

**Assessing the Impact of the  
FIFA World Cup Germany 2006<sup>TM</sup> -  
Some Methodological and Empirical Reflections**

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## 1 INTRODUCTION

Big tourist events have undoubtedly a considerable economic dimension. The spectators of these events buy entrance tickets, use the traffic system and take advantage of the services of the restaurant and hotel business. The organisers invest in the extension of tourism facilities and traffic networks and provide the means of production for the smooth running of the event. Especially big sports events are important advertising media. Furthermore the rights of television broadcast and the contributions of sponsors are an important source of finance. For the respective region, carrying out such an event often means a strain e. g. regarding the volume of traffic. At the same time the event may lead to a lasting improvement of the regional infrastructure. Last but not least the regions' image will be improved by carrying out the event only due to the media coverage.

Assessing the impact of tourist events is rather difficult because such events have always significant regional economic effects but not necessarily appreciable overall economic effects (comp. Ahlert, 2001, p. 116). Only in the case of international tourist events their spending determine definitely positive the outcome on regional as well as on national economic level, but especially in the case of such major international tourist events the positive macroeconomic effects are associated with substantial external effects.

The paper gives an overview of various economic studies – cost-benefit analysis (Rahmann et al., 1998; Kurscheidt, Rahmann, 1999), impact analysis (Ahlert, 2000; Meyer, Ahlert, 2002; Ahlert, 2005) and regional studies (Meyer, Ahlert, 2000; Wegweiser GmbH, 2004) which have been prepared in Germany in the past to identify the potential tangible and intangible effects of the FIFA™ World Cup 2006. It explains the strength and weakness of the different approaches and how these different types of analysis can perfectly fit together for identifying the potential regional, sectoral and national socio-economic effects. Besides that the paper shows what kind of mistakes respective misinterpretation of such studies and their results can be frequently observed.

## 2 STUDIES CARRIED OUT WITH REGARD TO FIFA™ WORLD CUP 2006 GERMANY

In Germany several studies have been prepared for estimating the social and economical impact of hosting the FIFA™ World Cup 2006 in Germany. In the following a short overview to the different types of studies for the national, regional and sectoral level of the economy is given.

### 2.1 OVERALL ECONOMIC STUDIES

Most of the presented studies have been prepared for the overall national level of economy. On the one hand studies have been prepared on the basis of macroeconomic impact models and on the other hand a cost-benefit-analysis has been prepared.

### 2.1.1 COST-BENEFIT ANALYSIS (RAHMANN ET AL., 1998; KURSCHIEDT, 2004)

Within the framework of the evaluation and feasibility study commissioned by the German Football Association for the football world championships in 2006, Rahmann et al. (1998) documented the socio-economic benefit of the event on the methodical foundation of the cost-benefit analysis (comp. Kurscheidt, Rahmann, 1999). Major sport events - in particular so-called mega-events like a Soccer World Cup - are big public projects with a high degree of externalities. Their production requires as well private as public inputs, affects a variety of interest groups and exercises a considerable effect on economic wealth. The predominantly political decision whether or not to bid for and to host a sport mega-event should therefore be based on a thorough ex ante analysis of possible repercussions of the project. A classical approach to such complex decision situations is cost-benefit analysis.

The cost-benefit analysis is a social investment calculation that includes both intangible and tangible socio-economic effects. It is aligned with rational decision making via resource allocation according to the opportunity-cost principle and economic welfare criteria. Within a flexible, clear analysis structure, the project effects are classified in direct vs. indirect and tangible vs. intangible costs and benefits, whereby the cost-benefit analysis considers qualitative and quantitative effects equally in a closed, methodical framework.

The main figure in the cost-benefit analysis is the so-called net present value (NPV). It summarizes all quantifiable positive and negative effects of the project in one single monetary value. It is calculated by adding up all discounted net benefits over the course of a defined planning horizon. Its value must be greater than zero for the recommendation of a project. When there are several projects, the alternative project with the highest net present value should be selected.

In terms of the World Cup football championships 2006, three influencing factors in particular can be identified for their economic effects. (1) the size of the stadium investments in the pre-event phase, (2) the expenditures of foreign tourists in the presence phase, (3) the (often negative) net result of the stadium operation in the post-event phase.

