venues, including 35 000 sports halls and another 9 000 halls used for ice hockey or shooting. The figure also includes 400 multi-purpose sports halls with a spectator capacity of at least 3 000.

Sports stadia, like most production factors, are subject to the law of diminishing returns. This includes the possibility that – given a correspondingly high level of provision – (additional) sports venues display a negative social marginal productivity. The reasons for this may for example be the follow-up costs of running and maintaining the venues, which represents a considerable burden to the local authorities concerned.[37] For countries, such as South Africa, that do not have a comparably dense provision of sporting facilities at their disposal, these costs are probably not directly transferable.

Second it has to be considered that the sports venues studied might hardly stimulate any positive effects to the regional economy, since they were not built with this aim in mind. The aim during planning was usually to maximise the profit margins of the professional clubs, rather than urban development. To this end the club managers have to restrict their expenditure to the extent necessary to ensure the satisfaction of the fans. It is not their job to formulate urban and regional policies, make stadium architecture more interesting from an urban planning perspective or to realise "external" effects for the regional economy that are of no direct benefit to their clubs. As a result the stadia are often situated in peripheral areas of the city and are not systematically embedded in any way in urban planning. The stadia display an aesthetic that can best be summed up as "functional", and "safe from hooligans". They are not usually attractive places, in which people congregate outside of opening hours, or where retail traders gather and/or the value of the surrounding properties increases.

However, the "functional" design of stadia should not be attributed to club managers alone: local government city planners should share the responsibility (and the cost) of developing stadia that capture the externalities associated with more sophisticated architecture (and in some cases, better locations). For example, Munich's Arena cost around €280 million, whilst the average for the other World Cup stadia in Germany stood at around €100 million. Given the fiscal concerns in many industrialised countries, politicians would find it difficult to support further public funding for sport stadia.[38]

37 An extreme example of this is the ice arena in Bad Reichenhall in southern Germany, which collapsed due, amongst other things, to a lack of maintenance. Several people were killed.

38 An increased level of positive economic effects emanating from stadia thus presupposes that the population must accept the message that stadia that are simply efficient from a sporting technology

While the direct economics impact of hosting such events have often been muted, as discussed above, there is potential for exploiting the opportunity offered by a large sporting event to create an architectural legacy with lasting positive impact. Success in this regard is often associated with so-called "iconic" buildings.

3.1 Iconic design

A clear definition of "iconic" buildings does not yet exist, but consideration of examples of this kind of building (e.g. the Sydney Opera House, the Guggenheim Museum in Bilbao, the Centre Pompidou in Paris, the Berlin Philharmony) does reveal certain common design characteristics: They display an architecture that, at least at the time of planning, was regarded as highly innovative, often apparently "impractical" and "non-functional", but which is nevertheless unique and striking. The planning is often so unconventional that citizens unite in their resistance to it, resistance which however gradually gives way to a feeling of regional pride, inspiration and identification.

In every case the innovative design helps the building succeed in becoming a landmark and part of the memorable character of their cities, which in turn succeed in "getting their name on the world map", i.e. achieve the desired image effects (Maennig and Schwarthoff, 2006). Iconic buildings provide an aesthetic focal point for a city and could become a springboard for other urban developments and recreational facilities, attractive for locals as well as international tourists.

In South Africa there is evidence that the World Cup might be used as a vehicle to attempt inducing positive urban economic effects: The new King Sezangakhona stadium in Durban is being designed as an "iconic" building with a 30 storey arch stretching its entire length (SAPA, 2006) and (Jones, 2006b). Not just in Durban, but elsewhere too in the host cities of South African 2010, the architectural plans (published so far) do seem different from the "functional" stadia projects of former World Cups (Maennig and Schwarthoff 2006).

But in South Africa, as elsewhere, there is also resistance to "iconic" projects: the residents of Greenpoint in Cape Town are evidently less willing to tolerate, much less to

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point of view may in some cases already require public funding. If it is intended that the architecture and location should also stimulate positive urban development processes, then this necessarily involves additional costs.

pay for, an iconic stadium. Indeed, pressure from local residents has already resulted in an instruction to the architects to "moderate" their design for the new stadium (Schaug, 2006).

