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Sports nationalism and xenophobia: when cheering turns into violence

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Abstract

International football matches are among the highest manifestations of national pride and unity that a country can have in peaceful times. However, some anecdotal evidence suggests that when things go wrong (e.g., when the national team loses), the euphoria surrounding these events can easily turn into xenophobic outbursts. We propose a conceptual framework and an empirical analysis to explain whether sports nationalism can fuel xenophobic behavior and attacks against immigrants. Leveraging on new soccer data from Germany and quasi-experimental econometric techniques, we show the existence of a causal nexus between the national team's performance in prominent international competitions and shifts in nationalist tendencies and xenophobic behaviors against immigrants. In the immediate days following a defeat of the German national team, there is a significant increase in the number of attacks against immigrants in the country. The opposite happens following a victory. Through a variety of robustness tests and different specifications, we show that the effect is specific to attacks against immigrants and not due to a general increase in violent behavior observed in other studies. Finally, we investigate potential underlying mechanisms by looking at the effect of football matches on reported mood and attitudes against immigrants.

Keywords: Nationalism, Sports, Immigration, Xenophobic violence.

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“I am a German when we win, but I am an immigrant when we loose”

Mesut Özil,

Former player of the German team¹

Introduction

When, in 1945, George Orwell described international sport as ‘war minus the shooting’, he expressed a feeling that most of us can share: international sports competitions are not just about sport (Orwell, 1945). They are among the highest manifestations of national pride and unity that a country can have in peaceful times, especially when the national team makes it to the final victory. On the less bright side, if things go wrong, cheering for the national team can easily exacerbate negative feelings of nationalism and turn into xenophobic outbursts. The perception that this might be the case is strong, but the evidence is scarce and often limited to anecdotes.² In this work, we leverage data from Germany to fill this gap and provide empirical support for the existence of a causal nexus between international soccer matches, nationalism, and xenophobia against immigrants.

¹ From a tweet of Mesut Ozil: <https://twitter.com/mesutozil1088/status/1020984884431638528>

² For instance, the case of the three English players who received racist insults after having missed the penalty in the 2021 European final (Landler, 2021) or the emblematic case of Mesut Ozil's removal from the German national team.

We support our analysis with a conceptual framework to link sports nationalism and anti-immigration attitudes. Although *sports nationalism*³ has long been underrated as “banal nationalism” or “partyotism”, a growing stream of empirical literature suggests that there may be important consequences on individual and collective behavior (Arnold, 2021; Bairner, 2001; Bertoli, 2017; Billig, 1995; Depetris-Chauvin et al., 2020; Dunning, 1999; Guilianotti, 2013; Rosenzweig & Zhou, 2021; Schiller, 2015). However, it is unclear whether these are positive or negative consequences. For example, a recent study suggests that *sports nationalism* can bring benefits through a reduction in inter-ethnic violence and animosity between citizens of the same country (e.g., Depetris-Chauvin et al. 2020). This evidence partially contrasts with another recent study - heavily covered in the press - that suggests that *sports nationalism* can be dangerous as it increases the risk of hostility between countries (Bertoli, 2017). From a theoretical standpoint, both strands of evidence might have their explanations. Some argue that national sports can help build national identity and cohesion (*patriotic nationalism*), while others argue that national sports can trigger ethnic division (*ethnic nationalism*) (Arnold, 2021; Dubois, 2010; Schiller, 2015).

We contribute to this theoretical literature by constructing a conceptual framework where nationalism and xenophobia are not thought of as stemming from unadulterated ideology but rather from a multi-dimensional construct of attitude, behaviors, and mood states (as in Fiske 1998). Within this framework, the traditional distinction between nationalism and patriotism is off the mark: they are ideological brothers, not distant cousins (Derbyshire, 2019; Walt, 2019; Wimmer, 2019). Thus, we bring forward the traditional dualism between nationalism types (ethnic vs patriotic) to a duality between nationalism moods that we label *identitarian* and *unitarian*.

³ We use *sport nationalism* to refer the phenomena of nationalism in the context of sport events. Tosa (2015) gives a slightly different definition: “Sport nationalism refers to complex social phenomena created by ties between a nation–state and its sports”. Some scholars preferred to use the two terms separately “Sport AND Nationalism”. See Arnold (2021) for a review.

For our empirical analysis, we look at a detailed dataset of daily attacks against immigrants during 2014-2018 in Germany, combined with the results of all soccer matches of the German national team in the same period. Our identification strategy leverages the plausible exogeneity of the date and result of soccer matches. We find that *sports nationalism* can cause an increase in xenophobic attacks against immigrants in the days after the German soccer team reports a loss, and a decrease in the days after the German soccer team wins. These results reconcile seemingly conflicting evidence between the positive and negative impacts of *sport nationalism*.

We add to the literature on *sports nationalism* by showing its practical and tangible effects on society (Arnold, 2021; Bertoli, 2017; Bertoli & Yin, 2019; Caruso et al., 2017; Depetris-Chauvin et al., 2020) and contribute to the theoretical debate about types of nationalism and patriotism, discussing the nature of the two ideologies and their relationship with other behavioral traits (Green et al., 2011; Habermas, 1994; Levinson, 1950; Schatz & Staub, 1997; Smith, 1991; Viroli, 1995; Wellings, 2012).

We also build on the strand of literature on the “relevance of irrelevant events”. We show how mood changes caused by the attendance of sports events can impact individual behaviors (Bertoli & Yin, 2019; Busby et al., 2017; Busby & Druckman, 2018; Dickson et al., 2016; Edmans et al., 2007; Fowler & Montagnes, 2015; Healy et al., 2010; Ivandić et al., 2021; Kirby et al., 2014; S. Müller & Kneafsey, 2021; Potoski & Urbatsch, 2017; Rosenzweig & Zhou, 2021; Trendl et al., 2021), and the more general consequences of sharing collective national experience (Clingingsmith et al., 2009; Durkheim, 1965). Finally, we depict how patriotism and nationalism are differently related to anti-immigration attitudes and attitudes towards out-group members (Blank & Schmidt, 2003; Heinrich, 2018; Hjerm, 2001; Rosenzweig & Zhou, 2021; Wagner et al., 2012), and we contribute to the shred of evidence on the determinants of anti-immigration attitudes, showing that seemingly unrelated events - such as the results of a soccer match – might cause violent behaviors against immigrants (Blinder, 2015; Markaki & Longhi, 2013; O’rourke & Sinnott, 2006).

