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Contents

The Soccer World Cup in Germany:
A Major Sporting and Cultural
Event – But Without Notable Business
Cycle Effects

- Economics of Sports
- Soccer as a Business
- Current Estimates of the Economic Effects of the 2006 World Cup
- What Economic Effects Can Really Be Expected from the World Cup?
- Will World Cup Tourism from Abroad Stimulate the Economy?
- Higher Purchases of Soccer-Related Goods?
- Positive Effects from Security Measures?
- Changing Expectations and Decisions
- Other Effects
- The Social Value of the World Cup
- Conclusion

The Soccer World Cup in Germany: A Major Sporting and Cultural Event – But Without Notable Business Cycle Effects

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The upcoming World Cup has raised high expectations in Germany, not just for the national team, but for the economy as well. As the cyclical upswing has mainly been supported by exports so far, hopes have been growing recently that this sporting event will have a positive and stimulating effect on domestic demand – partly by increasing consumer confidence – and so enable the upswing to gain breadth.¹

The analysis of the macroeconomic effects of the Soccer World Cup presented here shows that this could only happen if the event brought a clear change in consumer and investment behavior, together with a change in future expectations. However, that is not to be expected. Nevertheless, the World Cup is of high socio-political significance due its importance as a sporting and cultural event. It is (yet another) piece in the mosaic of Germany's transition from an industrial to a service society.

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Economics of Sports

Studies are regularly made of major sporting events like the upcoming soccer World Cup to see if the financial gains to a country's economy are greater than the costs.² This may partly be because considerable funds are channelled into these events from public budgets, and politicians are eager to show that this "pays off" for taxpayers.³ But that is not all. There is an

¹ In an answer to a parliamentary inquiry the Federal Government has stated that it expects the economic stimulus from the World Cup to be 3 billion euros spread over three years. One billion alone will come from foreign visitors to Germany for the matches (cf. Deutscher Bundestag, Drucksache 16/1386, answer of Undersecretary of State Georg Wilhelm Adamowitsch, 2 May 2006). The Landesbank Rheinland-Pfalz is equally optimistic: "We believe ... that the stimulus from the 2006 World Cup will come at a good time for the cyclical development", cf. press release of December 1, 2005.

evident tendency towards commercialisation in sports themselves – particularly in sports that grip nations, and most of all in football (soccer), which is the most popular sport worldwide.⁴

Altogether 64 matches will be played in twelve cities in Germany between 9 June and 9 July this year.⁵ Eight cities will host five games each, and those with the largest stadiums, Berlin, Dortmund, Munich and Stuttgart, six each. The stadiums differ greatly in size: Kaiserslautern holds 41 000, Berlin 74 000. If all the seats are filled there will be 3.3 million spectators, although of course one person will often attend more than one match.

Although the chances of the German soccer team are viewed with some scepticism here in Germany,⁶ the economic expectations are almost all optimistic.⁷ Former Federal Interior Minister Otto Schily, for example, is expecting "five million additional overnight stays" and around three billion euros extra turnover" for the tourist industry, as well as investment of 5.5 billion euros specifically for the World Cup. And former soccer player Franz Beckenbauer, head of the World Cup organizing committee, is euphoric: "Our country will never get another chance like this. It would be wonderful if the World Cup brought a turnaround in the economy as well." Surveys show decision-makers confident that "the general optimism that fills people during sporting events like this" will provide additional stimulus to the economy.⁸ Some researchers who have estimated the economic effects have also come to the conclusion that in all probability the World Cup will be of net benefit to Germany.⁹

² There is quite a tradition of economic analysis of sporting events. DIW Berlin carried out one of the first economic analyses of professional soccer soon after the Bundesliga (First Division) was founded in 1965: Manfred Melzer and Reiner Stäglin: "Zur Ökonomie des Fussballs – Eine empirisch-theoretische Analyse der Bundesliga", in: *Konjunkturpolitik*, Vol. 11, pp. 114-137. Various economic analyses of sports have been carried out since, particularly: Hans-Jürgen Krupp and Gert G. Wagner: Die wirtschaftliche Bedeutung des Sports, in: G. Anders et al (ed.): Sport und Wirtschaft, Schriftenreihe der Eidgenössischen Turn- und Sportschule Magglingen STSM 33, Magglingen and Cologne 1988, pp. 17-39, and Gert G. Wagner: The Economic Impact of Sport within the Frame of An Increasing Service-Sector in Market Economies – A Survey, in: *Sport Science Review*, Vol. 13, 1990, pp. 14-21; see also most recently Christoph Breuer: "Sportpartizipation in Deutschland: ein demo-ökonomisches Modell", in: *DIW Discussion Paper* No. 575, Berlin 2006, for an analysis of the determinants of sport in general.