3.2 Location and urban economics

On the micro level, it is a common characteristic of iconic buildings that they are located at (or within walking distance from) the city center, with some directly situated at the waterfront. On a macro level, they are almost always located in metropolitan areas, since the potential positive externalities depend on the scale of the population and of economic activity, and such buildings have to complement the urban planning needs of their cities. The following few paragraphs investigate the location of World Cup stadia in South Africa from this perspective and contrast it with the German locational decicisons.

After FIFA's decision that Germany would host the 2006 World Cup initially as many as 30 cities showed an interest in becoming a host city, a number that dwindled quickly to 16 on account of FIFA's minimum requirement of a capacity not smaller than 40 000 per tournament stadium. These 16 cities were required to compete for an initially unknown (it would have been either 10 or 12) final number of host cites which would only be announced on 15 April 2002 (Niersbach, 2002). In this way the German Organising Committee (OC) explicitly encouraged overinvestment in the football capacity of at least 4 of the final 16 candidate cities. Such overinvestment might well have been consistent with the preferences of the German Football Federation with its strong personal ties to the OC.

A number of criteria influenced the final selection of host cities, including: the stadia, their capacity and other facilities; the quality facilities for the media and VIPs; transport infrastructure connecting the stadia; environmental considerations; and the scope for creating a good atmosphere during the tournament (Niersbach, 2002). In addition to these the OC also acknowledged that political considerations would also be taken into account. For example, the OC was committed to selecting a second host city in Eastern Germany (in addition to Berlin).

However, the criteria for selecting the host cities did not include any specific consideration of the likely net economic impact on national or regional income (or employment), nor was the view of, inter alia, Rahmann et al. (1997) accepted that ten

host cities rather than twelve would raise the economic benefits of the tournament. An ex post evaluation of the economic impact of the world Cup has to acknowledge that economic considerations played only a limited role in the ex ante allocation of host cities.

In contrast with the German OC's decision to allow 16 cities to compete for a final 10 or 12 host slots, the South African OC had decided on a final list of 10 stadia in 9 municipalities by the middle of 2006. Five of these stadia are existing stadia that will be upgraded to meet FIFA's requirements (including the minimum capacity of 40 000) and five stadia will be newly built. Two of the newly built stadiums (in Cape Town and Durban) replace existing sport stadiums. Table 3 shows the host cities and stadia for South Africa 2010 and also indicates whether a stadium will be newly built or will be an upgrade of an existing stadium.

No formal list of criteria used to determine the host cities and venues in South Africa has been made available publicly. But it is possible to infer the criteria from the actual cites as well as from other large international sport events that have been hosted in South African over the last ten years, including a rugby world cup (1995) and a cricket world cup (2003). Important criteria seem to have been: first, the existing infrastructure (stadia, transport and tourist facilities) in major metropolitan areas; second, the geographical spread of stadiums across the nine provinces of South Africa; and, third, the goal of encouraging economic activity in underdeveloped rural areas due to the large gap between urban and rural incomes and wealth in South Africa.

It is possible to split the ten stadia planned for the 2010 tournament into three groups each of which satisfy one of these three criteria. Further relevant criteria include the wish to close the gap between the excellent facilities for rugby in the country and the relatively inferior facilities for football and the wish to spread the ownership of these stadia more broadly, i.e. the new stadia will be state owned, "on behalf of the people", as Gert Oosthuizen, the deputy minister for sport and recreation, argued in Parliament on announcing the final host cities for the tournament (Coetzee, 2006).

Turning to the stadia: first, South Africa has three major metropolitan areas (Gauteng, Cape Town and Durban) and it is unsurprising that 4 of the stadia (two of them new) are located here. These are also the area served by the country's three major airports, and a new international airport (the King Shaka airport) will be built north of Durban in time for the tournament. The bulk of the country's hotel accommodation is also located in these metropolitan areas.

Second large regional cities such as Port Elizabeth in the populous, but poor, Eastern Cape province and Bloemfontein in the interior of the country satisfy the criterion of spreading activities associated with the tournament to relatively large metropolitan areas outside the Cape Town, Durban and Gauteng triangle. These cities have adequate domestic airports and are connected to the larger metropolitan areas via the country's major highways.

