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The Role of Patriotism in Explaining TV Audience of National Team Games – Evidence from Four International Tournaments

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The Role of Patriotism in Explaining TV Audience of National Team Games – Evidence from Four International Tournaments

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Abstract

In the literature dealing with the determinants of TV audience in sports both the absolute and the relative playing strength of the opponents plays a prominent role. Regarding national team competitions, however, we conjecture that TV audience should also be driven by pure patriotism. Economic and socio-psychological theories offer plausible explanations for patriotic consumer behaviour. Analysing the Swiss TV audience of two FIFA World Cups and two UEFA European Football Championships, we find strong evidence that the TV ratings are highly affected by the number of foreign residents affiliated to the teams playing on the field. In addition, the absolute playing strength of the opponents is important whereas their competitive balance has no impact on TV demand.

Key words: patriotism, TV audience, soccer, national team games

JEL Classification: D 12, L 82, L 83

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I INTRODUCTION

Most studies of consumer behaviour in sports focus on gate attendance in the context of club competitions within leagues (see e.g. Borland and MacDonald, 2003, for an excellent survey). More recently, some studies have discovered TV consumers and their behaviour as a topic of scientific interest (e.g. Kuypers, 1996; Forrest, Simmons and Buraimo, 2005; Alavy, Gaskell, Leach and Szymanski, 2006). In general these studies follow the common pattern of gate attendance research assuming identical consumer preferences and conjecturing that the demand for televised sports games will increase not only with the absolute playing ability of the participating teams but also with the relative evenness of the competition. The latter assumption is based on a prominent proposition called the uncertainty-of-outcome-hypothesis (Rottenberg, 1956) which stipulates that consumers will positively value the suspense generated by more even competition. In addition to these two prominent variables of product quality every study includes a rich set of different factors that may affect TV demand in the specific context of inquiry.

Unsurprisingly, the existing studies of TV audience in sports conducted so far largely ignore the influence of patriotism. The possibility that TV audience is influenced by patriotism only becomes important in the context of national team games. Two of the world's most popular national team tournaments are the FIFA World Cup and the UEFA European Football Championship. The media coverage of these contests is remarkable: During the 2006 World Cup event, for example, 73'072 hours of dedicated programming were broadcast to 214 different countries and 26.29 billion estimated TV viewers (FIFA, 2007). Given that no league games are able to sustain comparable TV ratings, these big soccer events seem to appeal beyond the circle of regular soccer fans. A newly attained love for the game of soccer seems implausible as an explanation for this phenomenon. A more likely explanation lies in

feelings of patriotism and national pride which may be mobilized on a large scale during these events (Markovits and Hellerman, 2001). Presumably, everybody still remembers scenes and pictures of the last FIFA World Cup 2006 in Germany, where the qualified nations experienced remarkable increases of patriotism and nationalistic fervour when they succeeded to be promoted to the next stage of the tournament. On the other hand, the early exit of prominent national teams almost caused a national crisis and severely reduced the TV ratings in the corresponding countries. The French channel TF1, for example, lost estimated €18 million due to early disqualification of the French national team at the World Cup 2002 (Desbordes, 2006).

Despite the intuitive importance of patriotism in this context, the empirical literature about consumer behaviour in sports has not dealt with the phenomenon so far due to its focus on club competitions within leagues.[1] This paper aims to fill the gap by investigating demand and the special role of patriotism in the case of televised national team games. Based on both an economic and a socio-psychological explanation of why patriotism may be a strong driving force for consumption activities at national team competitions, we conjecture that the preference of a potential spectator to watch a specific game of the FIFA World Cup or the UEFA European Football Championship is (to a large extent) shaped by his or her citizenship. In line with the existing literature on consumer demand in sports we also assume that the absolute playing strength of the opponents and their competitive balance have a positive impact on TV audience.

[1] The study of Funk, Mahony and Ridinger (2002) is an exception. They identified national pride as one among many other motivational factors driving the level of spectator support regarding the United States Women's national soccer team. However, they do not relate national pride to observable consumer behaviour like TV demand.

Our hypotheses about the determinants of demand for televised national team games are tested using the Swiss TV ratings of four major soccer tournaments: the European Football Championships 2000 and 2004 and the World Cups 2002 and 2006. Among other advantages of this data set, which will be discussed in more detail, the country covered by the data, Switzerland, offers a good quasi-experimental design to test the influence of patriotism. With over 20% Switzerland has one of the highest foreigner rates worldwide and the foreigners come from over 200 different countries. Our results show that both the expected absolute playing strength of the opponents and patriotism strongly predict the TV figures, whereas outcome uncertainty is irrelevant.

The remainder of this paper is structured as follows: After motivating our hypotheses, we will explain the variables and methods used in our empirical framework and finally, we will present the results and discuss potential policy implications.

II TV AUDIENCE OF NATIONAL TEAM GAMES

Whereas gate attendance is restricted by stadium capacity, TV demand is practically unrestricted due to the scale effects of the underlying technology. “Desired” and effective attendance is therefore identical in the case of TV audience. For obvious reasons, factors like admission prices, travel costs or income effects that matter in the case of stadium demand are less relevant for the decision to consume televised games. In sum, these conditions make it easier to reliably measure consumer behaviour in the case of TV demand (Forrest et al., 2005).

The predictions of standard consumer theory are straightforward. A representative consumer chooses a consumption bundle that maximizes utility subject to a budget constraint. The

choice of the consumption bundle incorporates decisions on the kind and quantity of national team games to be watched on TV as well as on all other goods and services. Considering the budget constraint, consumers face a fundamental trade-off. The opportunity cost of consuming more of one good or service is the reduction in the quantity of other goods and services that may be consumed. It is obvious that the higher the utility of watching national team games on TV, the more viewers will switch-on holding everything else constant. Borland and MacDonald (2003) describe two main sources the fans may derive utility from: The quality of the contest and the identification with a team in the sporting contest. The quality aspect refers to both the absolute playing strength and the competitive balance of the competing teams. In the context of national team games the most likely form of identification is the affiliation of consumers to the team representing their nation at the tournament. This identification is reflected by the degree of patriotism. In the following two sections, we shall try to illustrate and motivate the concepts of (absolute) game quality, competitive balance and patriotism as determinants of the TV ratings.

Game Quality

Rottenberg (2000, p. 11) defined the quality of a game as follows: "The quality of the game is higher, the more grace and skill with which it is produced, the larger the number of instances of extraordinary physical achievement that appears in it, and the more uncertain its outcome".[2] High quality soccer games involve much brilliance, spectacle, fighting, emotions and a lot of fast ballgames and goal chances. Other facets like aesthetics and elegance may be very important for example in gymnastics or figure skating but less so in soccer. Madrigal (1995, p. 206) argues that "sporting events represent a hedonic experience in which the event

[2] Even though Rottenberg (2000) considered competitive balance as an element of game quality (similar to Borland and MacDonald, 2003), we treat outcome-uncertainty as a separate concept to prevent misunderstandings.

itself elicits a sense of drama". It is common to use the term playing strength in order to describe the ability of a team to produce "instances of extraordinary physical achievement" as well as the other aspects of quality described above.

Competitive Balance

Since a game is a product of at least two teams, not only the absolute playing strengths of the teams but also the inter-team comparison are likely to affect fan interest. The uncertainty-of-outcome hypothesis (Rottenberg, 1956; Neale, 1964) postulates that fan interest increases through even and therefore unpredictable contests. Despite the fact that the empirical evidence of the benefits of competitive balance is far from unambiguous (see the reviews of Szymanski, 2003a, or Borland and MacDonald, 2003), the uncertainty-of-outcome-hypothesis still enjoys highest prominence in sports economics.

Patriotism

The phenomenon that fans tend to form attachments to particular teams, which they often support almost regardless of the quality of the game, is well known from league football and from other team sports as well (Szymanski, 2003b). However, compared to club games in league football, national team games provide an additional source of consumer identification: the attachment to the own nation represented by the team. Patriotism concerns "an affective attachment towards the in-group implying feelings of belongingness, responsibility and pride" (Mummendey, Klink and Brown, 2001, p. 160). Since soccer is the world's most widely performed team sport played by more nations than are represented in the United Nations, the options to form patriotic attachments are more manifold than in any other sport. The choreography of the World Cup games additionally intensifies patriotic feelings for example by playing the national anthem before each game (Bogdanov, 2005). A Korean anthropologist

considered the high national enthusiasm during the World Cup 2002 in South Korea as "at heart, a strong 'nationalistic' phenomenon" (Cho Han, 2004, p. 21).