³ Even a major figure in soccer like Franz Beckenbauer, who has made great career mileage on the simple source of fun and enjoyment soccer offers to so many people, used profitability as an argument when he said: "Our Federal Economics Minister Clement is expecting the World Cup to increase our domestic product by at least eight billion euros" (*Wirtschaftswoche*, 10.3.2005, p. 20).

⁴ Contrary to the general belief in Germany, the ball used is not round, but spherical according to the FIFA regulations.

The purpose of this paper is not to add another impact analysis to these estimates, but rather to take a critical look at the available studies and point out some interrelations that need to be taken into account in assessing the socio-political importance of this kind of major sporting event. The economic effects on FIFA itself will not be included.¹⁰ Nor will other effects be discussed, like those on the environment and other types of sports.¹¹ But we will discuss the economic value that the free broadcasting of the games on television will produce for viewers in Germany, and we will estimate the economic effects of the "feel-good factor" that people in Germany may be expected to experience if Germany wins the World Cup.

Soccer as a Business

The teams in the first division of the German Soccer League (Bundesliga) achieve an annual turnover of about 1.2 billion euros.¹² This is not only from ticket sales for matches, but also from broadcasting rights, merchandising and advertising. The total is about equivalent to that of the German brown coal industry, which is a fairly small, unspectacular sector. Even if the income of the other divisions is added, the direct economic effects of the sport are not very impressive.¹³ By comparison, the German automotive industry achieved a turnover of 236 billion euros in 2005. The employment effects of professional soccer are also slight, since, as is evident from what players are paid, it is a highly productive branch with few employees.

The indirect effects of soccer in sports-oriented sectors are limited as well. The big manufacturers of sporting goods Nike, Adidas and Puma together achieved

⁵ The international soccer federation FIFA (Fédération Internationale de Football Association, with its headquarters in Geneva), which has organised the championship, calls it FIFA World Cup 2006™ – The term 'World Cup' used in this paper means the final round of the men's championship, not the women's tournament.

⁶ Again the reference here is to the men's German national team, although of course there is also a women's national team. Indeed, they won the world title in 2003, so they are reigning world champions.

⁷ See e.g. Marco Bargel: FIFA Fussballweltmeisterschaft 2006™ – Deutsche Wirtschaft steht als Gewinner bereits fest. In: Postbank Research, February 2005. For the sources of other references see the following text: Karl Brenke and Gert G. Wagner: "Fussball-Weltmeisterschaft in Deutschland: Ein wichtiges sportliches und kulturelles Ereignis – aber ohne nennenswerte gesamtwirtschaftliche Auswirkungen", in: *Wochenbericht des DIW Berlin*, 20/2006.

⁸ See GfW (Gesellschaft für Wirtschaftsförderung), North Rhine-Westphalia: Wirtschaftspotenziale der Fussball-WM 2006 für NRW, Düsseldorf 2004 (www.gfw-nrw.de), p. 14, and Fussball-WM 2006: Auswirkungen auf die Unternehmen – Ereignisse einer DIHK-Unternehmensbefragung, Berlin and Brussels, January 2006 (anon).

worldwide turnover of 20 billion euros in 2005. This included a wide range of sporting goods and casualwear – items with a sporty touch but not necessarily strictly for sports use. This is the kind of clothing that consumers would purchase in any case – whether or not the items are related to the World Cup. It must also be kept in mind that these manufacturers would turn to other designs and concepts if the World Cup were not taking place, without necessarily increasing or decreasing turnover. The advertising industry could also easily find other marketing tools. Indeed, there are signs that the present flood of World Cup advertising is becoming counter-productive and not benefiting the advertising firms.

Altogether, therefore, the economic effects of soccer should not be overestimated. However, professional sports are part of the worldwide "eventing" of life in rich economies, and are thus part of the growing markets for services.¹⁴

Current Estimates of the Economic Effects of the 2006 World Cup

The economic stimulus created by a major sporting event like the World Cup or the Olympic Games is not limited to the period of the event itself but begins earlier (with investment, for example) and continues afterwards (the cost of maintaining the infrastructure created, for example, and "follow-up" tourism). So any analysis of the effect would need to cover a longer period. Indeed, it is not even easy to say which economic activities should be regarded as part of the World Cup – the transport infrastructure is a case in point.