The effect of the investments is ambivalent inasmuch as they first represent costs, the financing of which results in additional capital costs in the post-event phase, which also admittedly generate benefits through the procurement of additional income as a result of multiplier effects. Moreover, they even correlate positively with the tourism spending as an indirect result of the influence of the stadium capacity and tourism attractiveness of the respective venues where the investments are made. Naturally, the consumption expenditures of the tourists during the event have an immediate positive effect and the effects are also multiplied as long as they are not replaced by event-independent expenditures.

The analytical advantage of the cost-benefit analysis compared to other methods (see impact analysis within the framework of the input/output analysis) is that the inter-temporal aggregated net present value includes the full effects of pre-periods at a discounted rate.

In the most recent calculations (Kurscheidt, 2004), optimistic expectations estimate a sustainable welfare growth of up to 3.4 billion Euros for the 2006 World Cup over an analysis period of 15 years.

### 2.1.2 DYNAMIC INTERINDUSTRY BASED MACROECONOMIC IMPACT ANALYSIS (MEYER, AHLERT, 2002)

Although the cost-benefit analysis performed for the FIFA World Cup 2006 (Rahmann et al., 1998; Kurscheidt 2004) does represent a lot of hard work, the analysis results suffer from the fact that the estimation of the overall economic investment and consumption effects is only the result of a rudimentary multiplier analysis with only one aggregate consumption multiplier and three aggregate investment multipliers for three pre-event years.

This was an important motive for the work of Meyer and Ahlert (2000, 2002). Based on the assumptions made within the Rahmann study on the World Cup stadium investments and the consumption expenditures of the foreign World Cup visitors, they estimated the overall economic income and employment effects for the analysis timeframe of 2002 to 2010 within the framework of the input-output based econometric forecasting and simulation model SPORT, which is a model variant of the German INFORGE<sup>1</sup> model (Ahlert, 2001; Distelkamp et al., 2003).

The performance of this model is founded on the INFORUM<sup>2</sup> philosophy, what means to build econometric input-output models bottom up and fully integrated (Almon, 1991; Nyhus, 1991). The construction principle bottom up says that each sector of the economy has to be modelled in great detail and that the macroeconomic aggregates have to be calculated by explicit aggregation within the model. The construction principle fully integrated means a model structure that takes into account the input-output structure, the complexity and simultaneity of income creation and distribution in the different sectors, its redistribution among the sectors, and its use for the different goods and services the sectors produce in the context of globalizing markets. In this way one succeeds to describe properly the role of each sector in the interindustry relations, its role in the macroeconomic process as well as its integration into international trade.

Final demand has the components private consumption, public consumption, equipment, construction, exports, inventories and imports of finished products in the disaggregation of 58 product groups. The most important determinants of final demand are the world trade variables (explaining exports), disposable income of private and public households (explaining private and public consumption), the interest rates and profits (investment) and the relative prices for all components and product groups of final demand.

Intermediate demand of the firms is depicted. For all intermediate inputs the model distinguishes deliveries from domestic production and imports. In general the input coefficients are variable and depend on relative prices and time trends.

The most important determinants of employment are production and the real wage rate of the sector. Wage rates are estimated by productivity and prices. Profits and unit costs are

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<sup>1</sup> Interindustry Forecasting Germany

<sup>2</sup> Interindustry Forecasting University of Maryland

given by definition. Unit costs of the product group and the prices of competing imports are the most important determinants of sectoral prices.

Besides the deeply disaggregated input-output account the model contains the sequence of accounts within the German SNA with the institutional transactors public households, private households, corporations and rest of the world and the functional transactors production, generation of income, distribution of income, redistribution of income, capital account and financial account.

This system contains the whole income redistribution of social security and taxation between the government, private households and corporations and thus allows calculating disposable income figures of public and private households, which are central determinants of final demand. Another important outcome of the SNA part of the model is the net lending/borrowing of the institutional transactors, which have influence on the interest rates. Interest rates are further determined by the US rate of government bonds and monetary policy variables, which react on price signals.

So the model has a high degree of interdependency. In addition to the common interdependencies of income generation the interdependencies of volumes and prices and the wage-price-interdependency are depicted. The special performance of the SPORT-model is the complete linkage of the national accounts to the input-output system and considering the sport-economic activities in detail.