Economics and social psychology provide different rationales of why patriotism may strongly determine consumption activities regarding national team games. In the following we use the term "patriotic consumer behaviour" to describe the preference of watching games of the team representing the own political nation instead of watching just any other game.

Economic Explanation of Patriotic Consumer Behaviour

Economists use the construct of rational individuals who engage in maximizing behaviour even when it comes to such seemingly irrational activities as love, crime, war, religion or in our case patriotism. Several Nobel Prizes (first and foremost the one of Gary Becker in 1992) indicate that economics has successfully expanded to topics that go beyond the classical scope of issues (see Lazear, 2000).

The economic explanation of patriotic consumer behaviour is based on one general premise: Watching soccer is habit forming, which means that an individual's current preference depends on his or her past consumption activities. Most economists agree that past consumption activities often are an important determinant of present consumption patterns (see e.g. Pollak, 1970; Stigler and Becker, 1977; Spinnewyn, 1981; Becker and Murphy, 1988). Stigler and Becker (1977) use music as an example of how past consumption activities lead to beneficial addiction through an accumulation of the so-called "consumption capital". By having exposed themselves to music in the past, consumers have gained inside knowledge that enables them to derive more pleasure from listening to the same music in the present. Stigler and Becker (1977) themselves referred to Marshall (1923) who had written: "(…) the

more good music a man hears, the stronger is his taste for it likely to become."[3] Applied to soccer this means that the marginal utility of watching a soccer game increases with the knowledge about the teams on the pitch. Therefore, given a certain budget constraint consumers will not diversify indefinitely either across activities, or across individuals or teams within a given activity, but will specialize in their consumption patterns. Apparently, consumption capital helps to explain persistent fan loyalty; however, it does not help to answer the question who will concentrate on which team.

Adler (1985) provided an extension of the original Stigler/Becker-framework by adding the element of accumulating consumption capital through discussion. Thus, team specific consumption capital may not only be increased through past consumption activities, but also by discussing the team's performance with other fans who know about it. However, such communication is costly. It involves *searching costs* to find other competent discussants as well as *language transaction costs*. In his paper Adler (1985) only considers the first aspect. Hence, he argues that fans tend to patronize the most famous team because the searching costs to find like-minded fans will be minimal as a consequence. The concept of language transaction costs introduced by Lang (1986) and expanded by Lazear (1999) adds an important insight to this analysis. Different languages and cultures can be viewed as a barrier in the accumulation of consumption capital through social interactions. Overcoming that barrier involves transaction costs in the form of opportunity costs of remaining misunderstanding, time or money spent on learning a language, using translators and other intermediaries, or rather generally on assimilating to a culture. Mutual intelligibility does not only require shared knowledge of the language but of nonverbal aspects like posture, gesture, general beliefs, expectations, costumes or rituals as well. A common culture (whereof the

[3] Original statement in Marshall (1923, p. 94) quoted in Stigler and Becker (1977, p. 78).

language is one aspect) facilitates social interactions and lowers the language transaction costs. Since learning a language and becoming assimilated to the majority culture is costly, market forces encourage segregation and prevent the rise of one dominant team everybody supports. Instead, the language transaction costs are minimized if team attachments are formed based on ethnical affiliations having the same language and culture. Nationals – defined as the majority group in a society – typically minimize both the searching and the language transaction costs by supporting the national team of the country they are living in. Regarding the minority groups of immigrants, however, the decision which national team they should support is more complex, which will be discussed in the following.[4]

Let us assume a society comprising two nationalities (a majority group A and a minority group B) having different cultures and speaking different languages. The corresponding national teams are denoted a and b. The consumer's time (budget) constraint can be stated as follows:

$$I_{ij} = x_{ij}(1+1/X_j) + y_{ij}(1+1/Y_j), \quad i = 1,...,n, \tag{1}$$

where I_{ij} represents the available units of time of consumer i in period j. x_{ij} is time devoted to the national team a and y_{ij} is time devoted to the national team b. In line with Adler (1985) we assume that the only cost in the consumption of televised national team games is time which consists of two elements: the actual time devoted to watching and discussing the game and the time devoted to the search of individuals with whom one could discuss the performances of the selected national team. The searching costs are $1/X_j$ and $1/Y_j$ where

[4] In this paper we implicitly suppose that the ethnical affiliation is mainly driven by the political citizenship of a person. However, this assumption is not always applicable. The United Kingdom is an interesting example of a state in which different ethnical nationalities (English, Scottish, Welsh etc.) have evolved in one state identity (British). Due to historical path dependencies the United Kingdom is even allowed to have more than one "national" team in soccer.

capital letters indicate the total number of supporters who choose to watch games of the corresponding national teams.[5]

The utility function of consumer i in period j depends on the time devoted to support the national team (x_{ij} and y_{ij}) and the accumulated consumption capital regarding the particular national teams ($\overline{X_{ij}}$ and $\overline{Y_{ij}}$):

$$V_{ij} = v_{ij}(x_{ij}, \overline{X_{ij}}) + v_{ij}(y_{ij}, \overline{Y_{ij}}). \quad (2)$$

Assuming that both teams (a and b) provide equal game quality, we do not include any playing talent or quality measures in the model. Thus, game quality does not affect the influence of patriotism.[6] We additionally assume that at an initial point individuals have higher consumption capital of the team representing "their" group than of the other national team. Hence, members of group A have $\overline{X_{ij}} > \overline{Y_{ij}}$, whereas individuals of the minority group B have more knowledge of team b ($\overline{Y_{ij}} > \overline{X_{ij}}$).

Adler (1985, p. 209) shows that given the "addictive" nature of arts or sports, individuals specialize in their consumption patterns. A consumer prefers c units of x_{ij} or c units of y_{ij} to any combination of x_{ij} and y_{ij} totalling c units. The marginal utility of consuming national team games is increasing or at least constant ($\frac{\partial v_{ij}}{\partial x_{ij}} > 0, \frac{\partial^2 v_{ij}}{\partial^2 x_{ij}} \geq 0, \frac{\partial v_{ij}}{\partial y_{ij}} > 0, \frac{\partial^2 v_{ij}}{\partial^2 y_{ij}} \geq 0$).[7] Thus, members of group A (B) will either support team a or team b but not both. Bearing this in

[5] Regarding this procedure see Adler (1985, p. 210).

[6] This ceteris paribus assumption seems plausible given the fact that we control for game quality in our econometrical model.

[7] Adler (1985) also assumes a strictly convex utility function implying increasing marginal utility.

mind, we replace x_{ij} in the utility function by $I_{ij}(1+1/X_j)$.[8] Hence, the utility an individual i derives from spending $I_{ij}(1+1/X_j)$ time units supporting team a in period j may be restated as:

$$V_{ij} = v_{ij}(I_{ij}/(1+1/X_j), \overline{X_{ij}}). \quad (3)$$

Since consumption capital increases utility, $\overline{X_{ij}}$ is a positive argument in the utility function (i.e. $\frac{\partial v_{ij}}{\overline{X}_{ij}} > 0$). Searching costs $1/X_j$ decrease the utility by reducing the available time units x_{ij} consumers can devote themselves to the consumption of national team games. The utility function of watching games of team b is analogous:

$$V_{ij} = v_{ij}(I_{ij}/(1+1/Y_j), \overline{Y}_{ij}). \quad (4)$$

Due to the specific initial endowments of consumption capital we derive from equations 3 and 4 that the members of the majority group A will all support "their" team a. In doing so, they do not only have a higher utility because of the higher consumption capital, but they also minimize the searching costs by collectively patronizing the same team. The minority group, however, faces a trade-off: Their higher endowment of the team-specific consumption capital of team b increases the utility of watching games of team b, but they know that given $A > B$ the searching costs to find likeminded fans are lower regarding team a.[9]

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[8] Regarding this procedure see Crain and Tollison (2002).

[9] Crain and Tollison (2002) illustrate that in a dynamic analysis the consumption horizon also affects this decision. Given that consumers live n periods and revise their consumption decisions in each period, younger people (with a higher n) from the minority group B have stronger incentives to switch to the more popular national team a and abandon team b than elderly people. Unfortunately, we do not know the age distribution of the nationalities living in Switzerland. Hence, we are not able to implement a dynamic perspective.