⁹ See particularly Bernd Rahmann: "Kosten-Nutzen-Analyse der Fussball-Weltmeisterschaft 2006 in Deutschland – Ausgewählte konzeptionelle Aspekte und Ergebnisse", in; H. D. Horch (ed.): "Professionalisierung im Sportmanagement – Beiträge des 1. Kölner Sportökonomie-Kongresses", Cologne 1999, pp. 355-373; Gerd Ahlert: "What does Germany expect to gain from hosting the 2006 Football World Cup – Macroeconomic and Regionaleconomic Effects", in: *GWS Discussion Papers*, 2005/4, pp. 1-25; and Markus Kurscheidt: "Erfassung und Bewertung der wirtschaftlichen Effekte der Fussball-WM 2006", *independent research report in MSS*, for Wegweiser GmbH Berlin, Bochum, undated.

¹⁰ FIFA will receive 1.5 billion Swiss francs from the television rights alone (according to their own homepage, www.fifa.com)

¹¹ For instance, whether athletics will suffer from the conversion of stadiums to strictly soccer stadiums, without facilities for track and field events.

¹² The turnover is higher in England and Italy – about 2 billion euros.

¹³ See Gert G. Wagner: "The Economic Impact of Sport", loc. cit.

¹⁴ See Gabriele Klein: "Marathon, Parade und Olympiade – Zur Festivalisierung und Eventisierung der postindustriellen Stadt", in: *Sport und Gesellschaft*, Vol. 1, No. 3, 2004, pp. 269-280, and Gert G. Wagner: "The Economic Impact of Sport", loc. cit.

It is particularly difficult to determine the individual effects and their interrelations. Multiplier effects also have to be taken into account: they are created as income is generated through investment or consumption which in turn stimulates demand. However, it must also be remembered that expenditure on the World Cup can reduce expenditure elsewhere. There can also be displacement and price effects. The data available is not sufficient for a comprehensive analysis. Some effects cannot be quantified at all – like a country's image abroad and its influence on future tourism. The expenditures in connection with a World Cup soccer championship also need to be examined to see whether some alternative use of the funds might not be of greater economic benefit.

A study on the economic effects of the World Cup for Germany based on state of the art research was included in the German Soccer Association's application to host the World Cup. Various scenarios based on different potential locations of the matches were presented. In the most economically beneficial version of the proposal – and the one ultimately chosen – a net economic benefit of 2.5 billion euros was calculated. The costs incurred before the matches begin were shown in this scenario as higher than the benefits, as this is the period when investment is needed. Shortly before and during the World Cup the ratio is reversed, with the benefits outweighing the costs, continuing up to 2008.

A further study based on this also affirms overall positive effects. It calculates a number of variables – the level of state investment, possible displacement effects of investment for the World Cup, and the method of financing the investment. One constant in all scenarios is the expenditure by tourists from abroad attending the World Cup, at 1.8 billion euros. All the models calculated show positive effects on economic output and employment. The maximum additional value creation simulated is 7.8 billion euros.

The estimates by Postbank (the bank of the German postal service), a principal sponsor of the World Cup, are much higher, although the method used is not clearly described in this publication. There the effects of the World Cup add up to 9 to 10 billion euros, with investment put at 6 billion euros, consumption by the resident population at 2 to 3 billion euros and expenditure by foreign visitors at 1 billion euros.

Altogether a *maximum* of 9 000 additional permanent jobs are estimated. And although tens of thousands of temporary (part-time) jobs will certainly be created during the World Cup, these cannot be expected to have any effect on the unemployment rate, for many will be in catering and similar services, where skilled labour for specific activities is required. Many of the jobs will not be filled through the labour agencies but through the

"network" of skilled labour which these service providers have built up to fulfill their peak demand.

A study by Ruhr University Bochum used an entirely different method, asking economic decision-makers what they plan to do in preparation for the World Cup. The result shows a planned investment volume of 5.5 billion euros, but it remains open whether or not these investments would have been carried out anyway without the World Cup. The study calculated that the event will have considerable innovation effects.

Even these estimates, which in part differ widely, show that calculating the economic effects of the World Cup entails considerable uncertainty. Moreover, none of the studies calculates alternative uses of the public funds. This raises particular problems in view of the considerable share of public funds being spent on the construction and expansion of stadiums.¹⁵

What Economic Effects Can Really Be Expected from the World Cup?

The investments made in preparation for the World Cup – to increase stadium capacity, for example – are now finished. These investments had no visible effect on the cyclical development, nor could this be expected given that they were spread over several years and had a small share in macroeconomic demand at 6 billion euros.¹⁶ The Postbank estimate includes a considerable amount of transport infrastructure investment, which cannot necessarily be regarded as specifically for the World Cup. Last year, investment in Germany totalled 384 billion euros, only one-sixth of total gross domestic product.