We organized the article as follows: in the first part, we provide the conceptual framework by surveying the relevant literature on the topic. In the second part, we

present the empirical application. We wrap up by discussing some limitations of the approach, and we conclude by mentioning policy implications and potential avenues of research.

Conceptual framework and context

Our conceptual framework is structured around three interrelated themes. The first theme explores how attending sports events affects individual moods and behaviors. The second theme delves into the connection between international sports events and the national dimension, including aspects like sports nationalism. The third theme centers on anti-immigrant attitudes and their intersection with nationalism.

This section provides a comprehensive overview of these three themes, viewed through an interdisciplinary lens and tailored to Germany's unique political and demographic context. As we conclude this section, we present a concise visualization of the conceptual framework (Diagram 1), rooted in the concepts of identitarian and unitarian nationalist moods.

Sports events are by far the topic that attracts the larger attendance in media, even more than a pandemic. Ranking the most-watched global television shows reveals that the top spots are dominated by Olympic games and soccer matches. During European and World Cup events, TV viewership in Germany and other European countries can reach over 80%. Notably, even the speeches of Presidents announcing lockdowns during the Covid pandemic fail to match the viewership of these sports events.⁴ Sports events are comparable (in terms of participation) to the more thrilling moments of a nation.

In the words of Hobsbawm, what makes soccer so effective in boosting national feelings is the ease with which it can represent the idea of a community of millions through the simple image of eleven named players (Depetris-Chauvin et al., 2020; Hobsbawm, 1990).

Sport events have long been used to amplify government propaganda and many recognize sports events as one of the most effective tools to boost national sentiment

⁴ see https://en.wikipedia.org/wiki/List_of_most-watched_television_broadcasts

(i.e., excluding warfare). After all, sporting events can be seen as a stylization of war, and in this light, it is not surprising that they can be accompanied by violent episodes (Caruso et al., 2017; Elias & Dunning, 1986). But it remains unclear if the feelings and moods triggered by sports events can have unintended effects on individual behavior in the absence of political exploitation or the lack of a national dimension. Some scholars have tried to empirically answer this question, supporting the idea that sports events have pernicious effects on society, even without political exploitation or nationalist dimensions. For instance, results of local soccer and basketball matches can increase domestic violence and mental illness (Dickson et al., 2016; Edmans et al., 2007; Ivandić et al., 2021; Kirby et al., 2014; Trendl et al., 2021) or can shape electoral results (Busby et al., 2017; Busby & Druckman, 2018; Fowler & Montagnes, 2015; Healy et al., 2010; S. Müller & Kneafsey, 2021; Potoski & Urbatsch, 2017).

This literature identifies two primary propagation channels: mood and time.

The first explanation is that sports events change psychological traits (mood), propagating to (otherwise) unrelated aspects of the social sphere. The direction of the change in the mood can depend on the outcome of a sporting event: a winning match can cause a positive or negative mood in the case of a loss. The individual can use the change in the mood as a signal for other irrelevant but contemporary events, such as the opinion on the status quo (Forgas, 1995; Isen, 1987; Samuelson & Zeckhauser, 1988; Yen & Chuang, 2008). However, some recent studies invoked the confounding roles of activities correlated with sports attendance and mood, suggesting that the increase in violent crimes observed during and after soccer matches can be partly explained by the rise in alcohol consumption (Ivandić et al., 2021; Kirby et al., 2014; Trendl et al., 2021).

The “time-consumption” framework offers a second explanation. Sports events are an alternative to other time-consuming activities. Attending sports events can temporarily divert attention away from other time-consuming commitments such as voting (Potoski & Urbatsch, 2017).

The “mood-change” and “time-consumption” frameworks offer valid explanations that can be generalized to any sports event, including local sports events where

nationalities are irrelevant. However, in the context of national sports events involving national teams, the dimensions of national identity and collective sentiment come to the forefront.⁵

National sports events are highly symbolic and emotionally charged collective experiences that shape a vision of a unique national community (Anderson, 1983; Bairner, 2001; Depetris-Chauvin et al., 2020). These collective experiences build social trust and a sense of union with others. Sharing a positive experience makes people feel closer, part of the same group, and creates a collective and national consciousness (Durkheim, 1965; Páez et al., 2015).

In the words of Simon Kuper, a British author who writes about sports (Kuper & Szymanski, 2014):

“...It seems that soccer tournaments create those relationships: people gathered together in pubs and living rooms, a whole country suddenly caring about the same event. A World Cup is the sort of common project that otherwise barely exists in modern societies...”

Nonetheless, a group’s greater sense of unity might come at the cost of people being recognized as outsiders (of the group). It is crucial to understand if the sense of unity outstrips the sense of identification against outsiders (e.g., immigrants).

In this study we focus on immigrants in Germany, in a period, after 2014, in which all European countries have experienced a significant surge in immigrant arrivals. We choose the case of Germany for a variety of reasons. The first is a practical reason. For Germany, we have a detailed dataset covering anti-immigrant attacks (*arvig*) that is not available for other countries. Secondly, Germany has incurred an extraordinary shock of immigrants’ arrivals in the period under observation. Thirdly, the German population constitutes an interesting case because even before the recent arrivals of immigrants, the country already had a significant share of the population of residents that were immigrants, non-natives, or with immigrant ancestry living there for motivations other than its colonial past.

⁵ Caruso et al. (2017) note that researchers such as Bandura (Bandura, 1976) attributed violence to the frustration resulting from defeat, whereas Dunning (1999) linked football-related violence to masculine territorial dynamics. However, they note that sports have also been recognized as avenues for mitigating political tensions and fostering trust among rival nations. This intricate viewpoint has expanded the examination of national sports by focusing on the prism of national identity.