So far we have not considered any language transaction costs in our model. The language transaction costs additionally increase the switching costs because they complicate further accumulation of consumption capital through cross-lingual discussions. If individuals from a minority immigrant group abandon their traditional national team and support the national team of the majority group, they have to assimilate to its culture and learn its language (to a certain degree) in order to be able to engage into fan discussions. Defining t_i as individual-specific language transaction costs that measure the time required of individual i to acquire a new culture and learn a new language, the utility function of an immigrant of the minority group B supporting team a is as follows:

$$V_{ij} = v_{ij}((I_{ij} - t_{ij})/(1+1/X_j), \overline{X}_{ij}). \quad (5)$$

Equation 5 shows that the time required for assimilation additionally reduces the available time units x_{ij} a consumer is able to support the national team. Thus, we conclude that the decision whether an immigrant from the minority group B will switch teams or still support team b does not only depend on the already accumulated team specific consumption capital $\overline{X}_{ij}$ and $\overline{Y}_{ij}$, but also on the individual language transaction costs t_{ij} and the size of the different fan groups X_j and Y_j. Given the specifity of consumption capital and the language transaction costs, the latter is highly affected by the proportions of the different nationalities within a society.

Within the economic framework, patriotic behaviour is the result of rational choice. Since consumption capital is irreversible and not transferable, it creates lock-in-effects and significant switching costs. Language transaction costs additionally foster fan segregation along the ethnical boundaries. Thus, we conclude that foreign immigrants tend to support the national team of their native country, because in doing so they economize on the language

transaction costs. As a consequence they are able to derive the maximal net pleasure from watching and discussing the games.

Socio-Psychological Explanation of Patriotic Consumer Behaviour

It is a core assumption of Social Identity Theory (see e.g. Tajfel and Turner, 1985) that people like to think positively about themselves and the groups to which they belong. Individuals classify themselves into various social categories in order to facilitate self-definition and self-esteem within their own social groups. According to Tajfel (1978, p. 63) social identity is "… part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership." Obviously, national belonging is one of the group memberships that may contribute to the (social) identity of a person. It is automatically assigned by ancestry. Under certain conditions a person may change her political citizenship. The native origin, however, is not changeable.

Benedict Anderson (1983) introduced the notion of "imagined communities" to explain the strong sociological bond to the native country. Despite the fact that even members of small nations are never able to cultivate face-to-face contacts with all fellow members, Anderson (1983, p. 14) notes that national belonging can arouse "deep attachments". Nations are primarily linked by common identities and less by networks of direct interpersonal relationships. "[The nation] is imagined as a *community*, because, regardless of the actual inequality and exploitation that may prevail in each, the nation is always conceived as a deep, horizontal comradeship" (Anderson, 1983, p. 7, emphasis in original). Belonging to a nation provides "a powerful means of defining and locating individual selves in the world through the prism of the collective personality and its distinctive culture" (Smith, 1991, p. 17).

Individuals are likely to display stronger identification with groups (or in our case with nations) if the distinctiveness of the group's values and the salience of out-groups are high, as Ashforth and Mael (1989) have shown. During international sports competitions the group lines are typically drawn more sharply and both the distinctiveness of the in-group and the salience of the out-group increase. During international big events the otherwise only "imagined" community becomes manifest.

III ECONOMETRIC FRAMEWORK

In order to analyse the determinants of TV audience, we use the Swiss TV ratings of all matches of the FIFA World Cups 2002 in South Korea and Japan and 2006 in Germany and of the UEFA European Championships 2000 in Belgium and the Netherlands and 2004 in Portugal. The TV figures comprehend all Swiss TV viewers who watched the national team games on one of the 17 different free-TV channels on Swiss cable television that serves over 90% of all Swiss households.[10] Thus, potential selection bias due to missing satellite TV ratings is small. The rating statistics were measured by *Publica Data* in a survey of 1870 Swiss households, equalling 4160 persons. These households have TV boxes in their homes which automatically record their TV-viewing habits in 30 second intervals.

Our decision to analyse only the Swiss TV audience figures is motivated by the following reasons: First, accurate worldwide TV figures are not available. Second, by examining just one country we are not concerned with potential biases due to variations in the TV contracts,

[10] The TV ratings include the viewers on the following channels: SF 1, SF 2, TSR 1, TSR 2, TSI 1, TSI 2, RTL, M6, ARD, ZDF, ORF 1, TF 1, F2, F3, RAI 1, RAI 2, SAT 1. Thus, besides six Swiss channels (in three different languages) there are also four German, four French, two Italian and one Austrian channels. The considered TV channels covered an estimated market share of 65% during the soccer competitions.

for example concerning different quota of pay-TV versus free-TV games, which might influence the TV ratings. Third, as a country with a long history of accepting non-nationals, Switzerland offers a good quasi-experimental design to test the influence of patriotism. With over 20% it has one of the highest foreigner rates worldwide and the foreigners come from over 200 different countries. Fourth, being a multilingual country Switzerland can be sub-sampled in three different language areas (French, Italian and German speaking regions) with varying foreigner compositions. This allows us to test the robustness of our results.

Explanatory Variables

We have three main categories of explanatory variables: absolute and relative game quality indicators and a measure of patriotism. In association football quality measures are typically hard to find. The quality of the game is not only determined by the players' talent but also by the cooperation and interaction in the team. We need, therefore, a measure that reflects the absolute playing strength of the national team as a whole. An index which is often used as an estimate of playing strength is the FIFA world ranking of the respective team. The scores of the FIFA world ranking are calculated from all international matches (including friendly games) on a monthly basis.[11] Points are awarded on the basis of the games' results, goals scored, strength of the opponents, importance and venues of the games (Hoffmann, Ging and Ramasamy, 2002). The FIFA ranking is not beyond controversy. Stefani (1997, p. 635) for example criticizes that "a friendly (often a pick-up exhibition used for player development) counts two-thirds as much as does a World Cup final played before a worldwide TV audience". Nevertheless, the FIFA ranking is considered as one of the best available data sources. It is often used in the literature to proxy the playing strength of a national team (see

[11] The monthly FIFA world ranking is published on the webpage www.fifa.com. We used the scores of the FIFA world ranking assigned one month before the competition.

e.g. Hoffmann et al., 2002; Torgler, 2004; Macmillian and Smith, 2007). We assume that the higher the combined FIFA scores of the two teams in a match are, the higher the quality of the game expected by potential consumers will be. Higher expected game quality positively influences the TV ratings.

In the last 17 World Cups from 1930 until 2002 only 24 national teams ever reached the semifinals and only seven nations ever won the World Cup (see Table 1). Five dominant countries (Brazil, Italy, Germany, Argentina and Uruguay) account for sixteen of the eighteen World Cup championships (89%). Brazil, with five victories the most successful country, has a winning percentage of 76% in all World Cup matches played. The same concentration on a few successful teams is also evident, if points are awarded on the basis of reaching at least the semifinals. This is well illustrated in Table 1 which lists the World Cup and European Championship scores as a designed measure that allocates four points for the winner, three points for the runner-up, and two points for the winning and one for the loosing team in the third-place play-off.[12] Unlike the FIFA world ranking, the World Cup scores (WCSCORES) and the European Championship scores (ECSCORES) also incorporate the fact that some teams are said to be typical tournament teams, which means that during the contest they are somehow able to release formerly unknown strength and motivation beyond their normal playing ability. Thus, we use the sum of the teams' WCSCORES and ECSCORES as second game quality proxy.

[Insert Table 1]

[12] A third-place play-off is only organized at the World Cup. Regarding the European Championship, we assign at least two points for all teams participating in a semifinal.

According to the uncertainty-of-outcome-hypothesis (Rottenberg, 1956), higher competitive balance translates into greater excitement and increases TV audience. In order to construct an indicator of outcome uncertainty, we rely on fixed betting odds provided by *Oddset*. Peel and Thomas (1988, 1992) pioneered the use of betting odds to measure the probabilities of different match outcomes in their gate attendance studies of English football. We transformed the posted betting odds along an adaptation of the measure of uncertainty proposed by Theil (1967),

$$BETTINGODDS = \sum_{i=1}^{2} \frac{P_i}{P_1 + P_2} \log\left(\frac{P_1 + P_2}{P_i}\right), \qquad (6)$$

where P_i denotes the winning probabilities of the two opposing teams.[13] The higher the value of equation (6), the higher is the expected outcome uncertainty.[14]

Since patriotism denotes positive and supportive attitudes towards the homeland, it is typically hard to quantify. Instead of collecting information on different intensity levels of patriotism, we simply assume that each individual has a similar minimal level of patriotic feeling, which we expect to be a motivation strong enough to switch-on when the "own" national team is playing during the FIFA World Cups or the UEFA European Football Championships. Thus, to test the influence of patriotism on TV ratings, we use data on the number of foreigners living in Switzerland in the year of the competition split into the different nationalities.[15] The Federal Office for Migration defines foreigners as individuals who permanently live in Switzerland and have not (yet) applied for Swiss citizenship. Bearing

[13] Roy (2004, p. 102) provides a detailed description and motivation of this measure. See Forrest and Simmons (2002) for a general discussion of betting odds as measure of outcome uncertainty.