An econometric study of the effects of past World Cup football championships did not show a positive effect.¹⁷ The author of the study concludes that countries should not view the World Cup as a business enterprise, but a form of public consumption. Those expenditures made by the government do improve citizens' overall well-being, but do not boost economic growth.

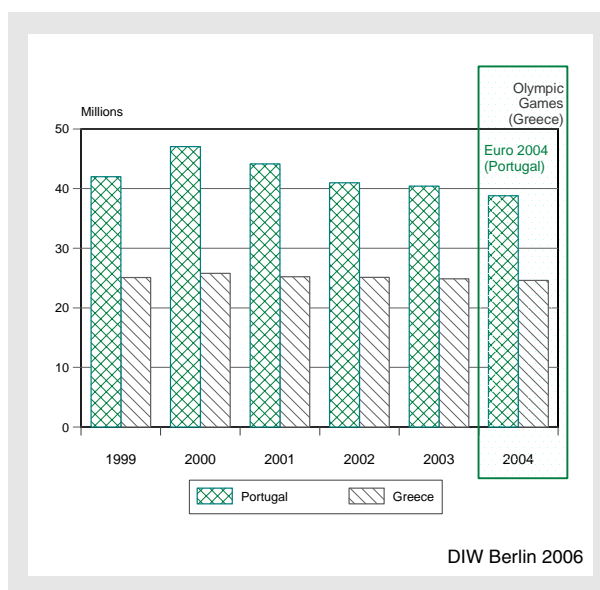
This year it is to be expected that domestic consumers will buy more goods related to the World Cup, and

¹⁵ See Judith Grant Ling: Full Count: "The Real Cost of Public Funding for Major League Sports Facilities", in: *Journal of Sports Economics*, Vol. 6, No. 2, 2005, pp. 119-143.

¹⁶ Certainly it could not be established that this created any notable effect. In smaller countries a major sporting event can certainly have considerable investment effects. This was evident in Greece, where the Olympic Games were held in 2002, and Portugal, which hosted the European soccer Championship in 2004.

¹⁷ Stefan Szymanski: "The Economic Impact of the World Cup", in: *World Economics*, Vol. 3, No. 1, 2002, pp. 169-177, here pp. 175f.

Figure 1
Paid Overnight Accommodation
in Greece and Portugal



Source: DIW Berlin calculations.

that a large number of visitors from abroad will come to Germany to see the matches.

Will World Cup Tourism from Abroad Stimulate the Economy?

FIFA is expecting about a million foreign visitors to come to Germany for the World Cup. Estimates of their spending range from 1 billion to 1.8 billion euros. The organization committee's room reservation service has so far handled bookings for one million overnight stays.¹⁸ There will also have been direct private bookings. It is stressed that room prices have not increased and there is still plenty of lodging space available for tourists in all the host cities.

Many researchers doubt that major sporting events have direct economic effects through increased tourism during the event. For example, it has become evident that the number of tourists in France was not higher than usual during the 1998 World Cup there.¹⁹ Nor was there any evidence of increased tourism to Portugal during the last World Cup or to Greece during the last Olympics (cf. Figure 1).

For Germany, National Accounts data can be used. It shows that the demand for accommodation did not rise

¹⁸ fifaworldcup.yahoo.com/06/de/060425/1/3xer.html

¹⁹ S. Szymanski, loc. cit., p. 175.

Table 1

Gross Value Created in the Hotel and Catering Sector, the Gross Domestic Product and Private Consumption

Year-on-year change in %, in 1995 prices

	Gross value created in hotels and catering	Gross domestic product	Private consumption	Event
1971	0.9	2.9	5.7	
1972	1.7	4.3	4.8	Olympic Games
1973	-0.6	4.7	3.0	
1974	0.9	1.0	0.5	Soccer World Cup
1975	0.6	-1.6	3.7	
1987	3.8	1.4	3.7	
1988	0.4	3.8	2.6	European Football Championship
1989	5.5	4.3	3.2	

Sources: Federal Statistical Office; DIW Berlin calculations

significantly in 1988 (European Football Championship) and 1974 (World Cup) (cf. Table 1). At most the Olympic Games in 1972 could have had some effect on the accommodation sector. But consumption in this sector is not significant for the economy as a whole, because it accounts for only just under 3% of the gross domestic product.

Displacement effects also have to be taken into account. A major sports event does attract foreign fans, but other tourists may stay away, perhaps because they fear price effects from the event or want to avoid the crowds. A World Cup championship can also reduce the number of business trips or conferences. In fact, there is certainly empirical evidence of this. There is considerable frustration in some World Cup host cities because the hotel rooms reserved by FIFA are not being booked.

