



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER



Diskussionspapier des
Instituts für Organisationsökonomik

11/2015

The Willingness to Pay for a German Win
of the 2014 FIFA World Cup in Brazil

Linn-Brit Bakkenbüll/Alexander Dilger

Discussion Paper of the
Institute for Organisational Economics

**Diskussionspapier des
Instituts für Organisationsökonomik
11/2015**

November 2015

ISSN 2191-2475

**The Willingness to Pay for a German Win
of the 2014 FIFA World Cup in Brazil**

Linn-Brit Bakkenbüll/Alexander Dilger

Abstract

We examine the value of sporting success of the 2014 Football World Cup in Brazil by using a method that allows measuring non-market goods, the contingent valuation method (CVM). Besides the value of sporting success in form of the willingness-to-pay (WTP), we determine what influences the WTP for different rounds in the tournament. According to our survey in Germany (n=549), the WTP increased with the success of the German national football team and respondents were willing to pay €23.00 on average if Germany became the World Champion 2014. An extrapolation of the WTP of the respondents finds that the German population at large were willing to pay €1.696 billion for becoming World Champion 2014. Tobit regressions show that expectations, intangible and socio-economic factors were significant determinants of the individual WTP.

JEL-Codes: D12, D61, D62, H41, H43, L83

Die Zahlungsbereitschaft für einen deutschen Sieg bei der Fußball-Weltmeisterschaft 2014 in Brasilien

Zusammenfassung

Wir untersuchen mittels der Kontingenten Bewertungsmethode für öffentliche Güter den Wert des sportlichen Erfolges der Fußball-Weltmeisterschaft im Jahr 2014 in Brasilien. Neben dem Wert des sportlichen Erfolges im Sinne der Zahlungsbereitschaft bestimmen wir Einflussfaktoren für die Zahlungsbereitschaft in unterschiedlichen Turnierrunden. Gemäß unserem Datensatz von 549 Antwortenden in Deutschland stieg die Zahlungsbereitschaft mit dem Erfolg der deutschen Nationalmannschaft. Die Umfrageteilnehmer waren im Schnitt bereit, 23,00 Euro für den deutschen Gewinn der Weltmeisterschaft zu zahlen. Eine Extrapolation der Zahlungsbereitschaften findet für die deutsche Bevölkerung insgesamt einen Wert von 1,696 Mrd. Euro für den Weltmeistertitel. Tobit-Regressionen zeigen, dass Erwartungen, immaterielle sowie soziodemographische Faktoren für die individuelle Zahlungsbereitschaft signifikant sind.

Im Internet unter:

http://www.wiwi.uni-muenster.de/io/forschen/downloads/DP-IO_11_2015.pdf

Westfälische Wilhelms-Universität Münster
Institut für Organisationsökonomik
Scharnhorststraße 100
D-48151 Münster

Tel: +49-251/83-24303 (Sekretariat)
E-Mail: io@uni-muenster.de
Internet: www.wiwi.uni-muenster.de/io

The Willingness to Pay for a German Win of the 2014 FIFA World Cup in Brazil

1. Introduction

The World Cup is one of the worldwide biggest sporting events. In 2014, the World Cup took place in Brazil. Millions of people followed the World Cup in stadiums, at home, or at public viewing places to celebrate it. Such sport events and especially sporting success create positive externalities (Johnson 2008) and public commodities as feelings of national pride (Allison and Monnington 2002), local unity (Castellanos et al. 2011) and a feel-good factor among the population (Forrest and Simmons 2003). In general, public commodities are characterised by no rivalry and non-excludability in consumption (Mozsár 2003). However, it is difficult to measure the value of sporting success because of its public commodity character and thus its intangible nature.

The purpose of this paper is to estimate the value of German sporting success with regard to the FIFA 2014 World Cup in Brazil and it has two objects of investigation. First, the study examines the value of sporting success of Germans for different rounds in the tournament. In particular, using the contingent valuation method (CVM), we measure the individual willingness-to-pay (WTP) for the different scenarios that the German national football team will reach the round of the last sixteen, the quarter-finals, semi-finals, the final and that it wins the World Cup. The individually stated WTP provides information about the value of sporting success. Furthermore, we extrapolate the individual WTP to determine the aggregated WTP of the German population. Second, an empirical analysis, based on the consumption capital theory by Becker et al. (1964), identifies the determinants that influence the WTP with special attention to the impact of happiness and being proud. For the analysis, we use data from an online and street survey on the World Cup in 2014 in Brazil that was accessible from May 21 till June 11, 2014 and was answered by 549 participants.

The paper is organised as follows: Section 2 introduces the conceptual framework, reviews existing literature referring to our object of investigation and formulates some expectations about factors influencing the WTP of different individuals. Section 3 presents the data used as well as the method. Section 4 sums up our empirical results starting with descriptive statistics followed by an extrapolation of the WTP for the whole German population and Tobit regressions to identify important factors of the WTP. Section 5 discusses the main results and concludes. It also outlines directions for future research and limitations of this paper.

2. Conceptual Framework, Literature Review and Expectations

This section gives an overview about the theoretical framework relating to measure the willingness-to-pay (WTP) and its determinants. It also provides a short literature review on already existing research that examines the value of sporting success of sport events like Olympic Games or football tournaments. We take a look at a specific method that allows us to measure the WTP and thus the value of sporting success followed by a specific selection of literature relating to the value of sporting success at different sport events. Then we look at possible determinants of the individual WTP.

The Contingent Valuation Method (CVM) is an economic and survey-based technique that has been designed to calculate the value of a good that is not traded in the market, especially a public good. The CVM uses surveys to capture the individual WTP for certain hypothetical improvement in non-market goods (Coates and Humphreys 2003). For this purpose, individuals are asked to declare their WTP in a hypothetical scenario by using an open question (Mitchell and Carson 1989).

Initially, the CVM has been used to measure the value of environmental and recreational public goods (Carson 2011, Davis 1963, Diamond and Hausman 1994, Thayer 1981). Then this method was applied to policy analysis including siting of a hazardous waste disposal facility (Groothuis et al. 1998) and historical site preservation (Chambers et al. 1998). In recent years the CVM has also been used in the sports industry. Johnson and Whitehead (2000) were the first to apply it to sports to determine the value of public goods generated by sport teams (see also Johnson et al. 2001). By the time, it has been applied to estimate the value of hosting sport events (Walton et al. 2008), the value of amateur sport programmes (Wicker 2011), and the value of sporting success (e.g. Humphreys et al. 2011, Wicker, Prinz and von Hanau 2012).

In spite of the application of the CVM for half a century (starting with Davis 1963), this method is questioned with respect to credibility, precision, and especially because of a potential hypothetical bias (Diamond and Hausman 1994, Walker and Mondello 2007). The bias is induced by a potential overestimation of the respondents' WTP because of the hypothetical nature of the CVM scenario (Wicker et al. 2015). Thus, the WTP of the respondents could be higher in the generated hypothetical scenario than their actual WTP because of hypothetical payments for the non-market good. Regarding this hypothetical bias, the results of previous CVM studies are inconsistent. Some studies cannot confirm any difference between hypothetical and actual WTP (Carlsson and Martinsson 2001, Sattler and Nitschke 2003) whereas, for

example, Johannesson et al. (1998) support a hypothetical bias by documenting that the hypothetical WTP exceeded the respondents' actual WTP.