A political backlash happened in Germany in response to the surge of immigrant inflows. The arrival of immigrants has been accompanied by a rising consensus for anti-immigration issues and extreme right-wing parties never seen in the post-Nazi era (e.g. *Alternative für Deutschland*). The anti-immigrant consensus culminated in a shocking surge of episodes of violence against immigrants (Figure 2).

[Figure.2]

The surge in episodes of violence against immigrants caused a rekindling of the debate about the determinants and forces that fuel xenophobic backlashes. Truly, xenophobic violence is not new in post-World War II unified Germany (Benček & Strasheim, 2016). Many scholars have studied these issues, underscoring the relationship between public discourse and violence (Koopmans, 1996; Koopmans & Olzak, 2004) and the more general relationship between right-wing extremism, anti-immigration movements, and episodes of violence (Arzheimer & Carter, 2006; Benček & Strasheim, 2016).

But does sport also affect violence and hate against foreigners? Two studies aptly answer this question: Bertoli (2017) and Depetris-Chauvin *et al.* (2020). Both studies exploit the exogenous surge of nationalism caused by soccer matches. The first one shows that a boost in nationalism increases aggression between states, in this study the rivalry is between two distinct groups (citizens and foreigners) (Bertoli 2017). The second study shows that nationalism caused by soccer matches reduces ethnic identification and the likelihood of ethnic violence within African countries, in this case, the rivalry is between different members of the same bigger group (citizens of the same country with different ethnicities) (Depetris-Chauvin *et al.* 2020).

In other words, while the first study provides evidence of an increase in inter-group friction, the second study reports a decrease in intra-group friction. The interpretative takeaway is that national soccer might boost national unity at the cost of animosity toward foreigners.

In this article, the picture is not as much as clear-cut. How do natives relate to immigrants?

The distinction between native citizens and immigrant citizens is feeble (especially for the second and third generations). The same German soccer team is composed of many players of immigrant ancestry. They are not fully recognized as Germans nor as immigrants.

As a representative example, we recall here the case of Mesut Ozil, a soccer star of the German soccer team. Ozil led the German team to win the World Cup in 2014. Born and raised in Germany with Turkish ancestry, Ozil passed from being a national idol to being at the center of brutal confrontations with German public opinion. The cause of the dispute was a meeting with the Turkish president Erdoğan attended by Ozil and other German players. We report here an excerpt from a statement of Ozil concerning the dispute.⁶

“... (Reinhard Grindel, president of German Soccer Association) has publicly said I should once again explain my actions and puts me at fault for the poor team results in Russia.... In the eyes of Grindel and his supporters, I am German when we win, but I am an immigrant when we lose. This is because despite paying taxes in Germany, donating facilities to German schools and winning the World Cup with Germany in 2014, I am still not accepted into society. I am treated as being ‘different’. I received the ‘Bambi award’ in 2010 as an example of successful integration to German society, I received a ‘Silver Laurel Leaf’ in 2014 from the Federal Republic of Germany, and I was ‘German Soccer Ambassador’ in 2015. But clearly, I am not German...? Are there criteria for being fully German that I do not fit? My friend Lukas Podolski and Miroslav Klose are never referred to as German-Polish, so why am I German-Turkish? Is it because it is Turkey? Is it because I’m a Muslim? I think here lays an important issue. By being referred to as German-Turkish, it is already distinguishing people who have family from more than one country. I was born and educated in Germany, so why don’t people accept that I am German?”

⁶ The complete statement can still be found on the linkedin of Ozil. This statement has been debated in several papers: (Fischer & Mohrman, 2021; Krause et al., 2015; van Campenhout & van Houtum, 2020)..

The words of Ozil depict a situation in which the same individual can be judged as an extraordinary positive or a negative example of cultural integration. From Ozil's perspective, he will be scapegoated for his Turkish ancestry if the German team performs poorly, while considered a respectable "fully German" if the German team performs well. Recently, something similar happened in England, where three black soccer players received racist outbursts after missing the penalty kicks in the Euro 2020 final (Landler, 2021). These cases remind us that the perception of who is a native or an immigrant; the perception of who is part of the group and who is not is somewhat shaky.

What can we say about the expected relationship between nationalism and attitude towards immigrants? Is it a stable relationship or "it depends"?

In our interpretation, the relationship critically depends on the type of nationalism. Different types of nationalism have different and opposite relationships. Ethnic, aggressive, exclusive, and identitarian nationalism positively relates to anti-immigrant attitudes. While patriotic, benevolent, inclusive nationalism - not bound to ancestry or ethnic profiles - can be negatively associated with anti-immigration attitudes (Green et al., 2011; Heinrich, 2018).

The difference is that aggressive nationalism solely thinks of a nation in an ethnocultural sense (Heinrich, 2018; Smith, 1991), with the consequence that immigrants are forcibly out-group members. While inclusive, unitarian and patriotic nationalism does not necessarily link to specific ethnicities and ancestry. If ethnicity and ancestry are not relevant, and all people can be part of the group, unitarian, patriotic nationalism can positively affect attitudes against immigrants.

Treating patriotism and nationalism as two separate constructs might be wrong as well; they are joined at the hip.

Instead of bounding xenophobia to patriotism or nationalism, we treat xenophobic violence as a multi-dimensional construct made of attitude, behaviors, and mood states (Fiske, 1998). We thus frame our theory in terms of *nationalist moods* instead of nationalist types.

The first is an inclusive, positive, and patriotic *unitarian nationalist mood*, where immigrants are perceived as citizens of the same country. The opposite mood is an

exclusive, aggressive, and negative identitarian nationalist mood, where immigrants are perceived as outsiders in a tension of “we against the others”. The prevailing nationalist mood (*unitarian or identitarian*) determines how *sport nationalism* impacts behavior against immigrants. In our view, a positive result of the soccer team is likely associated with a positive *unitarian mood* and should correlate with a reduction of attacks against immigrants. Instead, a negative result increases the negative *identitarian mood* and increases the likelihood of attacks against immigrants. Figure 2 describes the framing of our conceptual framework.