Higher Purchases of Soccer-Related Goods?

The World Cup is featured in advertisements everywhere, and as trademark regulations have just been relaxed, this will probably increase. But will this lead to higher consumer spending and thus boost the economy?

It is certainly not impossible that more soccer-related goods like sports apparel will be bought. Some consumers may well buy a new television set sooner than they would have otherwise. But whether people will eat more

cookies and chips because they are now called "World Cup cookies" and "soccer chips" is rather doubtful. In assessing the impact of purchases of goods on economic growth, one must also consider where the goods are manufactured. If we do so, we see, for example, that very few television components are really made in Germany. Moreover, this motivation to buy now would function just as well for a World Cup taking place in some other country, where it would not involve public expenditures within Germany.

In any case, the decisive factor for economic development is not whether more soccer-related goods are bought but whether private consumption as a whole is increased. According to the latest joint prognosis by the economic research institutes in Germany, private consumption this year will be only slightly higher than in 2005. Growth of 1.8% is expected with an inflation rate of 1.4%. Consumption should rise in the second half of this year, but this will not be due to the World Cup, it will be because private households are expected to make purchases of consumer goods earlier to evade the increase in VAT announced for 2007. In any case a decision to buy electronic goods or sporting goods related to the World Cup is inspired by the event itself and hardly by the country where it is taking place.

Positive Effects from Security Measures?

In view of the latent threat of terrorist attacks, major events require considerable expenditures to ensure public safety. With soccer there is the additional problem of hooliganism. In the purely economic view, higher expenditures on security could be regarded as a positive stimulus to the economy – at least if the higher expenditure by the organizers or the government creates additional income.

However, the German government has not increased its security forces in preparation for the World Cup. Increased security requirements during the games will probably be met by current employees working overtime. In fact, the state governments of Hessen and Baden-Württemberg have already expressly said as much. Part of the overtime may be paid, but a large part will probably be compensated with time off later. Private security firms are expected to achieve additional income from the higher demand for their services and it is to be assumed that they will temporarily increase their staff.

The material expenditures on security, which can be estimated in the tens of millions on the federal state level, will in all likelihood not be financed with loans but

will displace other items in state budgets. A cyclical stimulus is therefore not to be expected.

Changing Expectations and Decisions

We lack a sound theoretical or empirical basis to predict how the World Cup will affect domestic consumers' economic expectations and buying decisions. Results available so far for other countries do not suggest that the World Cup affects economic expectations.²⁰ If at all, people's expectations are affected by the performance of the national team, not by the country in which they play.

A survey carried out by experts at the Ruhr University of Bochum in 2004 of public and private decision-makers and potential investors in the environment of the FIFA 2006 World Cup did, however, show that 15% were expecting "positive" or "very positive" effects. Only just under one-quarter were not expecting any effects at all. The generally positive estimate was explained by the "general optimism" prevailing among the population during such sporting events.

However, an analysis of the movements in share prices from 1973 to 2004 in countries where there is great enthusiasm for soccer²¹ shows that winning major matches does not have any statistically significant effect on short-term market movements, but defeats do lead to statistically proven deviations from the trend by 38 base points, that is, 0.38 percentage points. If this result is applied to the general expectations for the 2006 World Cup, the conclusion is that a good performance by the German team will not have positive effects on economic behavior, because soccer fans are – at least secretly – already assuming that their team will do well.²² If soccer events have any influence at all on economic decisions it is rather the losses that play a role, producing a negative impact on economic behavior.

A major sporting event like the World Cup naturally increases the risk of terrorist attacks. To what extent this affects people's economic expectations is not known.²³

²⁰ See Stefan Szymanski, loc. cit. pp. 175f.

²¹ Alex Edmans, Diego Garcia and Oyvind Norli: "Sports sentiment and stock returns", Cambridge, Mass. et al. 2005, who also discuss the relevant psychological theory.

²² Alex Edmans et al., loc. cit., p. 5.

²³ The insurance policies for most of the World Cup stadiums taken out with the new Extremist Terrorist Insurance only cover material damage to the stadium.

Other Effects

During the last World Cup in Korea and Japan there was discussion in Germany about the millions of lost working hours, as the live broadcasts of matches were during working hours for the majority of fans in Europe and America.²⁴ However, increasingly flexible working times are reducing the likelihood of negative effects on labour productivity. Moreover, these problems should not arise during the World Cup in Germany, as most of the matches are being shown in the late afternoon or evening. In addition, in view of the high level of unemployment, employees are increasingly trying to avoid absenteeism in order not to risk their jobs. This is evident from the fact that sick leave is now at a historical low in Germany.²⁵

Probably the most important structural effects of the World Cup can be seen in a survey by the Ruhr University Bochum.²⁶ These include modernization effects towards the service economy (the "event industry"), that are not caused by the World Cup but are strengthened by it. They include new kinds of service agencies organizing such events and their supporting programmes.