As described above, the CVM has been applied to estimate the value of sporting success by asking about the individual WTP for achieving different tournament rounds. In this study we examine the value of sporting success to the German population at a major sport event in 2014, the FIFA World Cup in Brazil. The object of investigation of other studies dealing with the estimation of the value of sporting success has been either national football teams (World Cups or European Championships) or the Summer or Winter Olympic Games. Hereinafter, a short overview of specific studies is given. Up to now, there are two studies dealing with the football World Cup. First, Rätzel and Weimann (2006) analysed the WTP of the German population for the 2006 World Cup. On average, Germans were willing to pay €34.97 for the title. In addition, people were asked for their willingness-to-accept (WTA) a final defeat of the German national football team. The authors found that €17 billion would have been necessary to compensate for the loss of the title and to achieve collective indifferences. Wicker, Prinz and von Hanau (2012) examined the value of sporting success at the 2010 FIFA World Cup in South Africa and demonstrated that, on average, the respondents were willing to pay €25.79 for winning the tournament. Wicker et al. (2015) analysed the WTP for winning the 2012 UEFA European Cup. They showed that the respondents were willing to pay €40.74 on average for winning the European Championship. Compared to the WTP for winning the World Cup, the WTP for winning the European Championship is interestingly higher.

Four studies examined the value of medal success at Summer or Winter Olympic Games. Humphreys et al. (2011) estimated Canadians' WTP for financing a programme named 'Own the Podium' and thus for success of team Canada in the 2010 Winter Olympics. The so-called 'Own the Podium' programme was introduced by the Canadian government in the run-up to the Winter Olympic Games in Vancouver in 2010 to increase the number of medals for Canada. Participants of the survey were confronted with a hypothetical scenario and were asked about the financial support of their household to this program, before and after the Games. Before the Olympic Games started, households were willing to pay C\$44.96 (currently¹ €31.74). The Post-Olympics WTP was much higher with C\$91.42 (€64.54). Wicker, Hallmann et al. (2012) analysed the value of medal success at the 2012 London Olympic Games and showed that, on average, German respondents had a WTP of €6.13 for Germany achieving first place in the final medal table. Wicker et al. (2015) found a much higher WTP of

¹ One Canadian dollar equals €0.7060 by now, retrieved November 28, 2015 at http://www.finanzen.net/waehrungsrechner/kanadischer-dollar_euro.

€46.47 for Germany being ranked first in the medal table of London. One reason for this large difference could be the different dates of these surveys, one year (Wicker, Hallmann et al. 2012) vs. a few months (Wicker et al. 2015) before the Olympics. Rohkohl and Flatau (2014) found a similar value as Wicker, Hallmann et al. (2012) by asking German respondents about their WTP for medal success at the 2016 Summer Olympics in Rio several years in advance. According to them, respondents are willing to pay €6.86 for improving the medal performance of the German team.

The value of sporting success can be measured by the WTP that in turn expresses the consumer's utility (Becker et al. 1964). Generally, the individual's WTP should increase with the individual's subjective utility derived from national sporting success. In this context, the subjective utility and thus the WTP may differ among consumers depending on the individual importance of the sporting success (Wicker et al. 2015). Therefore, individuals with higher interest in sports and in a better tournament performance are willing to pay more because it is more important for their personal comfort. Furthermore, the type of sporting success may influence the subjective utility and WTP. This means that a higher stated WTP results from higher individual utility evoked by better results in a tournament. Previous studies (e.g. Rätzl and Weimann 2006, Wicker et al. 2015) support this assumption by showing an increase of the WTP from the quarter-finals to the semi-finals, and again, to the final and winning there.

The amount of the individual WTP may be influenced by several factors that can be grouped into consumption-related factors, expectations, intangible factors, and socio-economic factors (Wicker, Prinz and von Hanau 2012, Wicker et al. 2015). The consumption-related factors can be subdivided into generally sport-related consumption capital factors and football-specific consumption capital factors (Wicker, Prinz and von Hanau 2012). In general, the consumption capital theory by Stigler and Becker (1977) implies that individuals can generate consumption capital by the repetitive consumption of similar goods. In this regard, the individual utility is influenced by the size of the consumption capital. Transferring this concept to sports, individuals can increase their sport-specific consumption capital by watching sport events or by participating in sports. Walton et al. (2008) show a positive relationship between the individual WTP and interest in sport as well as sport participation. Consequently, we assume that interest in sports and sport participation have a positive impact on the value of sporting success, measured by the individual WTP. Even more specific, one can assume football-specific consumption capital that is influenced by football-specific factors like participation in football, interest in football and the number of World Cup games watched. The interdependences are analogue to those of the sport-related consumption capital factors. Thus, the

individual value of winning the World Cup should be greater if the person regularly participates in football and has a higher interest in it.

The second main group of factors that may influence the individual WTP are expectations about the outcome of the sport events. Such expectations are formed by previous experiences (Carman 1990). It can be reasonably assumed that the individual WTP will increase with expectations about the team's performance. With expectations above usual levels regarding team performance, the utility from sporting success in form of seeing the team performing well is greater, too. This assumption is supported by Humphreys et al. (2011) who depict a positive relationship between future performance of athletes and the WTP for medal success. Summing up, we forecast that higher expectations lead to higher WTP for sporting success.

As a third main group of influencing factors on WTP, we consider the so-called intangible factors. Factors like personal identification with the country, identification with the national team, and the national and personal importance of winning the World Cup are part of this group. Wicker, Prinz and von Hanau (2012) show a positive impact of identification with the country and national team on WTP as well as the national and personal importance of winning the title. This statement is supported by Humphreys et al. (2011). In addition to the mentioned intangible factors, the present study includes two additional factors, namely happiness and proud. Humphreys et al. (2011) show that more than 94 per cent of the respondents feel proud when a Canadian wins a gold medal. Additionally, nearly 92 per cent feel proud if Canadians win more gold medals than any other country. Complementary, Wicker, Hallmann et al. (2012) depict that individuals who feel proud and happy when German athletes win medals at the Olympic Games 2012 state a greater WTP as well. In sum, it is assumed that the intangible factors positively influence the value of sporting success and stated WTP, respectively.

The last group include the socio-economic factors like age, gender, educational level, income and birthplace. In terms of age, it can be expected that younger people state a higher WTP for winning the tournament than older people because of the nature of the feel-good-factor. Meaning, younger people are more willing to share their positive experience with other people (public viewing) and celebrate the success of the national team more than older people (Walton et al. 2008, Wicker, Prinz and von Hanau 2012). Conversely, it can be presumed that people who witnessed the victories of the World Cup in 1954, 1974, and 1990, consequently older people, state a higher WTP than mid-age people (Wicker, Prinz and von Hanau 2012). In conclusion, it is expected that age has a negative effect on the value of sporting success whereas age squared has a positive effect resulting in a U-shaped relationship between age

and WTP. There could be a gender effect because football is a male-dominated sport with regard to practice and watching (Knoppers et al. 1991). Moreover, we are asking about the Football World Cup of men, not women. Therefore, men's WTP should be greater than women's WTP. This assumption is in accordance with previous studies (e.g. Walton et al. 2008). The educational level as a third socio-economic factor should influence the stated WTP in a positive way. Thus, people with a higher level of education are expected to be willing to pay more than those with a lower educational level (Süssmuth et al. 2010). Moreover, many CVM studies (e.g. Atkinson et al. 2008, Wicker 2011) find a positive relationship between income and WTP because people with higher income could spend more. For this reason, we assume that income influences the value of sporting success and WTP in a positive way. A birthplace in Germany as our last socio-economic factor should influence the WTP in a positive way as well. It can be expected that the WTP for one's own national team is greater than for other national teams because of national pride and reputational effects.

3. Data and Method

To measure the value of sporting success at the 2014 FIFA World Cup, we collected our data by using an online questionnaire and a corresponding street survey in the city of Münster, Germany. Additionally, we gave questionnaires to students in different lectures at the University of Münster.² The online survey had been open from May 21 to June 11, 2014. The street survey and questioning of students in lectures started and ended at the same days. Consequently, the survey had finished the day before the World Cup in 2014 started. The link of the online questionnaire was published on several social online networks, such as Facebook, Twitter or Xing, and was published on the website of the Institute for Organisational Economics as well as on an intranet of the University of Münster called 'Learnweb'. At the end, 549 persons have participated in the survey, 194 of them online, 203 answered the street survey and 152 were students in lectures.