Empirical Analysis

We already have evidence of correlations between different types of nationalism and attitude against immigrants (Heinrich, 2018; Rosenzweig & Zhou, 2021). However, nationalism attitudes might correlate with several confounding factors challenging to control, making these correlations prone to bias.⁷ To correctly identify a causal relationship between the type of nationalism and the likelihood of attacks against immigrants, we need an exogenous source of nationalism. We follow recent studies that leveraged the exogenous source of nationalism caused by soccer matches (Bertoli, 2017; Depetris-Chauvin et al., 2020; Rosenzweig & Zhou, 2021) that provide a natural experiment to estimate the causal effects of nationalism.

In this section, we provide empirical evidence for such a relationship between the result of soccer matches (of the German national team) and episodes of violence against immigrants.

We first present the data. Second, we explain all the steps used to build our identification strategy in detail. Third, we discuss the results in terms of magnitude and significance. Fourth, we discuss alternative explanations that deviate from our conceptual framework, and we provide robustness tests in this direction. Fifth, we test some potential mechanisms. Sixth, we discuss the limitations of our empirical approach.

Data

Soccer matches

The source of our soccer data is the Kaggle International soccer results dataset (Jurisso 2020). Each observation reports the exact date and the tournament to which the match belongs. We label it as a “friendly match” for all those outside the FIFA World-Cup and UEFA Euro-cup, the only relevant leagues for European countries.

⁷ In the conceptual framework we discuss some of those factors (political attitudes, media, education etc.) that are difficult to control for lack of data availability at micro-level.

Attacks on immigrants

Events of attacks on immigrants are taken from the *arvig* database (Benček & Strasheim, 2016). The database collects data on anti-refugee graffiti, arson of refugee homes, assaults, and incidents during protests in Germany between 2014 and 2018, constructed using information collected by the Amadeu Antonio Foundation and Pro Asyl (two NGOs). The database has been extensively used in the literature on determinants of attacks on immigrants and has already passed several quality checks (K. Müller & Schwarz, 2021). Figure 4 reports the distribution of attacks by time and type. We can observe an increasing trend from July 2015 that peaked in February 2016 (with over 30 cases registered each day⁸). Attacks are mainly classified as miscellaneous and are more frequent on the weekend.

In our empirical analysis, we will exclude demonstration from the count of total number of attacks.⁹ While demonstrations can also be spontaneous and unauthorized, they still require substantial coordination in advance, making them difficult to be attributed to a soccer match that occurred only two days prior.¹⁰

[Figure.3]

[Figure.4]

Empirical strategy

Our statistical models link soccer matches to anti-immigrant attacks by estimating an equation where the dependent variable is the number of anti-immigrant attacks on a certain day.

Ideally, we would like to compare how our dependent variable (e.g., number of attacks) behaves on ordinary days (*control group*) compared to days after a match took place (*treatment group*).

⁸ This peak is correlated with reports about sexual assaults by refugees in Cologne.

⁹ We do not model other specific types of attacks due to the majority being categorized as "miscellaneous" (Figure 3), which hinders the statistical estimation of significant results.

¹⁰ In the appendix (Table A-II) we provide robustness tests.

Following established literature, we exploit the quasi-randomness of the assignment of the day of the match (Busby et al., 2017; Depetris-Chauvin et al., 2020; Healy et al., 2010). We assume the dates of matches are random because they were planned years before within international coordination.¹¹ There is virtually no reason why the risk of future anti-immigrant attacks, or any other local confounders, might have influenced the decision on the schedule of the matches.¹²

We are aware that several factors might correlate with the number of attacks (e.g., political preferences, presence of immigrants, media coverage, misinformation, etc.). However, while these factors could correlate with our dependent variable (number of attacks), we do not have any information suggesting that those factors can also correlate with our treatment variables (date of the match and result). For this reason, we reasonably assume that we do not have confounders' or omitted variables' issues in the estimation of the Model.

We assign days to the treatment and control group by using two dummies, *Post-Match* and *Post-Result*. The dummy variables measure if a match took place (*Post-Match*) within t (time-lag) days before the observation and the result of the match (*Post-Win* or *Post-Loss*) within the same time lag. We are thus comparing ordinary days to those after t days of the German soccer team's match.

[Figure.5]

[Figure.6]

The crucial choice of the time lag t determines if we assign a certain day to the treatment or control group. To make our choice not arbitrary, we opt to use a time lag of two days to follow the approach used in previous literature (Busby et al., 2017; Busby & Druckman, 2018; S. Müller & Kneafsey, 2021). In the appendix we also report results with a lag of 3, 4, and 5 days (showing it does not affect our results).

¹¹ The schedule of international matches is an agreement between FIFA and the other six continental federations. The dates of the matches under analysis were fixed in 2013 <https://resources.fifa.com/image/upload/1355-men-international-match-calendar-for-the-september-2014-july-2018-p-2076773.pdf?cloudid=e56gyrdutgevyxmf8t3o>

¹² The same does not hold generally true for club matches.

Figure 5 gives a graphical example of the treatment dummies at work with a lag equal to 2 days.

We do not expand the time-lag because the timing of subsequent matches constrains us. In fact, half of the matches take place within five days of another match (see the complete list in Figure A-4 and Table A-IX in the appendix).

Figure 6 shows a boxplot for control and treatment days. As we can see, the mean value of attacks after winning the match is lower, while the opposite is true for days after losing the match. The box plot also signals the presence of extreme values that might create statistical noise. More importantly, there are significant calendar effects. To rule out the possibility that a calendar effect correlates with anti-immigrant attacks (both are more recurrent during the weekend), we include a set of control dummies for the day of the week, month, and year in our Model.

Results

Following the treatment-control schedule we just described (Figure 5), we estimate an econometric Model on the following equation (1):

EQUATION 1:

$$\begin{aligned} & Attacks\ on\ immigrants_{d,w,m,t} \\ & = \beta_1 * PostMatch_{d,w,m,t} + \beta_2 * PostResult_{d,w,m,t} + \emptyset_w + \omega_m + \varphi_t + u_{d,w,m,t} \end{aligned}$$

Our dependent variable is the count of attacks in day d , day of the week w (Monday to Sunday), month m , and year t . The independent variables are the dummies for the treatment variables ($PostMatch_{d,w,m,t}$ and $PostResult_{d,w,m,t}$) and a matrix of calendar effects ($\emptyset_w + \omega_m + \varphi_t$).