According to this view, the 2006 World Cup in Germany is one piece in the mosaic of a broader transition to the service society, which is increasingly characterized by events both local and global. As such, it should not be underestimated. In addition to large-scale sporting events these include major art exhibitions and the local or worldwide birthday celebrations held for great cultural figures like Kant and Mozart. Each individual event is of only very minor macroeconomic importance, but together they are developing into a serious events industry, producing considerable demand for work for the "creative class".

The Social Value of the World Cup

Naturally, the value of a sporting event in itself and the whole range of events surrounding it can hardly be expressed in monetary terms. However, a few facts are known. For example, not just men are soccer fans – as widely believed – but women as well. Survey data compiled by DIW Berlin in cooperation with TNS Sozialfors-

²⁴ See WM und Arbeitszeiten, in: *iwd*, No. 22, 30 May 2002.

²⁵ See Karl Brenke, Dauer der Arbeitszeiten in Deutschland, in: *Wochenbericht des DIW Berlin*, No. 47/2004, p. 736. On the more recent development see an analysis by the AOK Research Institute wido.de/uploads/media/wido_pra_krankenstand_pi_grafiken_0306_01.pdf.

²⁶ GfW, loc. cit.

chung for the Socio-Economic Panel (SOEP)²⁷ for 2003 shows that slightly more than half of all adult men but only one-third of all adult women go to live sporting events, and just under 20% of the men but only 7% of the women do so regularly, that is, at least once a month. However, many women do watch soccer games on television, especially international championships. According to information from ZDF, Channel 2 of Germany's public service broadcasting, based on the AGF/GfK Television Panel, about 40% of the viewers aged 14 and over watching the last two big soccer championships in Europe – Euro 2004 and the Confederation Cup in 2005 – were female.²⁸

The minimum value of watching a match in a stadium is obviously the cost of the tickets sold. Of higher interest is the value of the World Cup to television viewers and users of other media.

The economists Joachim Weimann and Steffen Rätzel carried out a survey in 2004 which enabled this to be quantified.²⁹ Firstly, the respondents in the random sample were asked how much they would be prepared to pay for the broadcasting of World Cup matches on television if the games were not on the free channels.³⁰ A distinction was drawn in this quasi-experiment between games with and without a German team.

Secondly, two more complex questions were asked about the German team winning the World Cup. The first was to establish the "willingness to accept" (WTA), and the second the "willingness to pay" (WTP). To calculate the WTA, the respondents were asked to imagine that a friend had placed a bet for them that the German team would lose in the final, in order to surprise them with the winnings should that outcome sadly occur. The question was "How high would the winnings have to be for you to prefer that Germany lose?" The answers show the subjective value of winning the World Cup. To calculate the WTP a scenario was described to the participants in which a new German soccer team was created after the disastrous performance in the European championship in 2004. This program was expensive but as a result it would become *certain* for the German team to

²⁷ On the SOEP see e.g. Christoph Breuer: "Cohort effects in physical inactivity. A neglected category and its health economical implications". In: *Journal of Public Health*, Vol. 13, No. 4, 2005, pp. 189-195.

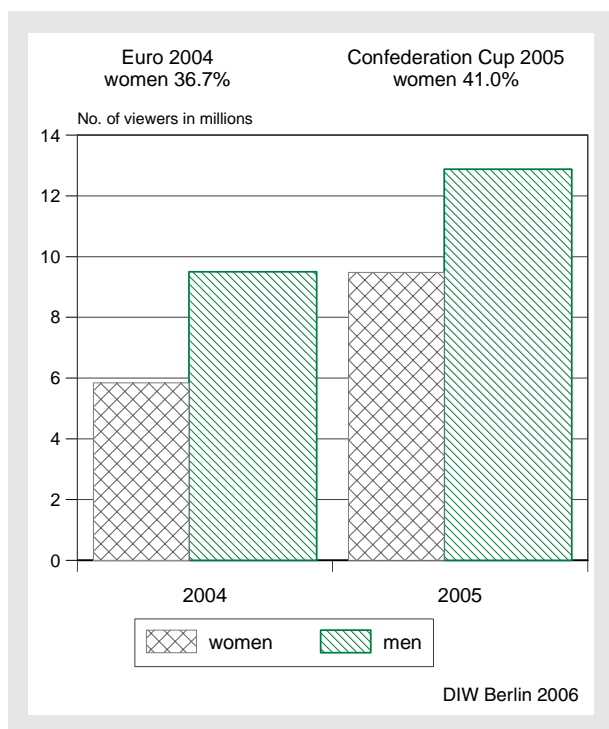
²⁸ Somewhat more men sit in front of the television when matches are shown in the afternoon and early evening, more evidence that high shares of women viewers at peak viewing times in the evening are partly also due to "enforced" viewing together.