The questionnaire began with a short introduction informing participants about the content of the survey. Furthermore, participants were notified that the attendance was anonymous, that the data were treated confidentially, and that the information they provided would be used for scientific purposes only. The questionnaire comprised 20 questions with some sub-questions that can be divided in sport-specific and football-specific questions, questions about the 2014

² See the Appendix for an English translation of the questionnaire.

FIFA World Cup and socio-economic questions. Table 1 provides an overview of the variables used in the survey.

Variables	Description	Scale
WTP_LS	WTP that Germany reach the last sixteen (€)	Metric
WTP_QF	WTP that Germany reach the quarter-final (€)	Metric
WTP_SF	WTP that Germany reach the semi-final (€)	Metric
WTP_F	WTP that Germany reach the final (€)	Metric
WTP_WIN	WTP that Germany becomes World Champion (€)	Metric
INT_SPORT	Interest in sport in general (from 0=no interest at all to 4=very strong)	Ordinal
SPORTP	Regular sport participation (at least once per week; 1=yes)	Dummy
INT_FOOT	Interest in football (from 0=no interest at all to 4=very strong)	Ordinal
WATCH_WC	Watching the World Cup (1=yes)	Dummy
WATCH_WC_GER	Watching the World Cup only with German participation (1=yes)	Dummy
GER_EXP_WIN	Expectation that Germany wins the World Cup (1=yes)	Dummy
EXP_GER	Expectation of German result (from 0=eliminated after preliminary to 5=win)	Ordinal
ID_GER	Identification with Germany (from 0=not at all to 4=very strong)	Ordinal
ID_FOOT	Identification with German national football team (from 0=not at all to 4=very strong)	Ordinal
NATIMP	Importance to country that the football team does well (from 0=not at all to 4=very important)	Ordinal
PERSIMP	Personal importance that the football team does well (from 0=not at all to 4=very important)	Ordinal
HAPPY_WIN	Degree of happiness if Germany wins the World Cup (from 0=not at all to 4=very strong)	Ordinal
PROUD_WIN	Degree of pride if Germany wins the World Cup (from 0=not at all to 4=very strong)	Ordinal
INT_FOOT_CLUB	Interest in a special football club (1=yes)	Dummy
INT_FOOT_PLAYER	Interest in a special football player (1=yes)	Dummy
AGE	Age (in years)	Metric
AGE ²	Age squared (in years)	Metric
GENDER	Gender of the respondent (0=female, 1=male)	Dummy
EDU	Educational level (from 0=no education to 6=university degree)	Ordinal
INC 1	Personal monthly net income up to €1,000	Dummy
INC 2	Personal monthly net income from €1,001 up to €2,000	Dummy
INC 3	Personal monthly net income from €2,001 up to €3,000	Dummy
INC 4	Personal monthly net income from €3,001 up to €4,000	Dummy
INC 5	Personal monthly net income over €4,000	Dummy
BORN_GER	Born in Germany (1=yes)	Dummy

Table 1: Overview of Variables

To identify the WTP and thus the value of sporting success, the survey included five different hypothetical scenarios in which the respondents were asked: “Hypothetically, suppose it would be possible, what is the maximum amount for the following success you would be willing to pay for the German national team at the 2014 FIFA World Cup?” This question was asked for reaching the round of last sixteen (WTP_LS), the quarter-finals (WTP_QF), semi-finals (WTP_SF), final (WTP_F), and for winning the title (WTP_WIN).

The participants also got questions about sports in general and specifically about football. They were asked whether they practice sports regularly, i.e. at least once per week (SPORTP), about their level of interest in sports (INT_SPORT), and specifically in football (INT_FOOT). Further, if they were interested in football, they were asked about their interest in a special football club (INT_FOOT_CLUB) or special football player (INT_FOOT_PLAYER). Regarding the 2014 World Cup, respondents were asked whether they would watch it (WATCH_WC) and, if so, whether they would watch games with German participation only (WATCH_WC_GER). Two questions concerned their expectation about the nation that would win the World Cup (GER_EXP_WIN) and the sporting success of the German team, meaning which round the German team would achieve at the 2014 World Cup in Brazil (EXP_GER). The questionnaire also contained questions about the respondents’ level of identification with Germany (ID_GER) and the German national football team (ID_FOOT). Furthermore, the participants were asked about the importance for them personally (PERSIMP) and nationally for the reputation of Germany (NATIMP) that the German football team performed well. The respondents were also asked whether they would be happy (HAPPY_WIN) and proud (PROUD_WIN) if the German national football team wins the World Cup. The survey finished with a set of socio-economic questions about the individual’s age (AGE), gender (GENDER), educational level (EDU), monthly net income (INC), and whether the participant was born in Germany (BORN_GER). Squared AGE (AGE^2) was calculated to control for a U-shaped relationship.

In Section 4 we start with descriptive statistics of our data. Then we extrapolate the average WTP for each round of the World Cup to get information about the value of sporting success to the German population. The extrapolations are based on the total number of people in each age group differentiated by gender in the German population. Moreover, regression models are estimated to identify determinants of the individual WTP. Because of the high proportions of zeros and no negative values we use Tobit regressions (Wooldridge 2006) with the two following equations:

$$\begin{aligned}
WTP_X = & \beta_0 + \beta_1 SPORT + \beta_2 WATCH_WC + \beta_3 EXP_GER + \beta_4 ID_GER + \\
& \beta_5 ID_FOOT + \beta_6 NATIMP + \beta_7 PERSIMP + \beta_8 HAPPY_WIN + \beta_9 AGE + \\
& \beta_{10} AGE^2 + \beta_{11} GENDER + \beta_{12} EDU + \beta_{13} INC1 + \beta_{14} INC2 + \beta_{15} INC4 + \\
& \beta_{16} INC5 + \beta_{17} BORN_GER + \varepsilon
\end{aligned} \tag{1}$$

$$\begin{aligned}
WTP_X = & \beta_0 + \beta_1 SPORT + \beta_2 WATCH_WC + \beta_3 EXP_GER + \beta_4 ID_GER + \\
& \beta_5 ID_FOOT + \beta_6 NATIMP + \beta_7 PERSIMP + \beta_8 PROUD_WIN + \beta_9 AGE + \\
& \beta_{10} AGE^2 + \beta_{11} GENDER + \beta_{12} EDU + \beta_{13} INC1 + \beta_{14} INC2 + \beta_{15} INC4 + \\
& \beta_{16} INC5 + \beta_{17} BORN_GER + \varepsilon
\end{aligned} \tag{2}$$

Equation (1) for the first kind of models considers the variable HAPPY_WIN. Instead, equation (2) includes PROUD_WIN as another potentially important intangible factor. All other explanatory variables are the same, whereas the interaction between these two would be too large (the correlation is $r=0.725$). The independent variable WTP_X has five different expressions: The WTP for the round of the last sixteen (WTP_LS), the quarter-finals (WTP_QF), the semi-finals (WTP_SF), the final (WTP_F), and for winning the title (WTP_WIN). Thus, there are five regression models for each equation.

Before starting with the extrapolation and regression analyses, data were checked with respect to validity and plausibility. Especially the WTP variables were scrutinised for plausibility. To reduce hypothetical bias evoked by the hypothetical nature of the CVM scenario all respondents who were willing to pay more than €500 were excluded from the sample because they might have misunderstood the question (Kuckartz et al. 2009). According to this procedure, we excluded 17 cases (about 3 per cent).

4. Empirical Results

In this section, our two research questions will be answered. In 4.1., we start with descriptive statistics of the answers to our survey. In 4.2., we extrapolate the average WTP for each round of the World Cup to estimate the value of sporting success to the German population at large. In 4.3., our empirical results of the Tobit regressions are presented to reveal determinants that influence the individual willingness to pay for sporting success.