[14] Since *Oddset* is a German betting company, the posted fixed odds regarding the German national team competitions possibly overstate the winning probability of the German national team and understate the winning probability of the opposite team. The profit maximizing bookmaker takes into account that the majority of German bettors are unlikely to bet against "their" team.

[15] We are grateful to Michael Moser from the Federal Office for Migration for providing this data.

in mind that the Swiss citizenship cannot be obtained unless the candidate has been a permanent resident for quite a long period of time,[16] is able to fluently speak one of the national languages and shows to be integrated into the Swiss habits, costumes and traditions, we assume that having the Swiss passport is a distinctive feature reflecting positive attitudes, including patriotic feelings, towards Switzerland. We furthermore assume that for those immigrants who successfully applied for Swiss citizenship searching costs economies to find other Swiss fans dominate over the path dependencies of former consumption patterns.[17] Given the specifity of consumption capital and the often considerable language transaction costs, we additionally assume that foreigners will be sticking to the national team representing their nation of origin even having lived abroad for years. Therefore, we postulate that the higher the number of foreign residents in Switzerland, the higher the TV ratings of the corresponding national team performances become.

To eliminate alternative explanations we also control for several characteristics of the game. We expect that games scheduled on weekends will have comparatively higher and games scheduled before 6pm (AFTERNOON) lower TV ratings due to different opportunity costs.[18] Some of the last games of the group stage in a tournament are played simultaneously. Since in professional sports consumers typically prefer watching "live" performances to video replays

[16] The so-called "regular naturalization" requires that applicants have been residents for at least twelve years (years spent in Switzerland between the age of 10 and 20 are counted double). Foreign spouses and children of Swiss citizens may apply for the so-called "facilitated naturalization" which has lower minimal requirements. But even here applicants need to have lived in Switzerland for at least five years.

[17] This is, of course, a simplification. Sometimes the emotional attachment to the native country is barely weakened even for assimilated immigrants who received the Swiss citizenship a long time ago (e.g. second or third-generation immigrants). But this potential distortion is negligible because the accumulated number of naturalizations between 1993 and 2005 is only one fifth of the total number of foreigners in 2006 (BFM, 2005; BFM, 2007).

[18] Since our TV figures do not include the persons watching the games in restaurants or special public viewing areas, we also experimented with weather variables (dummy for rain and thunderstorm and the temperature) to proxy the likelihood of watching a game in public. However, these variables neither had any significance nor changed the other coefficients in any way. *Infront Sports and Media Company* estimates that at the FIFA World Cup 2006 8% of the TV audience watched the games in public (FIFA, 2007).

(Lucifora and Simmons, 2003, p. 37), we included a dummy for all simultaneously played games which did not receive a live TV coverage by any of the 17 different TV channels in our sample.[19] The knockout games are assumed to be more exciting than games in the group phase. Thus, we use dummies for the last sixteen (regarding the World Cups), the quarter finals, the semifinals and the final.[20]

Descriptive Statistics

The Swiss TV ratings of the FIFA World Cup and the UEFA European Football Championships have sharply increased in the last view years. The accumulated audience figures rose from 20 millions at the European Championship 2000 and the World Cup 2002 to over 50 millions viewers of games at the World Cup 2006 (see Figure 1). Part of this increased enthusiasm and media profile may be explained by the fact that the Swiss national team only qualified for the latter two competitions. Part of it may be due to the geographical proximity to the host country in 2006. However, it is rather undoubted that the big soccer events enjoy rising audience interest in general.

[Insert Figure 1]

The World Cup 2002 in East Asia had the lowest TV ratings in our sample. The games did not only have an unattractive playing time (matches were shown between half past eight in the morning and 3:15 in the afternoon), the early disqualifications of prominent European

[19] Of course, the broadcaster's allocation of the live TV coverage is not exogenous. It is rather likely that aspects of quality or patriotism influence this decision. However, a probit or logit estimation does not indicate a statistically significant systematic impact of game quality and patriotism on the probability of receiving live TV coverage.

[20] We also experimented with a dummy regarding all games in the group-phase of the tournaments that were no longer momentous for at least one team (because it was already qualified for the next stage or disqualified). "Insignificant" games, however, do not have significantly lower TV audience.

teams like France and Italy additionally curbed enthusiasm and audience interest. Figure 1 also illustrates that the TV audience per game is much higher at European Championship competitions than at World Cups. Of course, the smaller number of games at European Championships (31 instead of 64) plays a major role. But part of the considerable difference might also be explained by game quality and patriotic involvement. We believe that the average game quality at the tournament of the best 16 European teams is higher than at the World Cup for which only 15 (2002) or 14 (2006) European teams were allowed to participate. The likelihood that a European team qualified for the knock-out stage at any of the past 18 World Cups is with 58% much higher than for African or Asian teams (18%), teams from Oceania (25%) or teams from North or Central America (32%). Only South American teams were more likely to be promoted (62%). The European Championships tournaments do not have to meet statutory quotes for Asian, African or Oceanian teams with much shorter soccer traditions. Second, given the predicted influence of patriotism, the high average TV ratings of games at the European Championships can also be explained by the fact that European immigrants represent the lion's share of foreigners living in Switzerland (87.5% in 2004).

[Insert Table 2]

Results

Since outliers can have an overwhelming influence on the regression results especially with small data sets, the variables were checked for outliers running a Grubbs test (Grubbs, 1969) for outlier detection.[21] Outlying observations may highly affect the OLS estimates by

[21] We used the code by Couderc (2007) to perform the Grubb's test of outlier detection. Sometimes "single-case" outlier diagnostics like the Cook's distance measure, DFITS or DFBETA statistics are used. Although useful,

receiving a lot of weight in the least squares minimization problem. Obvious outliers regarding the variable PATRIOTISM are all games of the Swiss national team. The Swiss population accounts for over 75% of the total population. This is definitely an extreme value. The literature does not completely agree on how to deal with influential observations (see e.g. Draper and Smith, 1998; Rousseeuw and Leroy, 2003). Broadly speaking there are three different strategies: First, the variables may be transformed. A logarithmic transformation significantly narrows the range of the data and is thus less sensitive to outlying observations. However, a logarithmic transformation is unusual using non-economic measures. And a logarithmic model does not provide better test statistics than a linear model according to the Davidson-MacKinnon test (Davidson and MacKinnon, 1981). A second strategy would be to choose an estimation method which is resilient to outlying observation like the least absolute deviations (LAD) approach. LAD minimizes the sum of absolute deviations of the residuals on the conditional median, rather than the conditional mean. And since the median is not affected by changes in extreme observations, the estimates of LAD react insensitively to outliers. But a major drawback of this procedure is, given our small simple size, the fact that the "robust" estimators are less efficient than OLS. Second, they require that the conditional distribution of the dependent variable is symmetric, whereas OLS produces unbiased and consistent estimators of the parameters in the conditional mean whether or not the error distribution is symmetric (Wooldridge, 2003). Thirdly, outliers may be dropped. However, this is not unproblematic because sometimes outliers provide information that other data points cannot due to the fact that it arises from an unusual combination of circumstances (Draper and Smith, 1998). Following the last procedure, we therefore report the coefficient results with and without outlying observations and we precisely disclose which games are found to be outliers.

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single-case diagnostics are well known to be inadequate in the presence of multiple outliers, because a group of outlying observations can mask each other when testing for a single one (Temple, 2000).

In a first step we assume that the effect of patriotism on the TV ratings has not changed over the last view years. Thus, we combine all four competitions and simply include three competition dummies that incorporate tournament specific shifts. The variables WCSCORES and ECSCORES are interacted with dummies for World Cup games and European Championship games, respectively.