²⁹ Steffen Rätzel and Joachim Weimann: "Der Maradonna Effekt: Wie viel Wohlfahrt schafft die deutsche Nationalmannschaft?" In: *Perspektiven der Wirtschaftspolitik*, Vol. 7, No. 2, 2006, pp. 257-270.

³⁰ The survey only covered 338 persons, but they were chosen at random and were representative. This number is sufficient to provide information on a question that refers to the entire population, that is, not specific groups.

Figure 2

Average Number of Public Service Broadcasting (ARD and ZDF) Viewers of the 2004 European Cup and 2005 Confederation Cup



Sources: AGF/GfK Fernsehpanel D+EU; ZDF evaluations; DIW Berlin calculations.

win the World Cup. The participants were asked how much they personally would pay for such a collective enterprise. The averages of the two questions were multiplied by the number of adults in Germany to obtain the aggregate monetary value of the World Cup.³¹

If the German team lost in the preliminary round, viewers were prepared to pay a total of 798 million euros for the broadcast of the matches (the cumulative figures for the quarter- and semi-final matches and the final are shown in Table 2). If the German team were playing in the quarter-finals and the semi-finals the aggregate willingness to pay rose by a further 189 million and 231 million euros respectively. If they reached the final another 327 million would be added (the differences between the willingness to pay without and with the German team playing are shown in Table 2). So the maximum value the German team could "earn" by broadcasts of its games adds up to just under 750 million euros if they reach the final. Compared with the investment expenditure on the World Cup, this is a modest sum.

³¹ Foreigners living in Germany who have a positive willingness to pay, and thus care whether Germany wins the title, were included. All others, including many Germans, counted as zero.

Table 2

Increase in Well-Being in Adults Living in Germany from the Broadcasting of World Cup Matches on Public Television Channels and If the German Team Wins the Final

	Willingness to pay ¹ to view a TV channel						Willingness to spend for the German team to win the championship	
	For the quarter finals		For the semi-finals		For the final		WTA method ²	WTP method ³
	Without German team	With German team	Without German team	With German team	Without German team	With German team		
Increase in well-being based on arithmetical mean								
Per capita in euros	2.44	5.26	3.59	7.04	5.90	10.78	255.00	35.00
Total (extrapolated) ⁴ in mill. euros	163	353	240	472	395	723	17 123	2 345
Increase in well-being based on the median								
Per capita in euros	0.00	3.00	1.63	4.00	3.00	5.00	50.00	10.00
Total (extrapolated) ⁴ in mill. euros	0	201	109	268	201	335	3 353	670

1 Answers by 338 persons surveyed. — 2 Answers by 256 persons to the question what is the minimum amount that would make it worth for you to win a bet against the German team in the final, meaning that Germany would lose? — 3 Answers from 58 persons questioned on their individual willingness to pay for a collective investment that would result in certain world championship for the German team. — 4 Extrapolated to the entire adult population.
Sources: Survey by Rätzel and Weimann (University of Magdeburg); DIW Berlin calculations.

The value of the world championship for the German team or "for Germany" greatly depends heavily on the method used to establish this (WTA or WTP). With the more realistic WTA method (the question about losing the bet), the aggregate value of the world title is about 17 billion euros. With the WTP method (the question about the value of certainly winning the final) it is only 2.3 billion euros.³² This is probably also due to the fact that the question is hardly realistic.³³

Admittedly the averages are greatly affected by extreme cases, that is, answers in which some participants gave a very high value.³⁴ These effects are largely excluded if instead of the average the medians are used (lower block in Table 2).³⁵ The medians of the willingness to pay for TV transmissions are only 3 to 5 euros

per person questioned, and quarter final matches without the German team are of almost no value to the German public. The medium value of the title is only 10 euros (WTA) or 50 euros (WTP). The broadcasting of the World Cup Final with the German team playing would create an aggregate subjective gain in well-being of just under 350 million euros, and 3.4 billion euros if the German team won (WTA) and 670 million euros (WTP). These are certainly considerable sums, but they are far below the expenditures on the World Cup – in terms of investment, for example. It must be remembered that real costs of TV broadcasting amounting to about 230 million euros and covered by the licence fees have to be set against the gain in well-being.³⁶ Even tak-

³² If the statistical errors in the random samples are taken into account (confidence intervals) – which are considerable due to the small number of respondents – the confidence bands fluctuate with 95 percent certainty between 13 and 21 billion euros (WTA method) and 1.3 and 3.4 billion euros (WTP method).