4.1. Descriptive Statistics

Metric/ordinal variables	Obs.	Mean	S.D.	Min.	Max.
WTP_LS	486	3.97	25.27	0	500
WTP_QF	481	4.83	20.26	0	300
WTP_SF	482	7.54	22.93	0	300
WTP_F	482	10.93	31.31	0	400
WTP_WIN	492	23.00	61.31	0	500
INT_FOOT	549	2.20	1.28	0	4
INT_SPORT	541	2.47	0.96	0	4
ID_FOOT	546	2.10	1.15	0	4
ID_GER	542	2.54	0.81	0	4
NATIMP	545	1.88	1.08	0	4
PERSIMP	546	1.97	1.25	0	4
EXP_GER	539	2.96	1.23	0	5
HAPPY_WIN	547	1.82	1.29	0	4
PROUD_WIN	547	2.01	1.29	0	5
AGE	530	28.76	12.18	16	76
AGE ²	534	975.55	1005.84	256	5776
EDU	541	5.07	1.35	1	6
INC	483	1.77	2.23	0	8
Dummy variables	% of respondents				
WTP_LS_D	549	17.12			
WTP_QF_D	549	19.13			
WTP_SF_D	549	25.50			
WTP_F_D	549	30.97			
WTP_WIN_D	549	39.34			
INC1	483	65.63			
INC2	483	15.53			
INC3	483	9.52			
INC4	483	4.14			
INC5	483	5.18			
SPORTP	549	79.42			
WATCH_WC	544	87.50			
WATCH_WC_GER	549	41.53			
GER_EXP_WIN	493	21.91			
INT_FOOT_CLUB	542	55.01			
INT_FOOD_PLAYER	542	30.41			
GENDER (1=male)	549	54.83			
BORN_GER	549	94.17			

Table 2: Sample Structure and Descriptive Statistics

Table 2 shows that respondents, many of them university students, were 28.76 years old on average with age ranging from 16 to 76 years. It also shows that 54.83 per cent of the participants were males and 45.17 per cent females. Thus, younger people and males are overrepresented in the present sample compared to the German population. According to the official statistics (Statistische Ämter des Bundes und der Länder 2015), only 30.14 per cent of Ger-

man people are 30 years or younger and the share of females aged 15 years and older is 51.38 per cent. These facts suggest the usage of weights (Wicker et al. 2015). Therefore, we generate weights for age and gender to make the sample more representative of the German population. The information for calculating the weights came from Statistische Ämter des Bundes und der Länder (2015), too.

Regarding further personal characteristics, 62.78 per cent of the survey participants were highly educated because they had a university degree or were currently going for it. The mean value for education of 5.07³ reflects this high percentage as well. The average net income category was 1.77. Expressed as a percentage, 65.63 per cent of the respondents had between €1 and €1,000 at their disposal every month, 15.53 per cent obtained between €1,001 and €2,000 net income. With 94.17 per cent, most of the respondents were born in Germany.

Regarding the consumption capital, 79.42 per cent of the respondents regularly (at least once per week) participated in sports. On average, the participants were moderately or strongly interested in sports in general (mean=2.47 on a scale from 0 to 4) and in football (mean=2.20). 87.50 per cent of the participants stated that they would watch the World Cup, 41.53 per cent wanted to watch games of the World Cup with German participation only. 55.01 per cent of the survey respondents were interested in a special football club and 30.41 per cent were interested in a special football player.

Regarding the intangible factors, the level of identification with Germany (mean=2.54) was higher than the level of identification with the German national football team (mean=2.10). The personal importance (mean=1.97) as well as the national importance (mean=1.88) that the German team scores well at the World Cup was not so high. On average, if the German football team became World Champion (as it did), participants were moderately proud (mean=2.01) and happy (mean=1.82). On average, the respondents expected the German national football team to reach the semi-finals (mean=2.96) and 21.91 per cent expected Germany to become World Champion.

Considering the WTP, 17.12 per cent of the respondents stated a (positive, larger than zero) WTP for reaching the round of the last sixteen, 19.13 per cent were (hypothetically) willing to pay for reaching the quarter-finals, 25.50 per cent had a positive WTP for reaching the semi-finals, and 30.97 per cent were willing to pay a positive price for reaching the final. In case of Germany becoming World Champion 2014, 39.34 per cent of the participants were willing to

³ 5 is equivalent to a degree of a university of applied sciences.

pay for it. The quite low percentage of people stating a WTP greater than zero is in accordance with previous studies (see Wicker, Hallmann et al. 2012, Wicker, Prinz and von Hanau 2012, Wicker et al. 2015).

Regarding absolute WTP, respondents were willing to pay, on average, €3.97 for Germany reaching the round of the last sixteen at the World Cup, €4.83 for reaching the quarter-finals, €7.54 for the semi-finals, and €10.93 for reaching the final. Participants were also willing to pay on average €23.00 if Germany gets the title. The results support the assumption of Section 2 that the WTP should increase with better results. Moreover, a comparison with previous research shows that the WTP for winning the World Cup is approximately constant (Wicker, Prinz and von Hanau 2012, mean=€25.79) but lower than for the UEFA European Championship (Wicker et al. 2015, mean=€35.33 in the unweighted data). One possible explanation is that the number of serious competitors and potential winners of the title is higher in World Cups than European Championships. Consequently, it is less likely that Germany becomes World Champion than European Champion and thus the population of Germany is less willing to pay for the event. However, the WTP is contingent on the realisation of the event such that it could be even higher for the less likely and more difficult success.

4.2. Extrapolation of WTP

Our extrapolations of the individual WTP to estimate the value of sporting success to the German population at large are based on the total number of people in each age group and differentiated by gender in the German population (Statistische Ämter des Bundes und der Länder 2015). Table 3 gives an overview of the absolute frequency of the distribution of the present survey data as well as the number of people in each group in the German population, differentiated by age and gender.

Age Group	Female	Male	Number of people in the population	
			Female	Male
15-24	134	118	4,235,626	4,456,315
25-34	73	111	4,968,587	5,119,307
35-44	10	6	5,046,008	5,123,926
45-54	12	21	6,738,946	6,878,529
+55	8	28	15,059,001	12,534,389
Total	237	284	36,048,168	34,112,466

Table 3: Distribution in the Data Set and Population by Age Group and Gender

Table 3 shows that most of the participants of our survey were aged between 15 and 34. In contrast to this, the age group 55 plus was strongly underrepresented in our sample while it is the largest group in Germany with 27.5 million people. This suggests introducing weights. Table 4 shows the average WTP for each age group, gender and round as well as the total value of the collective WTP (WTP on average multiplied with the numbers of people in the population in each age group differentiated by gender).