[Insert Table 3]

The estimates in Table 3 reveal that both game quality and patriotism are strong predictors of TV audience, whereas competitive balance seems to be irrelevant. Teams with high scores in the FIFA world ranking attract significantly more spectators than teams to which lower scores were assigned. In addition, the decision to watch a game seems to be largely driven by the national affiliation. The number of foreign residents living in Switzerland is strongly associated with the TV audience of games in which the corresponding national teams are playing.[22] The size and the statistical significance of the game quality and patriotism variables are highly influenced by a few outlying observations. The coefficient of PATRIOTISM more than triples and the coefficients of WCSCORES and ECSCORES are no longer significant if we drop the outliers. The impact of PATRIOTISM in the model to the right is largely driven by the "outlying" games of the Swiss national team which had an average TV audience of two millions and a sum of the corresponding population groups of almost six millions. The average TV ratings of all other games are 0.6 million with an average PATRIOTISM measure

[22] In order to control for potential systematic gender differences between the nationalities, which may bias the impact of patriotism, we also estimated the results using the males only. However, the results do not change except, of course, for PATRIOTISM whose coefficients duplicate with 2.06 in the model of all games and with 1.79 without outliers. The difference in the modification reflects the fact that the percentage of males in the foreign population is higher than in the Swiss population.

of 0.1 million. The remaining four outliers are unusual high values of the explanatory variables WCSCORES (Germany against Brazil in 2002 and Germany against Italy in 2006) and ECSCORES (Germany against Czech Republic and Germany against Netherlands in 2004).

The coefficients of the control variables have the expected signs and are highly significant (except the dummy for the European Championship tournament in 2004). Weekend games enjoy higher TV audience than midweek games. The fact that a game is scheduled before 6pm or did not receive a live TV coverage considerably decreases the TV ratings. The knockout games have significantly higher audience than games in the group phase with an increasing markup as the tournament is heading towards the final.

In a second step we run an Ordinary Least Squares (OLS) regression for each competition separately to allow for varying impacts of game quality and patriotism on TV audience across the different competitions.[23] Due to the small sample size we only include those variables in the regression model which have proved to be significant predictors in the main model. In doing so, the cases-to-variables-ratio can be increased.[24] Analysing four different sub samples we have to again identify potential outliers. The Grubbs test identified the following outliers: the finals of the European Football Championship 2000 and the World Cup 2002, all games of the Italian[25] national team at the World Cup 2002 and all games of the Swiss national team at the European Championship 2004 and the World Cup 2006. Table 4 presents both the estimates with and without outlying observations.

[23] We preferred splitting the sample into subgroups to using interaction terms of the game quality and patriotism variables because not only the impact of the variables of interest but also the coefficients of various controls are expected to change. However, estimation results using interaction terms are available from the authors on request.

[24] See Tabachnick and Fidell (2001) regarding this estimation strategy.

[25] The Italians are the greatest foreign population group in Switzerland.

[Insert Table 4]

Table 4 shows that – except for the European Football Championship 2000 – the variable FIFAR as a measure of playing strength and patriotism remain strong predictors of TV audience if the competitions are separately analysed. Here again, the coefficient of PATRIOTISM is highly affected by outlying observations. If outliers are deleted, the impact of the affiliated population groups on TV audience increases considerably, which we explain as follows: Despite our patriotism hypothesis whereby individuals watch just the games of "their" national team, it is likely that the interest in soccer highly varies. Some individuals never watch a football game whereas hard-core soccer fans watch every single game of the tournament. Given the considerable increase of the patriotism coefficient if the large outlying population groups are dropped (mainly the Swiss in 2004 and 2006), it seems as if the share of both extreme "fan categories" is not equally distributed across the nationalities but that foreign residents living in Switzerland have a stronger soccer passion than Swiss citizens. In addition, it is possible that the enthusiasm created by large immigrant groups may attract viewers from other nations to join in. Strictly speaking, the coefficient of the variable PATRIOTISM should not exceed 1000 according to the pure patriotism hypothesis. However, since we do not use a discrete choice model whether someone is going to watch the games of the "own" national team or not, coefficients above unity are possible.

Robustness Analysis

In this section we examine the robustness of our results in a twofold way: First, we analyse three sub-samples with varying foreigner compositions and second, we allow for the possibility that people might have supportive attitudes to more than just one country.

Switzerland has four official languages: German (64%) in the north and centre; French (20.4%) in the west; Italian (6.5%) in the south; and Romansh (0.5%) that is spoken locally by a small minority in the south-eastern region. This peculiarity of Switzerland as a multilingual and multicultural country helps us to investigate the influence of patriotism on the TV ratings in more detail. We are fortunate to have both the TV ratings and the data of the different immigrant groups separately for the main three language areas of Switzerland.

[Insert Figure 2]

The density of particular foreigner groups in a certain region is highly affected by the spoken language. The illustrations in the left column of Figure 2 display that French immigrants are most likely to settle down in the French speaking part of Switzerland, the Italians in the Italian speaking region and the German immigrants in the German speaking area (relatively to the total number of people living in that area). For a first visual test we compare the relative average TV audience of games with the German, French and Italian national team with the population shares of German, French and Italian foreigners in the three different language areas. The illustrations in Figure 2 show that the different shares of Germans, French and Italians in the different language areas are well reflected in the relative TV audience of the corresponding national team performances in all four tournaments. The Italian national team enjoys the highest TV audience share in the Italian speaking region, the French team in the French speaking area and the German national team in German speaking part of Switzerland. Of course, this does not yet prove that patriotism alone drives this result. We have to especially address the possibility that the demand of the “big three” European national teams might be driven by reduced language transaction costs in the corresponding regions (see the subsequent section in this paper). However, the apparent relationship between the population

shares and the relative TV ratings does not disappear if we control for game quality, competitive balance and other game specific characteristics. Table 5 displays separate estimates regarding the three language areas.[26] The influence of patriotism thereby shows high robustness.

[Insert Table 5]

So far we have treated patriotism as a positive and supportive attitude to just one country (according to the political citizenship). However, regarding Switzerland (and other multicultural and multiethnic countries) it is possible that the extent of identification with and pride in the nation might vary considerably even among people having the same political nationality. Instead of supporting just one national team and being indifferent concerning all others, people could have a list of precedence.

Both the languages and the culture of Switzerland are highly influenced by its neighbours. The French speaking areas, for example, tend to be geared slightly more to the French culture and the Italian speaking region is affected by Italy both in lingual and cultural aspects. The high cultural diversity in Switzerland is often observed in the different voting behaviours. The French speaking regions for example tend to be friendlier to state regulation and support a more open foreign policy than the German speaking part of Switzerland. The Swiss have even created a special word, namely "Röstigraben", to describe the dividing line between the different mentalities and the latent conflict between the German speaking majority and the French speaking minority.

[26] Outliers are identical in all three models and the same as in Table 3.

In the following we investigate the eventuality that individuals (mainly the Swiss) living in a specific language area of Switzerland might have a special affection for the neighbouring national teams regardless of their political citizenship. Apart from their first-order attachment to the Swiss nation, the Italian and French speaking minorities as well as the German speaking majority could possibly feel emotional about the Italian, French or German national team, respectively, due to the same lingual and a similar cultural background which lowers the language transaction costs.[27] Hence, we include a dummy for all games of the German national team (GERMANY), the French national team (FRANCE) and the Italian team (ITALY).

[Insert Table 6]

As Table 6 shows, people living in the German, French or Italian speaking regions exhibit no special interest for the German, the French or the Italian team, respectively, once outlying variables are eliminated. It seems that the second-order lingual or cultural similarities do not additionally help to explain the TV audience figures of national team games. Even in a multilingual and multicultural country like Switzerland it is rather the first-order attachment according to the political citizenship which defines whether someone is going to watch a national team competition or not.

IV CONCLUSIONS

The presented study investigates the determinants of TV audience at four major international soccer competitions: the UEFA European Football Championships 2000 and 2004 and the FIFA World Cups 2002 and 2006. The results indicate that the demand for televised national

[27] Regarding the German national team, it is rather a love-hate relationship.

team games is largely driven by the expected game quality based on the proven playing strength of the opponents as well as by patriotism. The number of foreign residents living in Switzerland is a good predictor of the Swiss TV ratings for the corresponding national team games. The relationship between soccer and patriotism seems to be very powerful. If outlying observations (particularly the games of the Swiss national team) are dropped, the relationship between patriotism and TV audience is even intensified. An exogenous shock of for example 1000 additional Portuguese immigrants living in Switzerland is likely to enhance the TV ratings of the games of the Portuguese national team by around 800. Of course, strictly speaking, we just find a correlation between particular population groups and TV figures, without being able to detect the exact causality chain. Additional psychological and sociological studies are required to explore the relationship between patriotism and fan support more in-depth. Nevertheless, we consider patriotism as the most plausible explanation for the robust relationship between TV audience and the size of the corresponding nationalities.