³³ Every person questioned must know that the title cannot be bought, that is, the question what it would be worth to him to know that the German team would certainly win the title is entirely unrealistic. Moreover, it is against the spirit of sports, where a match is only worth watching if the result is not predetermined.

³⁴ The highest amount named in answer to the WTP question was 330 euros, but for the WTA question it was 10 000 euros. Figures like these were regarded as extreme and not taken into account in the calculations (all figures outside the range of average \pm 3 standard deviations and that also exceeded 10% of the interviewee's annual income were excluded). Consequently, the highest WTA figure used in the calculation was 3 200 euros.

³⁵ We are grateful to Steffen Rätzel and Joachim Weimann for making these figures available.

³⁶ Evidently the exact costs are not known, nor the extent to which these are covered by the additional advertising income generated by the World Cup.

ing advertising income and the possible sale of rerun rights into account, the two German public TV broadcasters ARD and ZDF must be spending hundreds of millions out of their licence fee budgets.

Moreover, a fundamental problem arises if one attempts to use these figures to justify running the World Cup in Germany: both effects would be incurred if the event were held in some other country. At best it could be argued that home matches increase the German team's chances of winning the title.³⁷

Conclusion

The upcoming World Cup in Germany will not create a notable stimulus to the economy. About 1 million tourists are expected who would not otherwise have come, but the effects of their spending should not be overestimated. It is already becoming clear that there will be displacement effects in tourism, and that some hotel rooms originally reserved for the World Cup and only recently released will remain vacant. Certainly an increase in tourism was not evident at similar events in Germany or at recent major sporting events in other European countries.

The investment made in advance of the World Cup have not generated noticeable macroeconomic effects. The volume of investment in expanding stadium capacities for the World Cup totalled about 1 billion euros, and this was not enough to stimulate the economy, particularly as it was spread over several years. Probably more electrical goods and sporting goods will be purchased here in connection with the event, but a rise in private consumption as a whole is not to be expected.

Whether the World Cup will generate a positive mood in the country as a whole that will transfer into consumer behavior is very doubtful. Experience in other countries does not suggest that economic expectations are influenced by a soccer championship. If at all, it is the performance of the national team that affects confidence, not the country where the matches are played. If the results of an analysis of the relation between soccer games results and share prices are applied to the general formation of economic expectations, the conclusion is

again that no effects on economic decisions are to be expected at all from a strong performance by the German team, as this result is seen by fans as the only likely one. However, a negative influence may be expected if the German team loses.

Although one must conclude that in all probability the World Cup will not have any noteworthy positive effects on the German economy as a whole in the short run, the 2006 World Cup is one small part in a broader transition from an industrial to a service society, which is characterized by major events worldwide.

Last but not least, as a sports and cultural event, the World Cup is of high socio-political importance, as the German soccer association DFB has rightly stressed in its advertising. Such an effect should not be overestimated, however, given the evidence from studies showing that the "fun value" of the event and even the euphoria over winning may have no noticeable effects on consumption. But despite all the criticism of the commercialisation of sport, the World Cup is part of a global process of improving understanding between nations. Moreover, an event of this kind offers a country the chance to present itself in a positive light internationally, which can strengthen social contacts between countries at many levels and improve business relations as well. But the international stage can also produce negative effects, for example, when hooligans succeed in using it for large-scale violence. Whether or not this danger is outweighed by the potentially positive effects of international image building for Germany cannot be stated in advance. For some years now there has been a threat of violence disrupting the peaceful character of major sports events, and the danger of terrorist attacks is particularly acute at these globally publicized events where huge crowds gather.

³⁷ For another analysis of the social value of the World Cup see Malte Heyne and Bernd Süßmuth: "Wieviel ist den Deutschen die Ausrichtung der FIFA-WM 2006 wert und warum?" Bremen and Munich, May 2006: http://www.vwl.wi.tum.de/Aktuelles/Heyne_Suessmuth.pdf. We became aware of this brandnew study after finalizing our paper. The study basically supports our conclusion that the value of the World Cup itself (without a success of the German team) is quiet low within the population in Germany. The authors use the Contingent Valuation Method (CVM) for estimating the social value on the basis of a survey with 500 respondents.