Third, Rustenburg, Polokwane and Nelspruit are smaller cities in rural districts where the hope may be for economic spill-over from activities associated with the tournament (and its preparation) to the regional economies. All three of these cities are connected via major highways to Gauteng and spectators can attend games in these venues while based in Gauteng. A couch trip from Johannesburg international airport to will take around 4 hours to either Nelspruit or Polokwane and around 2 hours and thirty minutes to Rustenburg. Small domestic airports also serve the more distant Nelspruit and Polokwana.

The upgrading of Soccer City in Johannesburg and the Royal Bafokeng stadium in Rustenburg will help to close the gap between existing rugby and football facilities, but the remaining three upgrades (Ellis Park, Loftus Versfeld and the Free State stadium) are already shared facilities for football and rugby. Finally, at the time of writing it is not yet known how the ownership of the improved facilities and the procurement policies in the construction thereof will be implemented consistent with the goal of Broad Based Black Economic Empowerment (BEE).

In summary, three of the stadia planned for World Cup 2010 seem to satisfy the criteria for "iconic" buildings where location is concerned: Cape Town, Durban and Port Elizabeth. If the stadium plans for these cities would be embedded in a sustainable urban planning, there is hope that the WC 2010 in South Africa might do better than its predecessors in economic terms.

4. Conclusions

The OC of the World Cup 2006 in Germany had an operating budget of € 430 million on which it was able to produce a surplus. In addition to the cost incurred by the OC, public funds financed some € 1,4 billion investment in sport stadia and some € 2,0 million for the related infrastructure. This investment created infrastructure for which

there is a demand and the projects are economically sustainable. For this reason the capital layout can be regarded as costs of the World Cup only to a very limited extent, which is indeed covered by the rent payments form the OC to the clubs.

Financing for the WC in South Africa 2010 looks different. Current investment plans budget R8.4 billion for stadia and R6.7 to 14,9 billion for infrastructure, well above the R818 million which the South African delegation budgeted for stadium investment at the time of the tournament bid. Private financing is hardly available due to the weaker financial position of the local soccer clubs.

A first analysis of the economic impact shows that some sectors of fairly small importance to the German economy have profited from having the World Cup in Germany. And the evidence is mixed for the hotel and tourism sector which is usually expected to be amongst the main beneficiaries of such an event. National occupancy rates declined by 2.7 percentage points compared with June 2005, and in Berlin and Munich – the two cities with the largest number of matches – occupancy rates dropped by 11.1 and 14,3 percentage points. However, hoteliers were able to compensate for the lower occupancy to an extent by raising prices.

On an aggregated level, neither merchant sales nor employment showed significant effects which does not stand in contrast to former empirical findings on the effects of large sport events.

We nevertheless are less sceptical than other academics towards large sport events due to two arguments: First, the event benefit or feel-good utility is often omitted from the cost-benefit analyses; yet compared to the other economic effects describe above, the feel-good utility is amongst the most significant. It might be difficult though to estimate it correctly for ex-ante purposes: Large Sport events like World Cups or Olympic Games might be experienced goods where demand or the willingness to pay increases after a first consumption which reduces uncertainty. The potential downward bias of willingness to pay assessments has to be taken into account for future assessments.

Second, to date stadia construction has often been driven by the need for financial return at the club level, and only rarely pursued the target of positive effects for the region. Future projects that draw on the insights form urban economics with the aim of a more effective integration of stadia with urban needs holds the promise of enhanced externalities. "Iconic architecture" with its highly innovative, often apparently "impractical" and "non-functional" designs deserve special interest in this regard. Iconic

buildings might be able to create a feeling of regional pride, inspiration and identification, to become a landmark and part of the memorable character of the cities, which in turn succeed in "getting their name on the world map". This effect might be helpful for some of the South African host cities which are large, dynamic, beautiful and important – but not yet prominent internationally..