Female (Mean)					
Age Group	Mean WTP_LS	Mean WTP_QF	Mean WTP_SF	Mean WTP_F	Mean WTP_WIN
15-24	1.48	2.32	3.45	4.88	9.26
25-34	4.48	4.87	8.28	10.87	16.56
35-44	0.56	0.56	1.44	1.78	4.00
45-54	1.36	1.82	11.36	20.91	52.27
+55	1.43	2.14	2.86	3.57	4.29
Total	1.72	2.26	5.07	7.72	15.49

Male (Mean)					
Age Group	Mean WTP_LS	Mean WTP_QF	Mean WTP_SF	Mean WTP_F	Mean WTP_WIN
15-24	4.32	6.78	11.19	16.51	28.38
25-34	7.88	7.23	8.51	11.78	34.61
35-44	4.00	6.00	11.00	23.00	105.00
45-54	0.33	1.10	6.20	12.40	21.20
+55	1.96	3.92	6.58	9.12	16.69
Total	3.13	4.53	8.06	13.23	33.32

Female (Total)					
Age Group	Total WTP_LS	Total WTP_QF	Total WTP_SF	Total WTP_F	Total WTP_WIN
15-24	6,268,726	9,826,652	14,612,910	20,669,855	39,221,897
25-34	22,259,270	24,197,019	41,139,900	54,008,541	82,279,801
35-44	2,825,764	2,825,764	7,266,252	8,981,894	20,187,032
45-54	9,164,967	12,264,882	76,554,427	140,911,361	352,244,707
+55	21,534,371	32,226,262	43,068,743	53,760,634	64,603,114
Total	62,053,098	81,340,579	182,642,232	278,332,285	558,536,551

Male (Total)					
Age Group	Total WTP_LS	Total WTP_QF	Total WTP_SF	Total WTP_F	Total WTP_WIN
15-24	19,251,281	30,213,816	49,866,165	73,573,761	126,470,220
25-34	40,340,139	37,012,590	43,565,303	60,305,436	117,179,215
35-44	20,495,704	30,743,556	56,363,186	117,850,298	538,012,230
45-54	2,269,915	7,566,381	42,646,880	85,293,760	145,824,815
+55	24,567,402	49,134,805	82,476,280	114,313,628	209,198,952
Total	106,924,441	154,671,148	274,917,814	451,336,883	1,136,685,432

Table 4: Summary of Extrapolation of Willingness to Pay

The results show that the aggregated WTP of the female German population was €62 million for reaching the round of the last sixteen, €107 million for the male population and in sum €169 million. Women were willing to pay €81 million for reaching the quarter-finals, men were willing to pay €155 million. Moreover, women would pay €183 (€278) million for the semi-finals (final), men would pay €275 (€451). Women were willing to pay €559 million for winning the title, men even €1.137 billion and thus the sum was €1.696 billion. A comparison with Wicker et al. (2015) shows that the WTP for each round of the 2014 FIFA World Cup were lower than for the 2012 European Championship (the WTP for winning the UEFA European Championship was €2.847 billion).

4.3. Empirical Results of the Tobit Regressions

As describe in Section 3, our regression analysis is based on two different equations. The results of the following Tobit regressions indicate that several factors had an impact on the WTP for different results of the German national football team in the 2014 World Cup. With regard to the specific values of the WTP, the Tobit models show that the stated WTP was mainly influenced by expectations, by intangible factors, especially happiness, as well as by socio-economic factors. Surprisingly, consumption-related factors had no significant impact on the value of sporting success. However, this finding is in accordance with previous studies (Walton et al. 2008, Wicker, Prinz and von Hanau 2012).

Table 5 summarises the determinants of the WTP for sporting success at the 2014 World Cup with special attention to happiness as one possibly relevant factor.⁴ Indeed, HAPPY_WIN is in all models significantly positive. Respondents who were happier if Germany did win the World Cup were more willing to pay (€31.67). Thus, the WTP increased with the degree of happiness. This result is in accordance with expectations and previous results concerning this relationship (Wicker, Hallmann et al. 2012). PERSIMP has a significantly positive impact on WTP regarding the semi-finals, final and winning the title. Thus, participants who felt that it was important for themselves that Germany performed well were willing to pay €47.18 (€16.88, €8.77) more for Germany becoming World Champion (reaching the final, reaching the semi-finals). This positive effect is supported by previous studies (Wicker, Prinz and von Hanau 2012; Wicker et al. 2015). Regarding the expectation about the performance of the German national football team at the 2014 World Cup, the results of the Tobit model show an increase of the WTP. Thus, participants with higher expectations were more willing to pay for

⁴ Explanatory variables that are shown in Table 1 and Table 2 but not in Table 5 were not included in these regressions and had no significant impact in alternative estimations.

success of the German national football team. Participants were willing to pay €6.94, €7.25, €8.17, and €11.48 more if they expected that Germany reached the round of the last sixteen, the quarter-finals, the semi-finals, and the final. Only the expectation of winning the finals is not statistically significant.

AGE as one socio-economic variable influences the WTP in all models significantly positive. This is in accordance with previous studies (Humphreys et al. 2011; Wicker et al. 2015). In contrast, AGE² influences the WTP significantly negative. These findings indicate, contrary to our expectations, that the impact of age on WTP follows an inverted U-shape with a peak between 43 and 45 years. Possible explanations will be given in Section 5. Interestingly, GENDER has a significantly negative effect on WTP in one model (WTP_LS), indicating that men were willing to pay less than women for reaching the round of the last sixteen (when all else is equal while the descriptive statistics in 4.1. show a higher WTP for men). All other models show no significant difference in the WTP between men and women. The education-coefficient (EDU) influences the WTP in three of five models (WTP_SF, WTP_F and WTP_WIN) significantly positive, indicating that a higher educational level increased the WTP for reaching the semi-finals, final, and for winning the title. Therefore, respondents with a higher educational level had a greater WTP. The amount depends on the performance of the team and ranges from €5.13 to €16.75. People with a personal net income per month from €1,001 to €2,000 (INC2) were willing to pay significantly less for reaching the round of the last sixteen (-€19.50), the quarter-finals (-€23.28), and for the title (-€77.71) than people with a personal net income per month from €2,001 to €3,000 (INC3). Finally, the variable BORN_GER influences the WTP in a significantly negative way in three models (WTP_LS, WTP_QF and WTP_SF), meaning that people born in Germany had a lower WTP for the round of the last sixteen, the quarter-finals, and the semi-finals. This finding is also contrary to our expectations and will be discussed in Section 5. All other possible determinants (SPORTP, WATCH_WC, ID_GER, ID_FOOT, and NATIMP) have no significant influence on the WTP.

	WTP_LS	WTP_QF	WTP_SF	WTP_F	WTP_WIN
SPORTP	14.301 ⁺ (1.83)	5.934 (.79)	12.249 (1.04)	17.135 (.89)	2.336 (.06)
WATCH_WC	6.689 (.71)	7.813 (.80)	11.407 (.72)	20.018 (.82)	43.501 (78)
EXP_GER	6.944** (2.89)	7.248** (3.05)	8.166* (2.21)	11.476* (1.99)	10.687 (.82)
ID_GER	-2.076 (-.72)	-1.368 (-.46)	-.156 (-.02)	.401 (.04)	8.556 (.47)
ID_FOOT	-1.327 (-.49)	-.805 (-.30)	-1.973 (-.40)	-2.153 (-.27)	-12.696 (-.78)
NATIMP	-.115 (-.04)	-.152 (-.05)	-.727 (-.15)	.435 (.06)	-14.408 (-.72)
PERSIMP	3.348 (.99)	4.693 (1.42)	8.773 ⁺ (1.68)	16.879* (2.01)	47.179* (2.16)
HAPPY_WIN	9.298** (2.86)	8.960** (2.83)	12.296** (2.73)	14.925* (2.09)	31.671* (2.15)
AGE	2.388 ⁺ (1.90)	3.175* (2.12)	5.761 ⁺ (1.65)	9.261 ⁺ (1.67)	23.474 ⁺ (1.87)
AGE ²	-.027* (-2.08)	-.035* (-2.32)	-.062 (-1.62)	-.102 ⁺ (-1.65)	-.272* (-1.98)
GENDER	-11.340* (-2.21)	-7.804 (-1.57)	-8.918 (-1.16)	-9.430 (-.78)	-10.151 (-.43)
EDU	2.658 (1.09)	3.815 (1.53)	5.135 ⁺ (1.68)	7.748 ⁺ (1.73)	16.753 ⁺ (1.94)
INC1	-4.629 (-.49)	-5.127 (-.48)	6.702 (.34)	15.831 (.49)	7.966 (.12)
INC2	-19.499* (-2.07)	-23.278* (-2.42)	-15.107 (-1.21)	-19.906 (-1.05)	-77.710* (-2.06)
INC3	REF	REF	REF	REF	REF
INC4	-24.508 ⁺ (-1.79)	-15.278 (-1.22)	-31.644 (-1.58)	-47.800 (-1.52)	-73.318 (-1.38)
INC5	9.610 (.89)	1.986 (.19)	6.595 (.32)	22.828 (.70)	32.382 (.48)
BORN_GER	-27.735** (-2.98)	-26.218** (-2.91)	-25.468 ⁺ (-1.81)	-29.229 (-1.22)	-43.520 (-.70)
CONSTANT	-99.223 (-2.26)	-119.526* (-2.38)	-214.049* (-2.16)	-347.912* (-2.08)	-698.789 ⁺ (-1.94)
F	2.88	3.33	3.56	2.99	1.75
Significance	.000	.000	.000	.000	.033
Pseudo R ²	.116	.114	.077	.068	.060
N	403	399	400	400	409

Note: Displayed are the unstandardised coefficients, t-values in parentheses. +p<.10; *p<.05; **p<.01; ***p<.001, weighted sample.