We run a Poisson count regression Model to capture the distribution of the dependent variable. We first run a baseline Model without controls. After we include calendar effects, we exclude the 95th quantile to capture the presence of outliers.

To estimate separately the effect of win and loss (to gain interpretability), we run the same Model by either setting $PostResult$ equal to 1 in case of win ($PostWin$), or equal to 1 in case of loss ($PostLoss$). The coefficient of $PostLoss$ will estimate the

mean difference between days after a winning match compared to days after a loss or draw match. *PostMatch* will capture if a match has occurred in the previous days. The results of the estimation for *PostLoss* is shown in Table I (we report the result for *PostWin* in the appendix Table A-I) Looking at models 1 to 3 (which represent our baseline specifications), we can see that the loss of the German soccer team increases the count of attacks. In contrast, a victory of the German team decreases the count of attacks (e.g., the coefficient of *PostWin* is negative). The relationship is not symmetric since the loss effect is two times larger in absolute value. Also, controlling for the calendar effect reduces the size of both coefficients (Model 2), while excluding outliers increases their statistical significance (Model 3).

In terms of magnitude, the results are indeed relevant. The coefficients show that after a losing match, the difference in logs of the expected count of attacks is 0.44 units higher. This magnitude roughly corresponds to 8.5 more episodes of attacks (compared to a mean of 4.8).¹³

[Table.I]

[Figure.7]

Robustness test

We run robustness tests for several considerations that might influence our results. A concern related to our estimation strategy is that we cannot disentangle the increase in violent crimes specific to crimes against immigrants and a general rise in violent crimes. For instance, we are aware of some recent studies that provide evidence that alcohol consumption is the interviewing variable that links soccer matches to violent crime rise (Ivandić et al., 2021; Kirby et al., 2014; Trendl et al., 2021). If that is the case, it might be that what we observe might be partly explained by the disinhibiting power of alcohol consumption (that notably increases during soccer matches) and not the consequence of a nationalist or anti-immigrant attitude.

¹³ With an average of 4.8 attacks, a Poisson coefficient of 0.44 is equal to 8.4 more attacks ($13.2 - 4.8 = 8.4$ and $\log(13.2) - \log(4.8) = 0.44$, where 0.44 is the Post Loss coefficient in model 2 of Table I)

To answer these considerations, we highlight a theoretical argument and empirical proof.

On the theoretical side, we want to highlight that those studies looking at the link between alcohol consumption, violent crimes, and soccer matches (Card & Dahl, 2011; Ivandić et al., 2021; Kirby et al., 2014; Trendl et al., 2021) focus on a narrower time window (the day or the 12 hours after the match). The granularity of their data (emergency calls) makes this analysis possible. The data we use do not have the granularity to replicate the same exercise (we have daily data), and we only look at what happened on the days after the match (excluding the day of the match). For this reason, we are skeptical to assume that the inhibiting role of alcohol could also persist in the days after the match. Despite this, we believe it worth investigating if, for any reason, the increasing trend of attacks against immigrants after soccer matches is related to a rising trend of violent crimes in general.

To control for the daily number of violent crimes, we use as a proxy the daily google trends related to the keyword “Polizei” that we call the “Google Crime Rate” (in the appendix we report a careful description of how we build the measure). Including this proxy as a covariate in the Model should let us disentangle the variations of the number of attacks against immigrants from the trend of general crimes not specifically targeting immigrants.

The results are reported in Table I and Table A-I (Model 4). The effects remain statistically significant, with similar magnitude. We also find that the number of attacks against immigrants correlates with our proxy of the number of crimes committed in Germany (suggesting that general crimes correlate with crimes against immigrants, as expected).

As a second robustness test, we look at the spatial distribution of the event. We check if attacks correlate with the location of matches played in the German territory.¹⁴ In none of the locations closer than 30km to a stadium where Germany played, within 5 days of the match, an attack against immigrants occurred.¹⁵

¹⁴ This might be a problem because attacks against immigrants might correlate with hooliganism phenomena.

¹⁵ Calculations are reported in the replication notebook.

Lastly, the appendix contains a range of robustness tests. We explore expanding the time window till 5 days, employing alternative specifications, and using diverse match result metrics (0 for defeat, 1 for draw, and 3 for victory). We control for market conditions (DAX index) and election occurrences, as well as match intensity (measured by card count) and match type (friendly or competitive). Notably, the core estimates' magnitude and significance remain stable.

Event Study Analysis

A major concern of the econometric approach we described till now is that we are comparing days after soccer matches against ordinary days (including those far from soccer matches). While this approach is intuitive when interpreting results, it might not entail factors surrounding periods in which matches occur (e.g, “the world cup atmosphere”). In this section we focus specifically on the days closest to matches, comparing days just before to days just after soccer matches. We restrict the sample of observations to 5 days before-after a match.

Figure 8 shows the “event-study” reporting the mean count of attacks before and after a match (by type of result). After a losing match, the number of attacks increases in the days after. The effect is persistent till five days after the match.

EQUATION 2:

$$\begin{aligned} & Attacks\ on\ immigrants_{d,w,match} \\ & = \beta_1 * PostMatch_{d,w,match} + \beta_2 * PostResult_{d,w,match} + \emptyset_w + \theta_{match} + u_{d,w,match} \end{aligned}$$

After visualizing the results, we estimate a new Model (based on Equation 2) where we check if the results are robust to the inclusion of week-day effect (\emptyset_w) and control for specificities of a single match by including “match fixed effect” (θ_{match}). By doing so, we are effectively comparing days after and before the very same match.

We report results in Table II, where *Post Win* and *Post Loss* are respectively a dummy equal to 1 in the five days after a match and equal to 0 in the five days before. As we see, the coefficient is positive and statistically significant (very close in magnitude to what we found insofar), suggesting that a loss led to an increase in the number of attacks, even when we entail specificities surrounding a single match.