Table 1: Organising Committee of the World Cup 2006, Budget in Million €

Revenue		Expenditure	
Contribution from FIFA	170	Generell organisation	100
Ticket sales, minimum	200	Technical infrastructure	80
Marketing	60	Media and Image	50
		Transport and Logistics	25
		Security	25
		Volunteers	20
		Other	130
Sum	430	Sum	430

Source: Dengel (2006)

Table 2: Stadia investments for the FIFA 2006 World Cup in Germany

City	*Expenditure*						*Capacity Season 99/00*	*Capacity Season 05/06*	*Change of Capacity*	*Inhabitants*
	Gesamt	Fede-ral	State	City	Club	Other				
Berlin	242	196,0	0,0	0,0	0,0	46,0	76.243	76.000	-243	3.390.000
Dortmund	36	0,0	0,0	0,0	36,0	0,0	68.600	83.000	14.400	590.000
Frankfurt	126	0,0	20,5	64,0	0,0	41,5	61.146	50.300	-10.846	650.000
Gelsen-kirchen	192	0,0	0,0	0,0	33,8	158,2	62.004	61.524	-480	278.000
Hamburg	97	0,0	0,0	11,0	16,0	70,0	55.000	55.000	0	1.700.000
Hannover	64	0,0	0,0	24,0	0,0	40,0	56.000	49.000	-7.000	525.000
Kaiserslau.	48,3	0,0	21,7	7,7	18,9	0,0	41.582	40.721	-861	107.000
Köln	117,5	0,0	0,0	25,5	0,0	84,5	46.000	50.374	4.374	1.000.000
Leipzig	90,6	51,0	0,0	12,2	27,4	0,0	* 90.000	44.345	-45.655	494.000
München	280	0,0	0,0	0,0	280,0	0,0	63.000	66.000	3.000	1.300.000
Nürnberg	56	0,0	28,0	28,0	0,0	0,0	44.600	44.308	-292	490.000
Stuttgart	51,6	0,0	15,3	36,3	0,0	0,0	47.000	48.500	1.500	590.000
SUM	1.401,0	247,0	85,5	208,7	412,1	440,2	711.175	669.072		

Source: Fédération Internationale de Football Association [FIFA] (2004a) and Skrentny (2001).

Table 3: Stadia investments for the FIFA 2010 World Cup in South Africa

City	Expenditure (R billions)				Capacity season 2010	Inhabitants (2004)
	Total	National	Provincial	Local		
			New stadiums			
Cape Town	3.3[a,b]	Not available	0.1	0.4 [a]	68 000[c]	2984885
Durban	1.6[d]	1.6[d]	0	0	70 000 [d]	3129298
Nelspruit	0.6[e]	0.6 [e]	0	0	Not available	484245
Polokwane	0.8[f,g]	0.8 [g]	0	0	45 000 [f,g]	532673
Port Elizabeth	1.1[h]	Not available	Not available	Not available	40 000 [i]	1054359
			Upgraded stadiums			
Bloemfontein	0.3 [j]	Not available	Not available	Not available	43 000+[j]	655332
Johannesburg Ellis Park	Not available	Not available	Not available	Not available	70 000	3225407
Johannesburg Soccer City	1.2-1.5 [k]]	Not available	Not available	Not available	94700	3225407
Rustenburg	Not available	Not available	Not available	Not available	40 000	405554
Pretoria	0.185 [l]	0.141[a]	0	0.044[a]	55 000	1531954

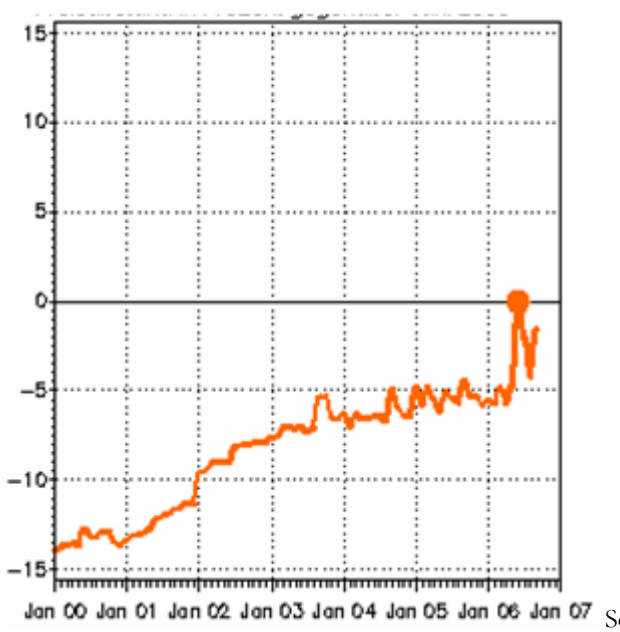
Sources: [a] Craig (2006)
[b] van Gass (2006)
[c]: Yeld (2006)
[d]: Jones (2006)
[e]: Samayende (2006)
[f] :Louw (2006)
[g]: Polokwane Municipality (2006)
[h]: Cull (2006)
[i]: Daily Dispatch (2006b)
[j]: Cronje (2006)
[k]: Daily Dispatch (2006a)
[l]: LOC Tshwane