Within a sport-specific version of INFORGE, which incorporates the results of a sport specific satellite account<sup>1</sup> the economic impact of the FIFA<sup>TM</sup> World Cup 2006 has been estimated (comp. Ahlert, 2000; 2001). The impact analysis with the SPORT-model measures the benefit impacts of public investments and of additional demand of foreign visitors as well as economic costs of the alternative financial strategies for public investments. Normally impact analyses invariably measure only the benefit impact but decision makers need information on both sides of the equation to make informed decisions (Howard, Crompton, 1995).

In their calculations from summer 2001 (see Meyer, Ahlert 2002; Ahlert 2005), they come to the conclusion that the 2006 FIFA World Cup in Germany during the years 2002 to 2010 results in an additional increase in the gross domestic product of approx. 6.8 billion Euros and an increase in employment in the amount of approx. 25,000 full-time jobs. This is an average of 2,800 people per year. In the year 2006, the GDP will grow by an additional 0.1 %.

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<sup>1</sup> It gives a detailed and consistent description of the economic relevance of sports for the German economy. It is a sport-specific extension of the German system of national accounts (SNA) and has been prepared for the period 1993 to 2000 (Ahlert, 2000). In this satellite account for sports the direct impact of all sport activities to gross value added resp. GDP were estimated systematically in accordance to concepts and definitions of the SNA.

### 2.1.3 IMPACT ANALYSIS WITHIN A QUARTERLY PANEL MODEL (BOSS ET AL., 2005)

The analysis of the Institute for World Economics (Boss et al., 2005) took place within a panel model. Based on an empirical quarterly analysis for 18 large sports events, the 1963II to 2004IV period was examined to determine whether and to what extent the gross domestic product actually grew due to the additional visitors during the 2006 World Cup.

The authors come to the conclusion that an additional GDP increase of 0.1% can be expected in the 2nd quarter of 2006 and 0.04% in the 3<sup>rd</sup> quarter, whereby the overall result was identified as weakly significant. The latter is not particularly surprising since, at least in the 60s and 70s, large sporting events were not particularly well attended by foreign guests. The only positive exceptions were and are traditional Olympic Games and the FIFA World Cup. As a result, no significant empirical connections can be observed during this early period.

### 2.1.4 EXPENDITURE ANALYSIS (BARGEL, 2005)

The examination of the Postbank AG (Bargel, 2005) is based on an estimation of all expenditures and revenue increases resulting directly from the 2006 World Cup. The consumption expenditures from domestic and foreign visitors that directly relate to the 2006 World Cup and all investment expenditures for the mega event (World Cup stadiums and traffic infrastructure) were taken into consideration as expenditures. This exclusively demand-side analysis suffers in particular from the fact that there was no model for estimating all income and employment effects. Moreover, all increases in expenditures were included in the analysis regardless of compensating substitution processes.

The Postbank estimates a sustainable growth impetus of up to 10 billion Euros, which will result in a sustainable employment impetus in the amount of approx. 40,000 jobs. An additional growth in the GDP of almost 0.3% is expected for the 2006 World Cup year.

## 2.2 REGIONAL ECONOMIC STUDIES

### 2.2.1 REGIONAL IMPACT ANALYSIS (MEYER, AHLERT, 2002; AHLERT, 2005)

Normally it is rather complicate to regionalize the indirectly induced overall cycle effects. By using the special regional modelling approach LÄNDER, it has been analysed how the overall macroeconomic impact of hosting the FIFA<sup>TM</sup> World Cup 2006 on income and employment can be spread out to the regional level of the individual federal states (in German: Länder).

The model LÄNDER (see Ahlert, 2005 & 2006) includes information from the macroeconomic model INFORGE as to Germany as a whole (prices, wages, employees, gross value added) as well as specific information on the individual federal states aggregated according to 11 industries. The data of the model LÄNDER is based on the national accounts of the federal states. For each of the 11 aggregated industries of each



federal state there are, among others, data on wages, the gross product and the employment collected for specified time intervals.<sup>1</sup>

The model LÄNDER is connected with the model INFORGE and serves to forecast the structural change on the level of the 16 German federal states. The total system INFORGE & LÄNDER is designed in a manner that full congruence is guaranteed with the information given in the overall macroeconomic model INFORGE about Germany as a whole. This model does not only allow to forecast the stimuli for the 16 states emanating from the overall economic development but also to assess the effects on the structure of every single federal state with regard to 11 aggregated industries.