[Figure.8]

[Table.II]

Underlying mechanisms (effect on attitudes and mood)

Our results depict a causal link between the results of matches and attacks against immigrants. What can we say regarding the mechanisms underlying this causal relationship? As we posit in our conceptual framework, the dual effect (increase or decrease) on attacks against immigrants might be attributed to changes in mood and changes in attitude against immigrants reflecting two different *nationalist moods* (e.g. unitarian or identitarian). To support this hypothesis, we recall the results of a pioneering study in social psychology by Schwarz and al. ([Schwarz et al., 1987](#)). They found that people interviewed before or after the match of the national soccer team of West Germany reported a different level of mood (well-being) and satisfaction with national issues. Importantly, the differences are linked to the result of the match: people interviewed after a winning match report a higher mood in case of victory, and a lower mood otherwise. The same study reports that people interviewed after a winning match report higher satisfaction with national issues. These results are widely confirmed by long-standing literature on the so-called “feel-good factor” and nationalism attitudes due to sports nationalism ([Erik Meier et al., 2019](#); [Hallmann et al., 2013](#); [Heere et al., 2016](#); [Kavetsos & Szymanski, 2010](#); [Stieger et al., 2015](#)).

To replicate the results of the literature mentioned above, we investigate self-reported attitudes before and after soccer matches using data from the European Social Survey (ESS) ([ESS 2020](#)). To estimate the impact of matches on attitudes, we replicate the strategy proposed by Depetris-Chauvin et al. ([2020](#)), applied to the data from the ESS, where individuals from different European countries respond to the following questions:

- *Is (country) made a worse or a better place to live by people coming to live here from other countries? Score from 0 (worse place to live) to 10 (better place to live)*
- *Taking all things together, how happy would you say you are? (on a scale from 0 to 10)*

We only select all those individuals interviewed two days before or two days after a match of their respective national team. With this sample, we estimate the Equation (3):

Equation 3

$$Response_{i,c,m} = \beta_1 * PostMatch_{i,c,m} + \beta_2 * PostResult_{i,c,m} + \theta_{c,m} + u_{i,c}$$

Where $Response_{i,c,m}$ is the answer of respondent i of country c before or after two days from match m . While $\theta_{c,m}$ is a vector of the country*match fixed effects. The use of the country*match fixed effect enables us to compare respondents from the same country before and after a certain match. We estimate four models for each type of result (win or loss), using the full sample of matches and responses (from 2002 to 2020) and all countries in the sample (36). After, we estimate separate estimations using only respondents from Germany and excluding friendly matches. We also separately look at male respondents, who are notably more sensitive to soccer and overwhelmingly over-represented among hate crime and xenophobic offenders (Roberts et al., 2013). The results are reported in Table III and IV and Figure 9. Regarding attitudes against immigrants, the coefficients appear in most specifications with the expected sign. After winning matches, respondents report a more tolerant attitude against immigrants, while individuals report a less tolerant attitude against immigrants after a losing match. These results partially contradict a recent study conducted in Africa that found that winning matches negatively views refugees' contribution (Rosenzweig & Zhou, 2021). However, we find the presence of a polarization effect for German respondents.¹⁶

¹⁶ We may be concerned that even if the average impact on anti-immigrant attitudes remains unchanged, polarization might occur, prompting individuals to adopt more extreme stances. To examine polarization, we substitute the dependent variable

The impact of winning matches on mood is also positive. However, in both results, the confidence intervals are very large and do not allow us to reject the null hypothesis of null effects (especially when we restrict the sample to only German respondents). On the one hand, we acknowledge that further investigation of the underlying causal mechanisms is needed. On the other hand, we also recognize that the data from the ESS might not be appropriate for testing this specific hypothesis as there are strong unbalances between groups of respondents and matches.¹⁷

[Table.III]

[Table.IV]

[Figure.9]

Long-term effects

Our main results only consider what happens in the two days after the match. The short time window poses a significant limitation of our analysis as we cannot provide additional information on the persistence of the effects we estimate – e.g., for how many days the effect of increased or decreased violence against immigrants persists?-. The structure of the scheduling of the matches poses a critical obstacle to extending the range of analysis, as most of the matches take place within short periods.¹⁸ That is, we are estimating only a very short-run effect.¹⁹

We could consider the cumulative effect of multiple matches within limited intervals as a potential solution to overcome this obstacle. We can group matches into blocks that contain matches separated by less than 20 days and study the difference in the periods before and after each block.²⁰

with the absolute distance from the average (score = 5). The results of this analysis are detailed in Table A-X in the appendix. Following a victory, German respondents' post-match answers show a more polarized position (1/5 standard deviation more).

¹⁷ See Figure A-5 in the appendix.

¹⁸ 2 matches in 7 days for friendly matches, 7-8 matches in 1 month for tournaments. See Figure A-4 in the appendix.

¹⁹ We do not expect such effect to be long-lived ([Mutz 2011](#), [Meier 2018](#))

²⁰ See Table A-IX in the appendix .

Figure 10 reports some of the blocks (the rest are reported in the appendix). We look at what happened during the main competition (Block 2, 12,17). While the German team is arriving in the final, victory after victory, we can observe a persistent decline in the number of attacks. However, it turns out that when Germany loses the final, as is the case of the UEFA Euro cup (block 12), the trend will reverse into an increase of attacks that persists for at least one month.

At a smaller scale, something similar can be observed in block 11. In the days after the German team lost the first friendly match against England, we can observe an increase in the number of attacks. However, after the large victory against Italy, the number of attacks diminish significantly.²¹

[Figure.10]

Limitations

In this section, we acknowledge some limitations we believe are important to note before jumping to conclusions. First, we recognize the presence of potential time spillover. For instance, a victory (or a loss) on a particular day might affect players' motivation in the following matches. Or, in another example, the number of attacks on a specific day might affect the number of attacks in the next days (e.g. an increase in police prevention). However, the extent of such spillover and the direction of the bias is unclear.²² A second important limitation regards the potential presence of a reverse-causality problem that goes from a bad national sentiment against immigrants to the performance of soccer players with immigrant ancestry. Investigating the presence of such a mechanism would require data on individual player performance that, to our knowledge, are not immediately available. On the same line, we might expect different results for teams that are not comprised of players with different ancestries, for instance Depetris-Chauvin et al. (2020) indicates a "role Model" mechanism where wins highlight interethnic cooperation's

²¹ The intuition we described is pure "narratives" that would need to account for potential confounders. Unfortunately, the low number of blocks we can observe (N=20) is too small for a proper econometric analysis.