Table 5: Regression Results of the Tobit Models with Happiness

Table 6 summarises the determinants of the WTP for sporting success at the 2014 World Cup including PROUD_WIN as an explanatory variable instead of HAPPY_WIN. Interestingly, the degree of being proud has no significant influences on the WTP in all models. This finding and the finding that national importance (NATIMP) has no significant impact on the WTP as well diverge from previous studies that depict a positive relationship between sports and feelings like patriotism and cultural belonging (e.g. Allison and Monnington 2002, Humphreys et al. 2011, Van Hilvoorde et al. 2010, Wicker, Hallmann et al. 2012). Personal importance (PERSIMP) influences the WTP in all models significantly positively and indicates an increase of the WTP with the personal importance of sporting success. All other explanatory variables have a similar significant impact on the different WTP variables as before.

	WTP_LS	WTP_QF	WTP_SF	WTP_F	WTP_WIN
SPORTP	12.132 ⁺ (1.69)	3.990 (.57)	10.371 (.85)	15.714 (.78)	.871 (.02)
WATCH_WC	7.280 (.75)	7.062 (.73)	8.988 (.58)	17.229 (.73)	39.789 (.73)
EXP_GER	6.472** (2.85)	6.637** (2.98)	7.468* (2.18)	11.231* (2.09)	10.945 (.93)
ID_GER	-2.113 (-.64)	-1.900 (-.59)	-.812 (-.12)	-.204 (-.02)	8.496 (.45)
ID_FOOT	.874 (.26)	.636 (.20)	.746 (.13)	3.366 (.36)	-.133 (-.01)
NATIMP	1.765 (.53)	1.426 (.43)	1.984 (.34)	5.196 (.56)	-3.114 (-.14)
PERSIMP	7.489* (2.33)	7.549* (2.30)	14.270* (2.24)	26.333* (2.51)	66.787* (2.53)
PROUD_WIN	.845 (.22)	3.029 (.80)	1.408 (.19)	-4.719 (-.39)	-12.868 (-.51)
AGE	2.963 ⁺ (1.92)	3.654* (2.17)	5.922* (1.98)	8.731 ⁺ (1.89)	21.978* (2.16)
AGE ²	-.034* (-2.24)	-.041* (-2.49)	-.065* (-1.96)	-.098 ⁺ (-1.93)	-.263* (-2.29)
GENDER	-8.924 ⁺ (-1.67)	-5.133 (-.98)	-5.646 (-.69)	-6.124 (-.48)	-3.422 (-.14)
EDU	3.225 (1.15)	4.530 ⁺ (1.67)	6.031 ⁺ (1.86)	8.062 ⁺ (1.72)	16.792 ⁺ (1.89)
INC1	-2.250 (-.22)	-2.202 (-.19)	9.351 (.54)	15.503 (.56)	3.379 (.06)
INC2	-18.412 ⁺ (-1.85)	-21.258* (-2.15)	-13.438 (-1.03)	-18.914 (-.94)	-77.902 ⁺ (-1.91)
INC3	REF	REF	REF	REF	REF
INC4	-23.455 ⁺ (-1.70)	-15.722 (-1.31)	-31.191 (-1.64)	-45.661 (-1.51)	-68.832 (-1.32)
INC5	2.330 (.21)	-3.700 (-.35)	-.781 (-.04)	11.962 (.38)	8.569 (.13)
BORN_GER	-25.195** (-2.67)	-23.671* (-2.56)	-21.812 (-1.53)	-24.356 (-1.04)	-31.100 (-.52)
CONSTANT	-114.478* (-2.23)	-132.412* (-2.46)	-221.455* (-2.56)	-339.047* (-2.44)	-672.101* (-2.29)
F	2.78	3.44	2.77	2.59	1.57
Significance	.000	.000	.000	.001	.068
Pseudo R ²	.099	.102	.068	.063	.057
N	403	399	400	400	409

Note: Displayed are the unstandardised coefficients, t-values in parentheses. +p<.10; *p<.05; **p<.01; ***p<.001, weighted sample.

Table 6: Regression Results of the Tobit Models with Proudness

5. Discussion and Conclusion

The present study provides evidence for the value of sporting success of the German national football team to the German population using a CVM approach. For this purpose, we examined the WTP for achieving different rounds at the 2014 FIFA World Cup in Brazil. Descriptive statistics show that nearly 40 per cent stated a positive WTP for Germany to win the 2014 World Cup. This result is in accordance with previous studies (Johnson et al. 2007, Wicker, Prinz and von Hanau 2012). The average WTP increased from €3.97 for achieving the round of the last sixteen to €23.00 for winning the title. These results are also in line with previous studies (e.g. Rätzel and Weimann 2006, Wicker, Prinz and von Hanau 2012) and indicate that national sporting success is a public goods creating value for the German population. The WTP for winning the 2014 World Cup found in this study is in the range of previous CVM studies that analysed the value of winning the World Cup (Rätzel and Weimann 2006, Wicker, Prinz and von Hanau 2012). However, the value of the hypothetical scenario that Germany becomes World Champion in 2006, 2010 and 2014 is lower than the value of hypothetically winning the 2012 European Championship. One possible explanation is that the degree of competitors and potential title winners is higher in World Cups than European Championships. Consequently, it is less likely that Germany becomes World Champion and thus the population of Germany is less willing to pay for this event. The extrapolated WTP values lead to an aggregated WTP of €1.696 billion for winning the World Cup in men's football. In contrast to that, the German population has an aggregated WTP for winning the European Championship in men's football of €2.847 billion (Wicker et al. 2015).

Our empirical results of the Tobit regressions show that several factors have an impact on the WTP for different results of the German national football team in the 2014 World Cup. With regard to the specific values of the WTP, the Tobit models show that the stated WTP is mainly influenced by expectations, by intangible factors, especially happiness, as well as by socio-economic factors. Meanwhile, consumption-related factors have no significant impact on the value of sporting success. Our findings are to a large extent in accordance with previous studies (e.g. Rätzel and Weimann 2006; Walton et al. 2008; Wicker, Prinz and von Hanau 2012; Wicker et al. 2015). Nonetheless, we think some results are worth to be discussed.

Firth, the socio-economic factor GENDER surprisingly has a significantly negative impact with respect to reaching the round of the last sixteen. According to our regression results, women are more willing to pay for reaching this round. They are willing to pay €11.34 (€8.92 in the model with proudness) more in comparison to men. This result basically disagrees with

previous studies (e.g. Walton et al. 2008) but is also found by Wicker, Prinz and von Hanau (2012). One possible explanation might be that women are more involved in watching and celebrating football during a football event like the World Cup compared to the German professional football league. Furthermore, especially when women watch football World Cup matches and spend considerable amounts of time, they are more willing to pay for a victory and thus attribute a higher value to the public goods created through sporting success than men. In contrast to women, achieving the round of the last sixteen is not a considerable success for men. Thus, they are less willing to pay for it than women who rate it as a success. Finally, in the descriptive data (Table 4) men are willing to pay more than women (€3.13 vs. €1.72), meaning that the average man has other characteristics that increase his WTP compared to an average woman. All other models show an insignificantly negative impact, meaning that there are no statistically significant differences between women and men regarding the stated WTP for the quarter-finals, semi-finals, final, and winning the title.