Table 4: Feelgood effects – WTP vs. WTA; exante vs. expost evaluation

	willingness to pay	**willingness to accept**	*in % of WTP*
before the WC			
uncorrected	10,59	38,55	*364,0%*
feelgood of > €70 = €70	8,75	35,92	*410,5%*
eliminating 5% "outliers"	5,96	32,79	*550,6%*
after the WC			
uncorrected	26,45	300,39	*1135,8%*
in % of "before the WC"	*249,7%*	*779,2%*	
feelgood of > €70 = €70	21,71	47,76	*220,0%*
in % of "before the WC"	*248,1%*	*133,0%*	
eliminating 5% "outliers"	22,79	144,56	*634,2%*
in % of "before the WC"	*382,7%*	*440,8%*	

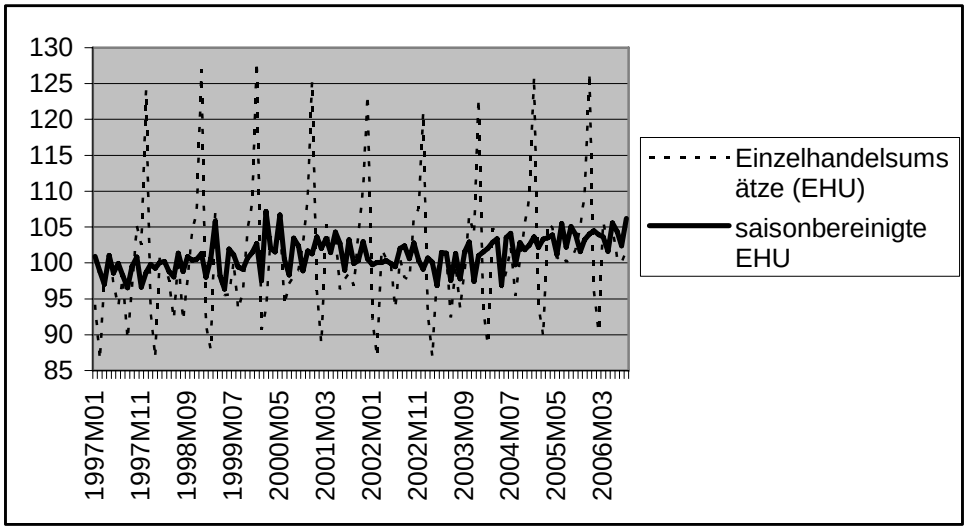
Source: Data from classroom experiment. Own calculations.

Figure 1: Hotel prices in Germany (incl. breakfast). Differences with June 2006



Source : http://www.destatis.de/indicators/d/vpigraf07.htm, nov 3rd, 2006

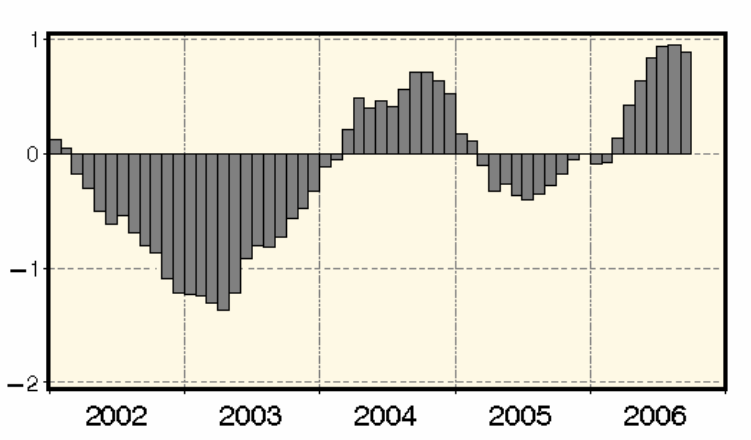
Fig. 2: Merchant sales, Germany 1997-1/2006-8