²² While we do use day, week, and month fixed effect and we could potentially include lagged variables these would not completely rule out the time-spillover issue as we are not able to make credible assumption on the structure of the process (how many lags? In linear form or not? etc).

success against foreign opponents, particularly if the national team has greater ethnic diversity. Third, it is plausible that the effects may exhibit variations contingent upon the nature of the match. Factors like historical rivalries, match intensity, and the overall prominence of the match are expected to exert a significant influence. In our endeavor to investigate such heterogeneity, we refer to Table A-IV and A-V in the appendix, where we briefly explore these aspects by examining distinct types of tournaments and match intensities. However, it's important to recognize that the extent of our dataset presents considerable constraints to this form of analysis.²³ These limitations are integral to our study and offer opportunities for further exploration.

Conclusions

Although there has always been a strong premonition that the competitiveness of international sports represents a risky game, the empirical evidence and theory are still very fragmented today.

In the theoretical contribution of this article, we drew a conceptual framework that can help us explain the relationship between *sports nationalism* and xenophobia through multi-disciplinary lenses. This framework is coherent with the idea that xenophobic demonstrations rise from a multi-dimensional construct of mood and ideologies. Future research on this topic could address the measurement of the different weights and interactions between the ideological and mood components of nationalism.

Our empirical analysis provides the first evidence of a causal nexus between national sports matches and behavior against immigrants. We have shown that the effects vary together with team performance. Thus, when we observe a negative national team performance, we can see the harmful effects of *sports nationalism*. Through a variety of robustness tests, we show that the effect is specific to attacks against immigrants and not due to a general increase in violent behavior observed in other studies (Card & Dahl, 2011; Dickson et al., 2016; Ivandić et al., 2021; Kirby et al.,

²³ When examining the tournament type distribution (Table A-III), it's evident that draws and losses are infrequent in the final stages of major tournaments, thereby reducing the credibility of estimates due to low variance.

2014; Trendl et al., 2021). As for the underlying mechanism, we test if national matches affect mood or attitude against immigrants on a large-scale survey dataset (ESS).

Our results help shed light on the phenomena of *sport nationalism*, and its consequences on society. If any, defeats of the national team in an international tournament could fuel xenophobic violence.

Before going to the final conclusions, we want to point out two important limitations. First, the limited data availability (we can only study Germany between 2014-2018) should require further investigations and replications of the exercise in different countries to make the results more robust. Second, our study did not investigate the overall impact of all games played by the German national team, which would have considered the sum of both positive and negative effects of each match. However, when considering the overall effect, one should consider that not all matches have the same importance. For example, a defeat in a final could nullify if not reverse all the positive effects generated by previous victories (Landler, 2021).

Notwithstanding these limitations, our results raise implications regarding policies for preventing hate crimes. In terms of policy implications, such evidence suggests the need for short-run preventive and monitoring measures before and after major international sports events and longer-run interventions promoting sports values and educational programs in national sports associations.

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Tables :

Table I: Effect of losing matches on the count of attacks against immigrants

Dependent variable: count of attacks against immigrants				
Variables	Model 1)	Model 2)	Model 3)	Model 4)
Post Loss	0.8992*** (0.1254)	0.4472*** (0.1282)	0.4907*** (0.1413)	0.5027*** (0.1413)
Post Match	-0.3744*** (0.0632)	-0.1878*** (0.0663)	-0.1775** (0.0690)	-0.1606** (0.0691)
Google Crime Rate				0.0149*** (0.0023)
Calendar Effect		✓	✓	✓
Excluding 95th quantile			✓	✓
N	1411	1411	1347	1347

†, **, ***: p-value at 1, 5 and 10 per cent; standard errors between parentheses. Poisson Model. Calendar effects are month, day of the week and year fixed effects. The results for PostWin are reported in Table A-I in the appendix

Table II: Effect of winning or losing matches on the count of attacks against immigrants (event-study analysis)

Dependent variable: count of attacks against immigrants						
Variables	Model 1)	Model 2)	Model 3)	Model 4)	Model 5)	Model 6)
Post Loss	1.0102*** (0.0951)	0.3310** (0.1323)	0.2801** (0.1357)			
Post Win				-0.4345*** (0.0851)	-0.2371** (0.1207)	-0.1850 (0.1245)
Post Match	-0.2410*** (0.0587)	-0.1562** (0.0706)	-0.1377 [†] (0.0714)	0.2221*** (0.0751)	0.0725 (0.0918)	0.0473 (0.0944)
Google Crime Rate	-0.0194*** (0.0061)	-0.0051 (0.0102)	0.0021 (0.0108)	-0.0146** (0.0060)	-0.0028 (0.0101)	0.0040 (0.0107)
Match fixed effect		✓	✓		✓	✓
Day of the week fixed effect			✓			✓
Sample: days closest to match (max 5 days)	✓	✓	✓	✓	✓	✓
N	382	382	382	382	382	382

[†], **, ***; p-value at 1,5 and 10 per cent; standard errors between parentheses (OLS). The number of observations is significantly reduced compared to Table I as we only look at days closest to the match.

Table III: effect of winning/losing matches on attitude against immigrants

Dependent variable: Is (country) made a worse or a better place to live by people coming to live here from other countries?
Score from 0 (worse place to live) to 10 (better place to live)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post Win					0.1099** (0.0552)	0.0392 (0.0827)	0.1483** (0.0727)	-0.0843 (0.2025)
Post Loss	-0.0606 (0.0631)	0.0427 (0.0947)	-0.0201 (0.0853)	-0.0339 (0.2793)				
Post Match	0.0210 (0.0320)	0.0462 (0.0478)	-0.0107 (0.0417)	-0.0454 (0.1100)	-0.0469 (0.0381)	0.0385 (0.0569)	-0.0916 [†] (0.0521)	-0.0107 (0.1393)
Match * Country Effect	✓	✓	✓	✓	✓	✓	✓	✓
Sample	Full Sample	Male Only	Excl. Friendly	Only Germany	Full Sample	Male Only	Excl. Friendly	Only Germany
N	44605	20833	28607	3077	44605	20833	28607	3077