A second socio-economic factor with surprising results is AGE. Contrary to our assumption that young and old people state a higher WTP than mid-age people, AGE has a significantly positive impact whereas AGE² influences the WTP in a significantly negative manner. Thus, stated WTP increases with AGE and follows an inverted U-shape because of the negative impact of AGE² with a peak between 43 and 45 (41 and 45 in the models with proudness) years. One possible explanation might be that people who witnessed the last great victory of the German national football team, namely winning the World Cup 1990, stated a higher WTP to create such feelings of success again than younger people who did not witness the win of a title in football (Wicker, Prinz and von Hanau 2012). While young people might be more interested in football, they do not have enough monthly income because of their student status to pay for such a “non-influenceable” event (although we control for income groups separately). Mid-aged people have enough monthly income to pay for the success of the German national football team without being restricted elsewhere. Older people might do not see any sense to pay for such an event or lack the money like young people.

Third, the stated WTP by participants that were born in Germany interestingly decreases significantly between €25.47 and €27.74 depending on the performance of the football team. Explanations might be missing feelings like patriotism and cultural belonging or the lack of trust in the German national football team by native Germans whereas foreign-born people (32 out of 549 in the survey) have less of these problems. In sum, our results indicate that socio-economic factors as well as happiness seem to be the most influential determinants of the stated WTP and thus of the value of sporting success.

This study has some limitations so that the results should be interpreted with caution. First, the sample only includes 549 participants who are not really representative for the German population. Future research may address more participants to increase the size of the sample or select them randomly from the population. Second, the pseudo R^2 in the models is quite low with values between 5.7 % and 11.6 %. Consequently, there might be other and more relevant factors that influence the WTP. Third, there are some general objections against the CVM as discussed in Section 2. It would be interesting to look for other measures. For example, the increase in happiness could be compared with other determinants of happiness and their costs. Finally, this study is limited to Germany. Information about the WTP in other countries for a win of their national teams or even the German team are not included. Further research could look at other countries to obtain statements about different determinants of the WTP depending on the country.

Literature

- Allison, L./Monnington, T. (2002): "Sport, prestige and international relations", *Government and Opposition*, 37 (1), pp. 106-134.
- Atkinson, G./Mourato, S./Szymanski, S./Ozdemiroglu, E. (2008): "Are we willing to pay enough to 'back the bird'? Valuing the intangible impacts of London's Bid to host the 2012 Summer Olympic Games", *Urban Studies*, 45 (2), pp. 419-444.
- Becker, G. M./Degroot, M. H./Marshak, J. (1964): "Measuring utility by a single-response sequential method", *Behavioral Science*, 9 (3), pp. 226-232.
- Carlsson, F./Martinsson, P. (2001): "Do hypothetical and actual marginal willingness to pay differ in choice experiments? Application to the valuation of the environment", *Journal of Environmental Economics and Management*, 41 (2), pp. 179-192.
- Carman, J. M. (1990): "Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions", *Journal of Retailing*, 66 (1), pp. 33-55.
- Carson, R. T. (2011): "Contingent valuation: A comprehensive history and bibliography", Edward Elgar, Cheltenham, Northampton.
- Castellanos, P./García, J./Sánchez, J. (2011): "The willingness to pay to keep a football club in a city: How important are the methodological issues?", *Journal of Sports Economics*, 12 (4), pp. 464-486.
- Chambers, C. M./Chambers, P. E./Whitehead, J. C. (1998): "Contingent valuation of quasi-public goods: A validity and reliability assessment", *Public Finance Review*, 26 (2), pp. 137-154.
- Coates, D./Humphreys, B. R. (2003): "Professional sport facilities: Franchise and urban economic development", *Public Finance and Management*, 3 (3), pp. 335-357.

- Davis, R. K. (1963): "The value of outdoor recreation: An economic study of the Maine Woods", Ph.D. Dissertation, Harvard University, Cambridge, MA.
- Diamond, P. A./Hausman, J. A. (1994): "Contingent valuation: Is some number better than no number?", *Journal of Economic Perspectives*, 8 (4), pp. 45-64.
- Forrest, D./Simmons, R. (2003): "Sport and gambling", *Oxford Review of Economic Policy*, 19 (4), pp. 598-611.
- Groothuis, P. A./Van Houtven, G./Whitehead, J. C. (1998): "Using contingent valuation to measure the compensation required to gain community acceptance of a LULU: The case of a hazardous waste disposal facility", *Public Finance Review*, 26 (2), pp. 231-249.
- Humphreys, B. R./Johnson, B. K./Mason, D. S./Whitehead, J. C. (2011): "Estimating the value of medal success at the 2010 Winter Olympic Games", Working Paper No. 11-20, Appalachian State University, Boone, NC, <http://econ.appstate.edu/RePEc/pdf/wp1120.pdf>, retrieved October 13, 2015.
- Johannesson, M./Liljas, B./Johansson, P.-O. (1998): "An experimental comparison of dichotomous choice contingent valuation questions and real purchase decisions", *Applied Economics*, 30 (5), pp. 643-647.
- Johnson, B. K. (2008): "The valuation of nonmarket benefits in sport", in: Humphreys, B. R./Howard, D. R. (eds.): "The business of sports", pp. 207-233, Praeger, Westport, CT.
- Johnson, B. K./Groothuis, P. A./Whitehead, J. C. (2001): "The value of public goods generated by a major league sports team: The CVM approach", *Journal of Sports Economics*, 2 (1), pp. 6-21.
- Johnson, B. K./Whitehead, J. C. (2000). "Value of public goods from sports stadiums: The CVM approach", *Contemporary Economic Policy*, 18 (1), pp. 48-58.
- Johnson, B. K./Mondello, M. J./Whitehead, J. C. (2007): "The value of public goods by a national football league team", *Journal of Sport Management*, 21 (1), pp. 123-136.
- Knoppers, A./Meyer, B. B./Ewing, M./Forrest, L. (1991): "Opportunity and work behavior in college coaching", *Journal of Sport and Social Issues*, 15 (1), pp. 1-20.
- Kuckarzt, U./Ebert, T./Rädiker, S./Stefer, C. (2009): "Evaluation online: Internetgeschützte Befragung in der Praxis", Verlag für Sozialwissenschaften, Wiesbaden.
- Mitchell, R. C./Carson, R. T. (1989). "Using surveys to value public goods: The contingent valuation method", *Resources for the Future*, Washington, D. C.
- Mozsár, F. (2003): "On the Notion of Public Goods", in: Lengyel, I. (2003): "Knowledge transfer, small and medium-sized enterprises, and regional development in Hungary", JATEPress, Szeged.
- Rätzel, S./Weimann, J. (2006): "Der Maradona Effekt: Wie viel Wohlfahrt schafft die deutsche Nationalmannschaft?", *Perspektive der Wirtschaftspolitik*, 7 (2), pp. 257-270.
- Rohkohl, F./Flatau, J. (2014): "Zur Zahlungsbereitschaft für nationale Sporterfolge bei den Olympischen Sommerspielen 2016: Eine Schätzung unter Anwendung der Kontingenten Bewertungsmethode", *Sport und Gesellschaft*, 11 (2), pp. 105-129.