In a simulation with regard to the World Cup 2006 it has to be taken into account that the venues of FIFA World Cup™ Germany 2006 are not evenly spread over the German ground. There are only 12 staging cities. Nonetheless the question arises to what extent the effects on income and employment are in fact evenly spread over the federal states. It can of course be expected that the effects will partly be confined to the venues e. g. in case of the money directly spent by the sports tourists at the venues or the necessary capital expenditure in the pre-event phase. According to the model calculation, the direct, primary stimulus has been attributed to the venue whereas the indirect effects calculated by means of INFORGE/SPORTS have been adapted to regional level by the model LÄNDER.

#### 2.2.2 IMPACTS ESTIMATED BY CONDUCTING A SURVEY (WEGWEISER GMBH, 2004)

This study present the results of an expert survey conducted for four regions of Germany. The circle of experts is thereby limited to event decision-makers in politics, government, sports, and economics. The queried group of people within the economy included, in particular, representatives from tourism, stadium construction and stadium operation. The goal of this “survey of investment” was to identify the investment need and the outgoing innovation potential of the FIFA World Cup 2006. By limiting the questioning to the event decision makers, the result is an unbalanced indication of the event-induced innovation potential in favour of the event. This shortcoming is further intensified due to the fact that no classification of the event industries and the influencing event-specific investment impulses is performed in the overall economic context.

The regionalised expert survey comes to the conclusion that the greatest profiteers are the World Cup cities of Leipzig, Munich, Dortmund and Gelsenkirchen. The greatest innovation potentials are seen in the areas of stadium construction and technology and tourism.

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<sup>1</sup> Individual, dynamic multiplier models – the size of the multiplier varies over the time – have been developed within the model LÄNDER for each federal state (see Ahlert, 2007).

### 3 CRUCIAL ASPECTS IN DESIGNING SUCH EVENT SPECIFIC STUDIES

In this chapter some frequently observed problems respective misinterpretation of sport-economic impact studies and their results are discussed. With regard to the simplified methods of economic impact analysis Kesenne (1998) gives a critical overview.

#### 3.1 IDENTIFYING THE EVENT-RELATED INVESTMENTS

In an overall economic effect analysis of a mega event, such as the FIFA World Cup or the Olympic Games, the investments made in the run-up to the event should be considered step-by-step in terms of their direct reference to the event. In this case, we can differentiate between the net and gross overall economic effect of an event.

The gross effect shows the potential macroeconomic effects of a mega event as a result of the additional spending of foreign event visitors and the additional event-specific investments in the post-event phase. The latter include both investments in event-specific infrastructure (e.g. stadiums, direct linking of the stadiums to the traffic network, etc.) as well as supplementary non-event-specific investments that would have taken place anyway and that will only accelerate against the background of the occurring event (e.g. finishing traffic, communications and hotel infrastructure).

On the other hand, when estimating the event-specific, net overall economic effect, the economic effects of the implementation of “anyway” measures are not included in the calculation of the overall economic effects of the mega event. By not taking the “anyway” investments into consideration, the expansive circular effects resulting from these measures are omitted on one hand. On the other hand, the same also applies to the too-large parts of the public-sector financing costs, which thus do not distort the ascertained result. Such a refined impact analysis has been undertaken with view to the German application for the Olympic Games 2012 (comp. Ahlert, 2004b).

#### 3.2 WORLD-CUP-INDUCED GOVERNMENT EXPENDITURES

Within the scope a complete cost-benefit analysis of an event, all societal costs should generally be taken into consideration. The “hard”, often consciously undisclosed costs include, for example, expenditures for ensuring public safety during the event as well as hidden subsidies in favour of the organizer.

For example, the German tax authorities promised the international football association FIFA an exemption on the withholding tax for all World Cup proceeds. If a 25 % deduction were to be levied on bonuses, entry fees and monetary benefits (the so-called withholding tax) alone for the 2006 World Cup proceeds of the 2006 FIFA World Cup, this would result in tax revenue of approx. 180 million Euros. Similarly, the FIFA sold broadcast rights worth 180 million Euros to public television companies, which are financed directly by domestic television watchers via radio and television fees.