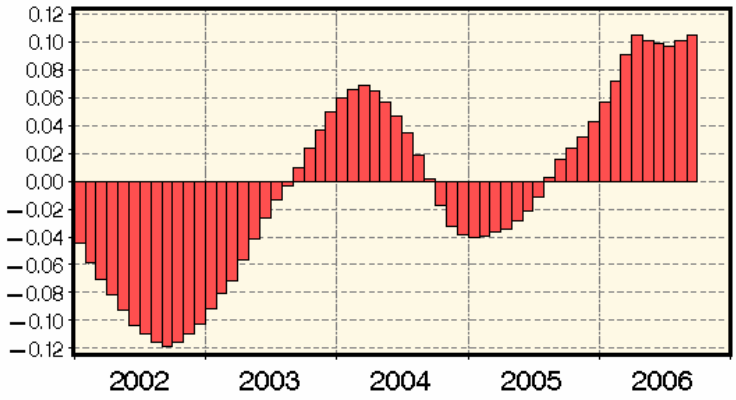
Remark: Real sales, without petrol stations and car sales, 2003=100.
Source: Statistisches Bundesamt, „Lange Reihen Binnenhandel, Gastgewerbe, Tourismus“

Figure 3 : People in paid work, changes to previous year in %

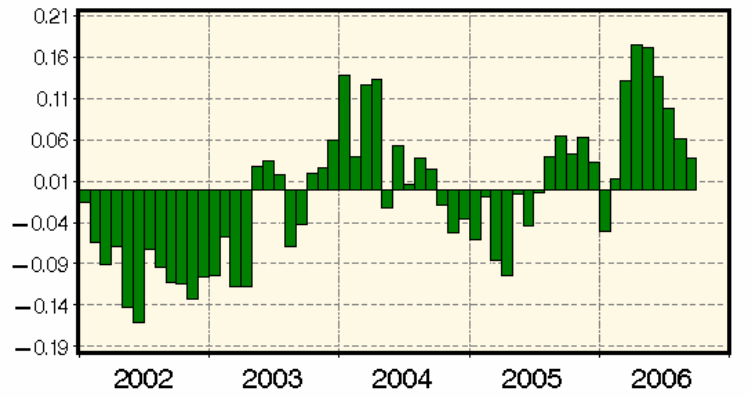
A: Original data



B: Trend



C: Seasonally adjusted



Source: German Federal Office of Statistics, http://www.destatis.de/indicators/d/gkarb810.htm, Nov. 23rd 2006

Appendix A

Tab. A1: Overview of econometric studies on economic effects of sport and sport facilities

Study	Region under study	period	Dependent Variable	Independent variables	Result of study
Baade (1987)	9 US cities	1965-1983	Income Trade turnover	Population; dummies: new or renovated stadium, existence of a football team; existence of a baseball team	Significant negative or no significant positive effects
Baade and Dye (1990)	9 US cities	1965-1983	Income Trade turnover	Population; dummies: new or renovated stadium, existence of a football team; existence of a baseball team	Effects on income and trade turnover are uncertain, possibly negative.
Baim(1994)	15 US cities	1958-1984	Employment service sector Employment non-agricultural sector	Population; dummies: existence of a football team; existence of a baseball team	Positive effects of professional sport teams on employment
Baade (1994)	48 US cities	1958-1987	Per capita income	Number of professional Major League Teams, number of stadia, not older than 10 years	No significant effect of stadia and teams on income
Kang/ Perdue (1994)	Korea (and 4 other asian countries)	1988-1990	Tourists arrivals Income from tourismus	Relative prices, event factor	Olympic Games of Seoul 1988 led to 1 million additional arrivals and US$ 1.3 billion additional income from tourism
Baade (1996)	48 US cities	1958-1987	Per capita income Employment leisure industry (SIC 79) Employment sport industry (SIC 794)	Number of professional Major League Teams, number of stadia, not older than 10 years	No significant effect of stadia and teams on income and employment.
Baade and Sanderson (1997)	10 US cities	1958-1993	Employment leisure industry (SIC 79) Employment sport industry (SIC 794)	Per capita income; weekly working hours; population; number of professional sports teams; number of new stadia	No significant effect of stadia and teams.
Coates and Humphreys (1999)	37 US cities	1969-1994	Per capita income	Population; income; stadium capacity; dummies Team entries in the last 10 years, team exits in the last 10 years, existence of a team, construction of a stadium in the last 10 years, single- or multiple-use stadium	Possibly negative effect of stadia and teams on income.
Teigland (1999)	Norway/ Calgary City	1991-1997/ 1981-1993	Norwegian guest nights Foreign guest nights in Norway Occupancy rate in Calgary	Retail trade volume; Lagged price index; Final domestic demand	Significant negative effect of 1992 Olympic Winter Games on Norwegian guest nights, no effect on foreign guest nights/ No effect of 1988 Olympic Winter Games on accommodation demand in Calgary
Baade, Matheson (2000)	75 largest US-cities (1969 / 1997)	1973-1997	Growth of employment	Population; per capita income; nominal wages; taxes; Dummy oil boom; Regional dummy, Trend var.	No significant employment effects of Super Bowl matches.
Coates, Humphrey (2000a)	37 US- cities	1969-1996	Per capita income	Population; income t_{-1}; nominal wages; taxes; Oil boom and bust dummies; regional and yearly dummies, trend variable, dummies or entrance/ exit of team in the last 10 years, for the existence of teams, for the construction of a new stadium, stadium capacity, dummy for single- oder multiple-use Stadium	Possibly negative effect of stadia and teams on income
Coates, Humphrey (2000b)	37 US- cities	1969-1996	Per capita income	See Coates, Humphrey (2000a). In addition dummies for strikes.	Strikes in Major Baseball League und Major Football League did not have significant effects on local income.