We know from demand studies in club football that gate attendance is positively related to a team's market – typically approximated by the metropolitan statistical area (e.g. Falter and Pérignon, 2000; Schmidt and Berri, 2001; Forrest, Simmons and Feehan, 2002; Borland and MacDonald, 2003; Simmons, Buraimo and Forrest, 2007). Our results indicate that regarding TV audience of national team competitions the relevant market is no longer geographically but nationally segmented. Patriotism plays a crucial role in shaping viewing habits. Immigrants tend to stick to their native country even when living abroad. From an economic standpoint the strong national differences in consumer behaviour may be explained by historical path dependencies of a habit forming activity, which creates lock-in effects and significant switching costs. From a sociological perspective the national team seems to be an

important object of social identification that facilitates the important feeling of belongingness and self-esteem.

The finding of this study that both game quality and patriotism increase the TV ratings sheds a new light on the recent decisions of the FIFA Executive Committee concerning the assignment of World Cup slots to the six different confederations. Recently, the European confederation lost slots to the other confederations (representing Africa and North and Central America). Based on the concept of sporting merit alone, this development is difficult to understand. As the measures of playing strength indicate, European and South American teams have shown much better field performances at past World Cups than teams from other confederations. From the perspective of the European confederation a system of slot allocation which emphasizes sporting merit looks advantageous as it increases the opportunities of the European teams. In 2002 the European confederation proposed that the teams qualifying for the quarter-finals should automatically secure a slot for their confederations at the next World Cup. FIFA reacted to this proposal by launching a commission that inquires into the subject.

In our opinion, it seems to be a plausible goal for the world governing body of football to maximize the TV exposure of the World Cup. Most revenues accruing to FIFA and its member associations are simple by-products of attention and the World Cup is the basic attention generating vehicle of FIFA. Our study indicates that in order to reach this goal FIFA cannot allocate slots to the World Cup on the grounds of sporting merit alone. Instead, FIFA has to take into account aspects of patriotic identification of large population groups in the world if it wants to further develop football as the number one sport worldwide.

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Table 1: Playing success at past World Cups and European Championships

	World Cup Scores 1930-2002	World Cup Scores 1930-1998	European Championship Scores 1960-2000	European Championship Scores 1960-1998
Brazil	31	27	0	0
Germany	28	25	20	20
Italy	21	21	10	7
Argentina	14	14	0	0
Uruguay	10	10	0	0
France	9	9	11	7
Sweden	8	8	2	2
Holland	7	7	10	8
Czech Republic	6	6	11	11
Hungary	6	6	3	3
England	5	5	4	4
Poland	4	4	0	0
Austria	3	3	0	0
Portugal	2	2	4	2
USA	2	2	0	0
Yugoslavia	2	2	7	7
Chile	2	2	0	0
Croatia	2	4	7	7
Turkey	2	0	0	0
Spain	1	1	7	7
USSR	1	1	14	14
Belgium	1	1	5	5
Bulgaria	1	1	0	0
South Korea	1	0	0	0
Denmark	0	0	7	7

Note: The World Cup scores and the European Championship scores are calculated by weighting championship with 4, runner-up with 3, third place with 2 and fourth place with 1.

Figure 1: TV audience statistics

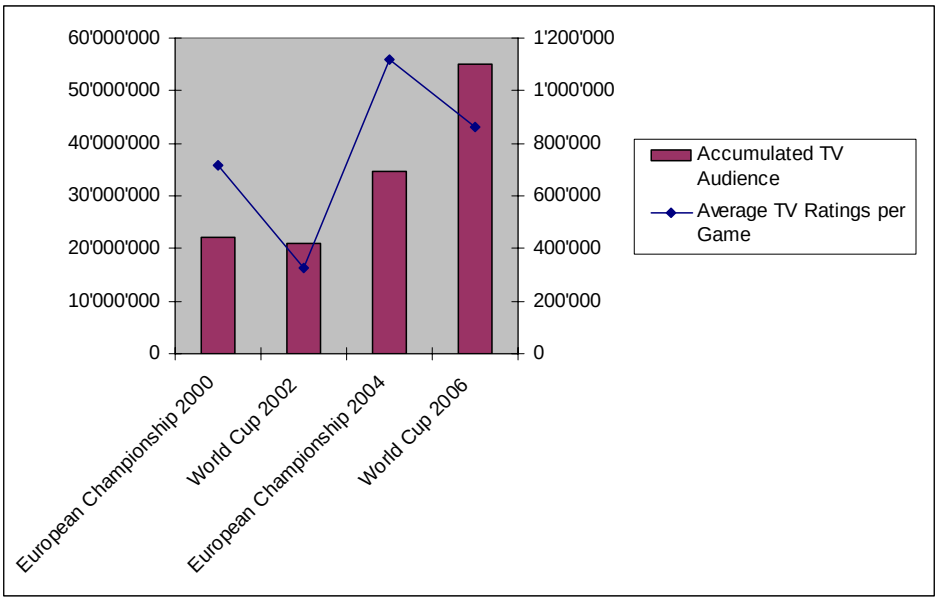


Table 2: Independent variables and descriptive statistics

		EC 2000		WC 2002		EC 2004		WC 2006	
Variable	*Description*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
(Absolute) Game Quality									
FIFAR	Sum of scores in the FIFA world ranking (in 100)	13.43	0.84	13.48	0.69	13.72	0.76	14.01	0.81
WCSCORES	Sum of World Cup scores	—	—	11.03	12.07	—	—	13.45	13.25
ECSCORES	Sum of European Football Championship scores	11.33	6.03	—	—	12.87	6.93	—	—
Competitive Balance									
BETTINGODDS	Adaption of the Theil-measure of uncertainty using betting odds information (in %)	27.85	2.08	25.92	0.04	25.79	0.04	23.92	44.86
Patriotism									
PATRIOTISM	Sum of citizens of the playing nations living in Switzerland (in 1'000)	160.1	120.1	66.4	81.2	675.9	1761.2	468.9	1427.3
Control variables									
WEEKEND	Games scheduled on Saturday or Sunday (dummy)	0.43		0.36		0.35		0.38	
AFTERNOON	Games scheduled before 6 pm (dummy)	—		—		—		0.36	
NOTLIVE	Games without any live TV coverage (dummy)	0.03		0.09		0.00		0.09	
LASTSEXTEEN	Knockout games of the last 16 (dummy)	—		0.14		—		0.14	
QUARTERFINAL	Knockout games of the last 8 (dummy)	0.13		0.07		0.13		0.07	
SEMIFINAL	Semifinals including the third-place playoff (dummy)	0.07		0.05		0.07		0.05	
FINAL	Final	0.03		0.02		0.03		0.02	

Table 3: Pooled estimation of TV audience with and without outliers

	All Games		Without Outliers	
	β-coef.	*Std.Error*	*β-coef.*	*Std.Error*
FIFAR	83'556.3 **	30'111.2	94'786.1 ***	29'463.2
WCSCORES*WC	3'259.2 *	1'955.7	1'607.5	2'072.1
ECSCORES*EC	15'336.5 ***	4'692.4	8'515.3	5'305.7
BETTINGODDS	1'764.4	4'460.6	-445.4	4'489.7
PATRIOTISM	236.6 ***	15.2	794.7 ***	197.7
WEEKEND	119'915.9 **	40'249.2	133'884.3 ***	39'059.3
AFTERNOON	-407'379.5 ***	52'374.1	-392'796.5 ***	54'621.2
NOTLIVE	-288'235.3 ***	82'812.9	-255'894.2 ***	78'130.9
LASTSEXTEEN	254'991.5 ***	56'026.6	217'747.9 ***	51'586.0
QUARTERFINAL	361'183.6 ***	56'764.7	335'843.8 ***	57'255.1
SEMIFINAL	727'062.6 ***	100'733.3	647'454.5 ***	103'726.1
FINAL	1'393'230.0 ***	105'471.3	1'375'591.0 ***	83'181.2
EC 2000	-368'149.2 ***	89'368.0	-311'752.3 ***	95'456.5
WC 2002	-125'296.7 ***	34'887.6	-93'124.9 **	35'513.8
EC 2004	-142'965.4	105'741.0	-52'389.6	106'423.4
Constant	-468'319.9	449'087.6	-623'211.3	435'235.3
R^2	0.847		0.810	
Number of observations	190		179	

Note: Significance levels: * 5% ; ** 1%, *** 0.1%. Standard errors are White robust. Significance tests are one-tailed for directional variables and two-tailed for control variables.