### 3.3 INTERMEDIATE CONSUMPTION RESPECTIVELY VALUE ADDED OF THE ORGANIZER

Normally the operative budget of the organizing committee of big sport events like the FIFA World Cup is financed resp. sponsored by national and international companies. In a macroeconomic view sponsorship of a company is a strategic management decision in outsourcing marketing activities to a different company - the organizing committee of the event. By such a decision the companies expects that the product placement in the context of the sport event will be much easier and more sustainable.

With regard to international sponsors of the event the macroeconomic impact is generally positive. It is a final demand (resp. export) of better product placement opportunities by the event organizing committee. On the other hand with regard to national sponsors this purchase is only an intermediate demand. If the budget of the organizing committee is financed by national sponsors we obviously only have a difference in the sectoral structure of intermediate demand and value added. The total value added remains unchanged.

Often the details of financing the event are disregarded. In the case of financing the organizing committee by sponsorship of national companies there is no additional intermediate demand. In the end it is only a change in the companies marketing concept by outsourcing some activities in favour of the event organizing committee.

Looking at the FIFA World Cup 2006 we can observe that national companies as "Official Suppliers" are sponsoring the event to 60 million Euros. Besides that international German companies as "FIFA World Cup Official Partners" are financing the competition to the amount of 120 million Euros.

### 3.4 INBOUND TOURISM CONSUMPTION

With regard to actual estimations to the economic impact of the World Cup it should also be checked whether the estimate of the tourist expenditure by the foreign spectators of the World Cup, i. e. the event-specific inbound tourism consumption has to be corrected. At the moment the World Cup ticketing information gets more and more precise with regard to the sales of tickets to foreign visitors of the different countries.

Besides that the overall economic effects of this additional inbound tourism consumption could be adapted more precisely, if there would exist more precise information about the country of origin of the incoming World Cup tourists as well as about the detailed commodity structure of the international World Cup tourists. The latter information can be yielded by special surveys (Preuss, 2005) or by the detailed information of tourism satellite accounts (comp. Ahlert, 2004a).

### 3.5 DOMESTIC TOURISM CONSUMPTION

From an overall macroeconomic perspective, the World-Cup-specific expenditures of domestic visitors do not need to be taken into consideration since they can only spend their money once. They will finance additional expenses associated with the World Cup through substitution with other consumption uses. Thus, it could be that some domestic fans forgo a vacation in order to finance the additional World Cup expenditures. However, this would only be considered economically positive if this were to affect international travel. In this

case, the income earned domestically would stimulate additional demand domestically and would thus not flow overseas. Some households will also use part of their savings in order to finance the overall increase in spending due to the uniqueness of the event. However, since the additional net economic effects are difficult to identify and - probably - only carry little weight, their estimation is normally forgone.

### **3.6 REGIONAL DISTRIBUTION OF THE OVERALL ECONOMIC EFFECTS**

From a regional economic perspective, the hosting of the 2006 FIFA World Cup will cause, at least in the short term, a massive growth impetus in the venue cities. This applies in particular to those cities that are especially attractive from a tourist point of view (magic cities). However, from an overall economic perspective, the total consumption expenditures of private domestic households remain almost unchanged due to substitution processes because it can be expected that there is an additional demand at the venues and correspondingly a reduced demand at the residences of the domestic spectators. There is only an interregional redistribution of income in favour of the 12 World Cup venue cities. Only the consumption expenditures of foreign World Cup tourists lead to a clearly positive impetus even from an overall economic perspective (see Meyer, Ahlert, 2002; Ahlert 2006).

## **4 CONCLUSION**

The paper gives an overview of various economic studies which have been prepared in Germany in the past to identify the potential tangible and intangible effects of the FIFA World Cup™ 2006. It explains the strength and weakness of the different approaches and how these different types of analysis can perfectly fit together for identifying the potential regional, sectoral and national socio-economic effects. The paper at hand illustrates the wide scope of application of such model-based calculations and how they can be used for improving the quality of the quantitative overall economic results within the framework of a cost-benefit analysis.

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