Baade, Matheson (2001)	US-Host cities of All Star Game (Baseball)	1973-1997	Employment growth Taxable sales	Population; Real per capita income; nominal wages; taxes; Oil boom and bust dummies; regional dummies	Job losses in 10 of the 21 cities in the study. Average loss of approx. 8.000 jobs. No significant changes in taxable sales
Baade, Matheson (2002)	75 largest US- cities (1969 / 1997)	1969-1997	Employment growth	Population; per capita income; nominal wages; taxes; Dummy oil boom; Regional dummy	No significant employment effect, neither of the 1984 L.A. Olympic Games nor of the 1996 Olympic Games in Atlanta
Coates, Humphrey (2002)	39 US- cities	1969-1997	Per capita income	See Coates, Humphrey (2000a). In addition dummies for the participation at postseason Games	No significant income effects form the participation at postseason Games.
Szymanski (2002)	20 countries in the world with the largest GDP	1971-2000	Growth of GDP	Previous year's growth; dummies for years before, after and during the Olympic Games and the World Cup	Significantly lower growth in year of World Cup
Coates, Humphreys (2003)	37 US cities	1969-1996	Wages service sector; wages trade; wages hotel industry; wages entertainment and recreation sector; wages catering sector; employment service sector; employment trade	Population; income; stadium capacity; dummies team entries over the past 10 years, team exits over the past 10 years, existence of a stadium/arena over the past 10 years, single- or multiple-use stadium	Overall negative effect of stadia and teams on wages and employment.
Hotchkiss, Moore Zobey (2003)	All counties in Georgia, USA	1985-2000	employment wages	share of 8 sectors population	Significant positive effect of Olympic Games 1996 on employment in Olympic regions, no significant effect on wages
Baade, Matheson (2004)	13 host cities of WC 1994	1970-2000	growth rate	- income - Wages - Taxes - Oil dummy	6 cities with negative impact. Total loss US-$ 9.26 billion
Carlinho, Coulson (2004)	60 largest USA-MSAs in 1993/ 1999	1993/ 1999	Housing rents Wages	Usual Hedonic pricing model variables, Dummy for time-varying city characteristics, Time Dummy	Rents are 8 percent higher in central cities with NFL team. No significant effect on wages.
TU (2005)	FedEx Field, Washington	1992-2001	prices of 35000 transactions of single-family properties in Prince George´s County	- Usual Hedonic pricing model	Aggregate increase of property value of about US$ 42 million
Jasmand, Maennig (2006)	652 German regions	1961-1988	Regional GDP Regional employment	- share of agriculture and industry, of trade and transport, of other services - employment/ - population - dummies for oil price shocks and urbanisation	Significant positive income effect of Olympic Games 1972 on Olympic regions, but no significant employment effect.

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