- Sattler, H./Nitschke, T. (2003): "Ein empirischer Vergleich von Instrumenten zur Erhebung von Zahlungsbereitschaften", *Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung*, 55, pp. 364-381.
- Statistische Ämter des Bundes und der Länder (2015): "Bevölkerungsstand: Bevölkerung nach Geschlecht und Altersgruppen: Stichtag 31.12.2013", Statistische Ämter des Bundes und der Länder, Düsseldorf, <https://www.regionalstatistik.de/genesis/online;jsessionid=7F00B2B981D254F764863CAE48F1AE6C?sequenz=tabelleErgebnis&selectionname=173-21-4>, retrieved November 27, 2015.
- Stigler, G. J./Becker, G. S. (1977): "De gustibus non est disputandum", *American Economic Review* 67 (2), pp. 76-90.
- Süssmuth, B./Heyne, M./Maenning, W. (2010): "Induced civic pride and integration", *Oxford Bulletin of Economics and Statistics*, 72 (2), pp. 202-220.
- Thayer, M. A. (1981): "Contingent valuation techniques for assessing environmental impacts: Further evidence", *Journal of Environmental Economics and Management*, 8 (1), pp. 27-44.
- Van Hilvoorde, I./Elling, A./Stokvis, R. (2010): "How to influence national pride? The Olympic medal index as a unifying narrative", *International Review of the Sociology of Sport*, 45 (1), pp. 87-102.
- Walker, M./Mondello, M. (2007): "Moving beyond economic impact: A closer look at the contingent valuation method", *International Journal of Sport Finance*, 2 (3), pp. 149-160.
- Walton, H./Longo, A./Dawson, P. (2008): "A contingent valuation of the 2012 London Olympic Games", *Journal of Sports Economics* 9 (3), pp. 304-317.
- Wicker, P. (2011): "Willingness-to-pay in non-profit sport clubs", *International Journal of Sport Finance*, 6 (2), pp. 155-169.
- Wicker, P./Hallmann, K./Breuer, C./Feiler, S. (2012): "The value of Olympic success and the intangible effects of sport events: A contingent valuation approach of Germany", *European Sport Management Quarterly* 12 (4), pp. 337-355.
- Wicker, P./Kiefer, S./Dilger, A. (2015): "The value of sporting success to Germans: Comparing the 2012 UEFA Championships with the 2012 Olympics", *Journal of Business Economics* 85 (8), pp. 897-919.
- Wicker, P./Prinz, J./von Hanau, T. (2012): "Estimating the value of national sporting success", *Sport Management Review*, 15 (2), pp. 200-210.
- Wooldridge, J. M. (2006): "Introductory econometrics: A modern approach", Thomson South-Western, Cincinnati, OH.

Appendix: Questionnaire in English

1. Please evaluate your interest in football?

no interest	little	moderate	strong	very strong
<input type="radio"/>				

2. Will you watch the football World Cup in Brazil (Television/Stadium/Public Viewing/Internet)?

yes no

2a. During World Cup, will you only watch games with German participation or will you also watch games without German participation?

games with German participation only games with and without German participation

3. How many games of the football World Cup 2014 will you watch (Television/Stadium/Public Viewing/Internet)?

Total number: _____ (Note: The Football World Cup includes 64 games).

4. Please evaluate your degree of personal identification with the German national football team?

not at all	small	moderate	strong	very strong
<input type="radio"/>				

5. Who do you expect to win the World Cup?

6. What are your expectations in terms of the final ranking of the German national team?

elimination in preliminary round round of last sixteen quarter-finals
 semi-finals final World Champion

7. Please evaluate the national importance to Germany that the German team performs well.

not important	little important	moderate	important	very important
<input type="radio"/>				

8. Please evaluate the personal importance that the German team performs well.

not important	little important	moderate	important	very important
<input type="radio"/>				

9. Please evaluate your degree of happiness in case of Germany winning the title.

not at all	small	moderate	strong	very strong
<input type="radio"/>				

10. Please evaluate your degree of proudness in case of Germany winning the title.

not at all	small	moderate	strong	very strong
<input type="radio"/>				

11. Hypothetically, suppose it would be possible, what is the maximum amount for the following success you would be willing to pay for the German national team at the 2014 FIFA World Cup?

reaching round of last sixteen _____ Euro reaching quarter-finals _____ Euro

reaching semi-finals _____ Euro reaching final _____ Euro

World Champion _____ Euro

12. Are you interest in a special football club?

yes no Name of the special football club: _____

Are you interest in a special football player?

yes no Name of the special football player: _____

13. Do you exercise regularly (once per week minimum)?

yes no

kind of sport: _____ hours per week: _____

14. Please evaluate your interest in sport.

no interest	little	moderate	strong	very strong
<input type="radio"/>				

15. Please evaluate your degree of personal identification with Germany.

no identification	small	moderate	strong	very strong
<input type="radio"/>				

16. Sex: male female **Age:** _____ years

17. Were you born in Germany? yes no

18. What's your educational level?

- no school-leaving qualification general-education secondary school
 intermediate secondary school advanced technical college certificate
 general matriculation standard practical university degree
 university degree

19. What's your personal monthly net income?

- up to 500€ from 501 up to 1,000€ from 1,001 up to 1,500€
 from 1,501 up to 2,000€ from 2,001 up to 2,500€ from 2,501 up to 3,000€
 from 3,001 up to 3,500€ from 3,501 up to 4,000€ over 4,000€

20. What's your zip code? _____

Thank you for your participation!

Diskussionspapiere des Instituts für Organisationsökonomik

Seit Institutsgründung im Oktober 2010 ist monatlich ein Diskussionspapier erschienen. Im Folgenden werden die letzten zwölf aufgeführt. Eine vollständige Liste mit Downloadmöglichkeit findet sich unter <http://www.wiwi.uni-muenster.de/io/forschen/diskussionspapiere.html>

- DP-IO 11/2015** The Willingness to Pay for a German Win of the 2014 FIFA World Cup in Brazil
Linn-Brit Bakkenbüll/Alexander Dilger
November 2015
- DP-IO 10/2015** 5. Jahresbericht des Instituts für Organisationsökonomik
Linn-Brit Bakkenbüll/Alexander Dilger
Oktober 2015
- DP-IO 9/2015** How to Apply as a Doctoral Student in Germany?
Alexander Dilger
September 2015
- DP-IO 8/2015** Welche Unternehmen profitieren vom Euro?
Alexander Dilger
August 2015
- DP-IO 7/2015** Bundesrepublik Erde
Grundrechte und Grundgesetz für die ganze Welt
Alexander Dilger
Juli 2015
- DP-IO 6/2015** Leiharbeit im Profifußball
Sind Leihspieler stärker motiviert?
Michael Müller
Juni 2015
- DP-IO 5/2015** Which Currency Is Best for Business in a Small Country?
Alexander Dilger
Mai 2015
- DP-IO 4/2015** Better Winding Up
A Proposal for Improved Winding Up of Executory Contracts
Alexander Dilger
April 2015
- DP-IO 3/2015** Zurück in die dirigistische Vergangenheit
Das Hochschulzukunftsgesetz in NRW
Alexander Dilger
März 2015
- DP-IO 2/2015** Corporate Governance, State Ownership and Cross-listing
Evidence from Chinese A-Share Listed Firms
Hongmei Xu
Februar 2015
- DP-IO 1/2015** Der Zusammenhang zwischen sportlicher (Wettkampf-)Aktivität und kognitiver
Leistungsfähigkeit
Michael Müller
Januar 2015
- DP-IO 12/2014** Are Attractive Female Tennis Players More Successful?
An Empirical Analysis
Linn-Brit Bakkenbüll/Stephanie Kiefer
Dezember 2014



Herausgeber:
Prof. Dr. Alexander Dilger
Westfälische Wilhelms-Universität Münster
Institut für Organisationsökonomik
Scharnhorststr. 100
D-48151 Münster

Tel: +49-251/83-24303
Fax: +49-251/83-28429

www.wiwi.uni-muenster.de/io