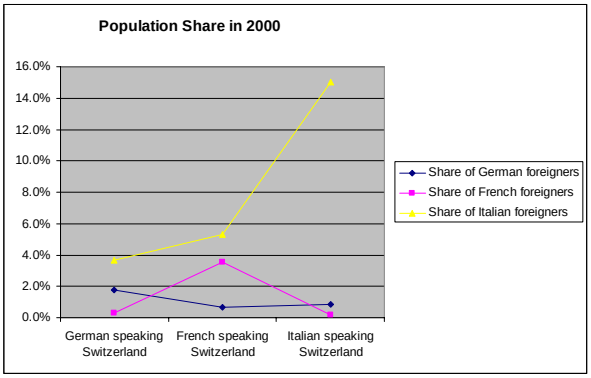
Table 4: Separate estimation of TV audience with and without outliers

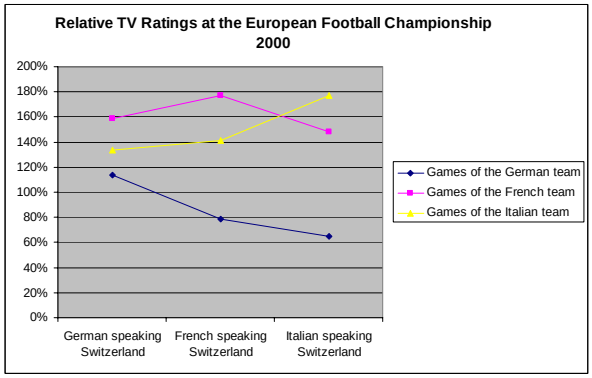
	EC 2000 All Games		EC 2000 Without Outliers		WC 2002 All Games		WC 2002 Without Outliers	
Variable	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*
FIFAR	59'886.2	60'992.2	59'886.2	60'992.2	38'755.7 *	21'611.0	37'941.8 *	22'059.2
PATRIOTISM	-172.3	728.0	-172.3	728.0	722.1 ***	135.0	1'085.2 ***	262.7
WEEKEND	32'532.4	121'614.7	32'532.4	121'614.7	164'123.5 ***	31'516.4	169'586.2 ***	33'802.4
AFTERNOON	-42'585.5	250'394.5	-42'585.5	250'394.5	—		—	
NOTLIVE	-634'553.0 ***	122'298.9	-634'553.0 ***	122'298.9	-98'660.7 ***	22'973.6	-95'353.2 ***	24'627.5
LASTSEXTEEN	—		—		111'516.6 *	44'055.4	96'377.0 +	50'381.5
QUARTERFINAL	461'499.3 *	181'271.5	461'499.3 *	181'271.5	287'173.0 ***	45'336.3	267'667.0 ***	42'819.4
SEMIFINAL	883'142.0 ***	138'844.4	883'142.0 ***	138'844.4	442'409.1 ***	29'698.5	416'752.1 ***	36'354.9
FINAL	1'648'142.0 ***	244'161.0	—		1'224'366.0 ***	42'948.8	—	
Constant	-221'307.6	842'623.2	-221'307.6	842'623.2	-351'256.3	285'124.8	-353'448.0	289'330.3
R^2	0.771		0.632		0.886		0.788	
Number of observations	31		30		64		59	

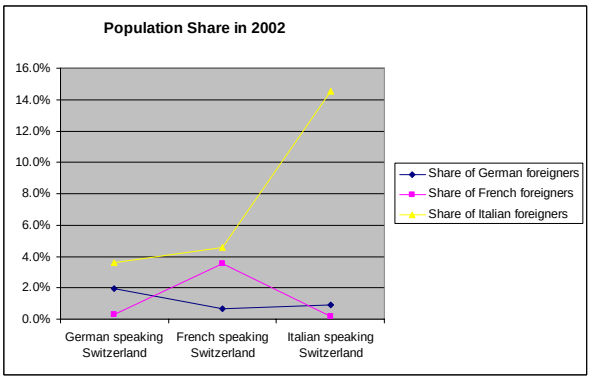
	EC 2004 All Games		EC 2004 Without Outliers		WC 2006 All Games		WC 2006 Without Outliers	
Variable	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*	*β-coef.*	*Std.Error*
FIFAR	341'189.1 ***	77'716.2	290'988.5 ***	76'065.8	142'806.9 ***	41'932.8	142'089.9 **	45'766.3
PATRIOTISM	225.9 ***	26.1	2'181.6 ***	550.1	250.6 ***	15.4	817.2 **	328.7
WEEKEND	164'582.5	133'250.4	200'688.8	114'756.6	35'131.6	75'227.8	38'151.9	72'860.2
AFTERNOON	—		—		-406'052.1 ***	55'864.6	-402'250.1 ***	60'513.9
NOTLIVE	—		—		-426'020.8 ***	110'254.6	-413'157.0 ***	117'808.80
LASTSEXTEEN	—		—		401'150.0 ***	74'177.9	346'677.0 ***	78'734.2
QUARTERFINAL	300'594.1 *	137'463.8	397'237.9 ***	93'285.2	436'212.2 ***	91'120.3	367'849.8 ***	98'772.4
SEMIFINAL	764'251.1 ***	101'003.0	821'487.8 ***	172'243.9	884'161.6 ***	213'521.8	731'418.0 **	230'247.8
FINAL	1'606'724.0 ***	150'685.6	1'443'685.0 ***	122'586.4	1'563'480.0 ***	76'119.0	1'392'875.0 ***	113'457.5
Constant	-3'913'841.0 **	1'104'664.0	-3'457'843.0 **	1'065'158.0	-1'208'124.0 *	596'410.6	1'238'947.0 +	637'255.1
R^2	0.741		0.787		0.884		0.847	
Number of observations	31		28		64		60	

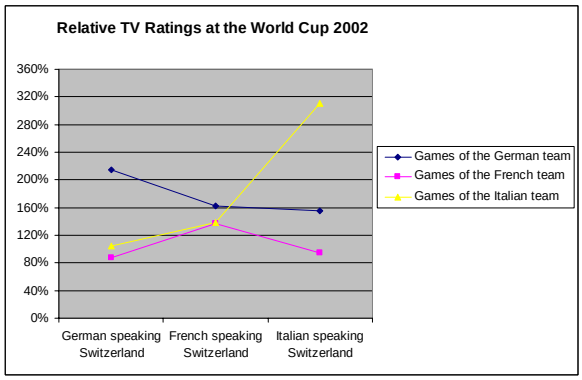
Note: Significance levels: * 5% ; ** 1%, *** 0.1%. Standard errors are White robust. Significance tests are one-tailed for directional variables and two-tailed for control variables.

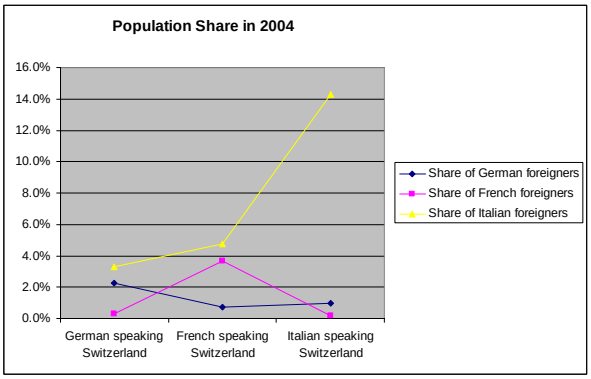
Figure 2: Share of German, Italian and French immigrants in the three language areas of Switzerland and relative TV audience per game of the corresponding national team performances

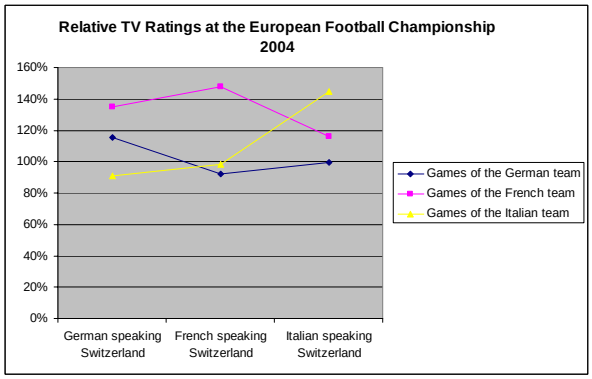


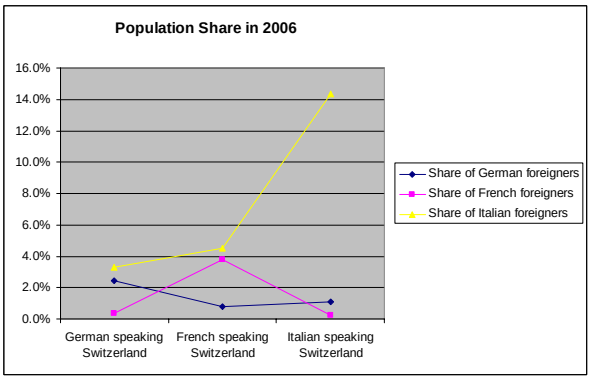












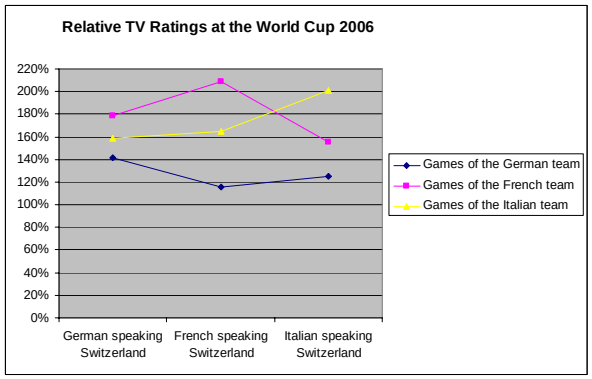


Table 5: Estimates of TV audience split into the three language areas of Switzerland

	German Speaking Switzerland				French Speaking Switzerland			
	All Games		Without Outliers		All Games		Without Outliers	
Variable	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*
FIFAR	52'482.1 **	22'189.8	66'544.6 **	22'480.0	27'196.8 ***	7'340.2	17'487.3 **	7'354.4
WCSCORES*WC	2'573.5 *	144'596.2	1'211.1	1'634.7	406.6	492.8	822.5	515.2
ECSCORES*EC	13'928.4 ***	3'577.8	8'548.1 *	4'100.6	1'387.5	1'221.0	822.3	1'605.8
BETTINGODDS	1'667.6	3'277.9	-321.3	3'281.5	155.0	1'122.3	152.0	1'163.3
PATRIOTISM	219.6 ***	13.6	633.5 **	226.8	340.9 ***	25.5	1'098.2 ***	189.4
WEEKEND	107'924.0 ***	28'304.6	117'263.6 ***	27'895.9	9'520.8	11'375.0	12'397.6	10'906.9
AFTERNOON	-300'909.9 ***	38'180.2	-286'141.9 ***	40'272.7	-95'199.9 ***	13'895.8	-92'197.5 ***	13'926.3
NOTLIVE	-197'787.4 **	65'037.0	-179'281.7 **	61'565.5	-79'048.5 ***	15'641.9	-68'822.6 ***	14'446.0
LASTSEXTEEN	176'412.8 ***	38'401.8	152'902.8 ***	36'025.0	66'951.0 ***	16'251.1	56'349.9 ***	14'358.1
QUARTERFINAL	264'164.1 ***	41'387.4	252'724.2 ***	41'871.4	84'074.0 ***	14'664.3	71'150.6 ***	14'618.3
SEMIFINAL	541'301.7 ***	71'671.0	496'999.7 ***	74'355.4	159'777.6 ***	27'104.7	125'112.6 ***	29'449.4
FINAL	1'028'755.0 ***	81'936.6	1'052'112.0 ***	67'046.3	311'974.3 ***	26'007.4	281'249.5 ***	21'235.7
EC 2000	-301'179.0 ***	68'256.1	-243'577.9 ***	73'080.0	-60'165.3 **	20'728.5	-61'657.8 *	24'282.5
WC 2002	-109'352.5 ***	25'872.2	-89'327.3 ***	27'016.5	-7'640.8	9'303.7	-2'836.8	9'262.7
EC 2004	141'197.2	78'135.7	-66'537.3	81'203.7	-4'872.2	28'194.1	4'593.4	30'282.2
Constant	241'191.1	330'699.4	-415'169.9	331'031.7	-207'837.8	108'660.4	-99'121.9	105'720.3
R^2	0.850		0.807		0.813		0.789	
Number of observations	190		179		190		179	

	Italian Speaking Switzerland			
	All Games		Without Outliers	
Variable	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*
FIFAR	2'676.4 *	1'380.4	3'694.8 **	1'203.9
WCSCORES*WC	403.6 ***	104.7	244.9 **	95.4
ECSCORES*EC	239.1	228.5	181.0	246.5
BETTINGODDS	-33.0	222.3	-106.9	193.6
PATRIOTISM	214.2 ***	25.7	681.1 ***	63.3
WEEKEND	2'933.2	2'129.9	4'424.9 *	1'724.8
AFTERNOON	-10'404.5 ***	2'960.6	-10'526.2 ***	2'558.7
NOTLIVE	-9'610.3 **	3'222.4	-7'622.8 **	2'887.6
LASTSEXTEEN	10'705.8 **	4'023.6	8'109.3 **	2'752.2
QUARTERFINAL	11'963.3 ***	2'923.4	10'407.4 ***	2'874.0
SEMIFINAL	23'431.3 ***	4'259.6	20'940.3 ***	4'002.1
FINAL	48'586.3 ***	5'011.6	39'885.6 ***	5'390.6
EC 2000	-8'126.4 *	4'036.9	-6'477.0	4'146.8
WC 2002	-7'619.8 **	2'695.5	-5'687.0 **	2'029.0
EC 2004	1'068.2	5'092.3	6'282.5	4'550.2
Constant	-7446.260	20'468.9	-21'301.3	17'733.5
R^2	0.752		0.802	
Number of observations	190		179	

Note: Significance levels: * 5% ; ** 1%, *** 0.1%. Standard errors are White robust. Significance tests are one-tailed for directional variables and two-tailed for control variables.

Table 6: Estimates of TV audience including dummies for games of the German, French and Italian team

	German Speaking Switzerland				French Speaking Switzerland			
	All Games		Without Outliers		All Games		Without Outliers	
Variable	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*
FIFAR	69'112.5 **	26'689.4	69'884.6 **	26'750.5	24'634.0 **	9'006.3	14'593.4	9'469.0
WCSCORES*WC	1'129.8	1'921.5	1'653.9	1'892.4	736.2	661.3	1'607.0 **	677.9
ECSCORES*EC	9'243.0 *	4'599.2	5'851.3	5'028.5	897.4	1'565.0	557.5	1'750.1
BETTINGODDS	1'283.8	3'241.3	-730.4	3'383.0	488.6	1'152.5	16'086.3	1'215.9
PATRIOTISM	221.6 ***	15.8	824.0 *	469.6	331.6 ***	27.3	1'055.1 ***	229.9
GERMANY	92'742.8	53'850.3	15'465.8	69'374.2	-3'043.9	18'938.7	-21'682.5	19'528.1
FRANCE	64'946.9	60'779.0	77'952.3	66'484.9	55'039.3 *	21'414.1	38'010.2	23'709.1
ITALY	88'197.2	46'781.9	-33'170.4	93'562.2	41'471.3 **	12'907.3	2'402.9	16'156.3
R^2	0.844		0.796		0.812		0.778	
Number of observations	190		179		190		179	

	Italian Speaking Switzerland			
	All Games		Without Outliers	
Variable	*β-coef.*	*Std. Error*	*β-coef.*	*Std. Error*
FIFAR	2'845.2 *	1'516.6	2'433.4	1'563.2
WCSCORES*WC	297.0 **	120.8	360.5 **	123.0
ECSCORES*EC	245.9	247.6	-2'819.5	265.1
BETTINGODDS	31.2	187.4	80.1	193.5
PATRIOTISM	180.2 ***	22.4	940.0 *	436.3
GERMANY	-2'380.5	3'099.8	-5'421.1	3'341.6
FRANCE	1'402.9	3'338.7	3'427.5	3'652.5
ITALY	21'367.7 ***	2'904.8	-12'515.3	19'650.7
R^2	0.826		0.807	
Number of observations	190		179	

Note: Significance levels: $^{+}$ 10%, * 5% ; ** 1%, *** 0.1%. Standard errors are White robust. Significance tests are one-tailed for directional variables and two-tailed for control variables. The model also includes dummies for afternoon games, weekend games, games without live TV coverage, the last sixteen, the quarter-finals, the semifinals, the final as well three different competition dummies (the World Cup 2006 is the reference).