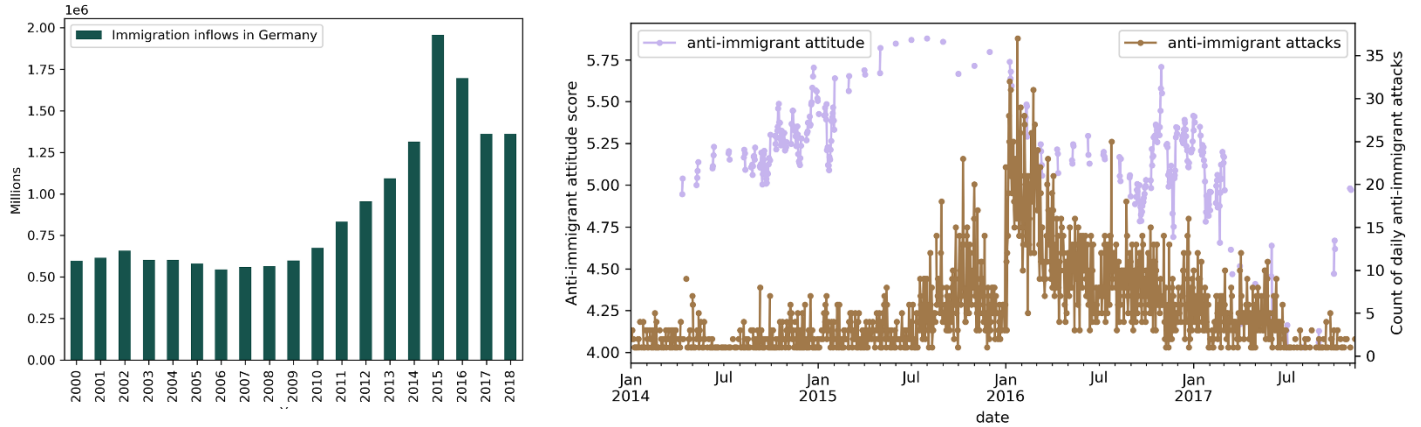
[†], **, ***; p-value at 1,5 and 10 per cent; standard errors between parentheses (OLS).

Table IV: effect of winning/losing matches on reported mood

Dependent variable: Taking all things together, how happy would you say you are ? (on a scale from 0 to 10)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post Win					0.0456	0.1235 [†]	0.0775	0.0854
					(0.0458)	(0.0661)	(0.0599)	(0.1684)
Post Loss	0.0337	0.0164	0.0142	-0.0833				
	(0.0523)	(0.0757)	(0.0703)	(0.2314)				
Post Match	-0.0434	-0.0457	-0.0389	-0.0336	-0.0565 [†]	-0.1003 ^{**}	-0.0755 [*]	-0.0871
	(0.0266)	(0.0382)	(0.0343)	(0.0915)	(0.0317)	(0.0456)	(0.0430)	(0.1159)
Match * Country Effect	✓	✓	✓	✓	✓	✓	✓	✓
Sample	Full Sample	Male Only	Excl. Friendly	Only Germany	Full Sample	Male Only	Excl. Friendly	Only Germany
N	46562	21552	29928	3134	46562	21552	29928	3134

Figures :

Figure 1: Immigration inflows, attitudes and attacks



Immigration inflows in Germany are taken from the OECD dataset. Anti-Immigrant attitudes is an index taken from the moving average of the answer to the question of the European Social Survey: Is (country) made a worse or a better place to live by people coming to live here from other countries? Score from 0 (worse place to live) to 10 (better place to live). Anti-immigrant attacks are the count of daily attacks from the Arvig dataset.

Figure 2: a conceptual framework on the relationship between sport nationalism and xenophobia

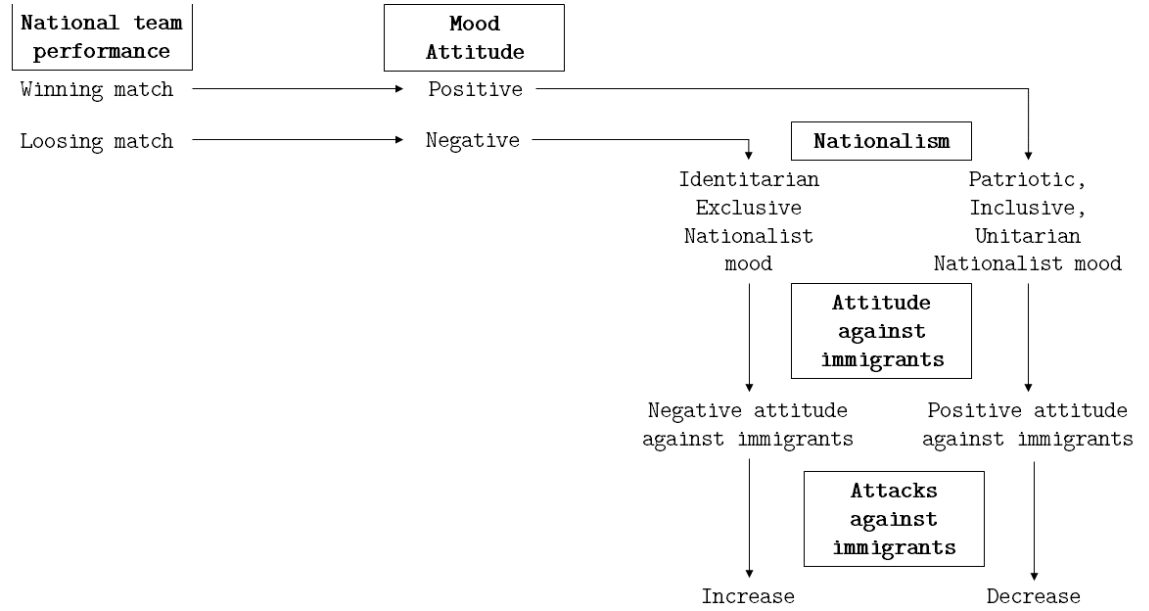


Figure 3: Germany National team Soccer matches

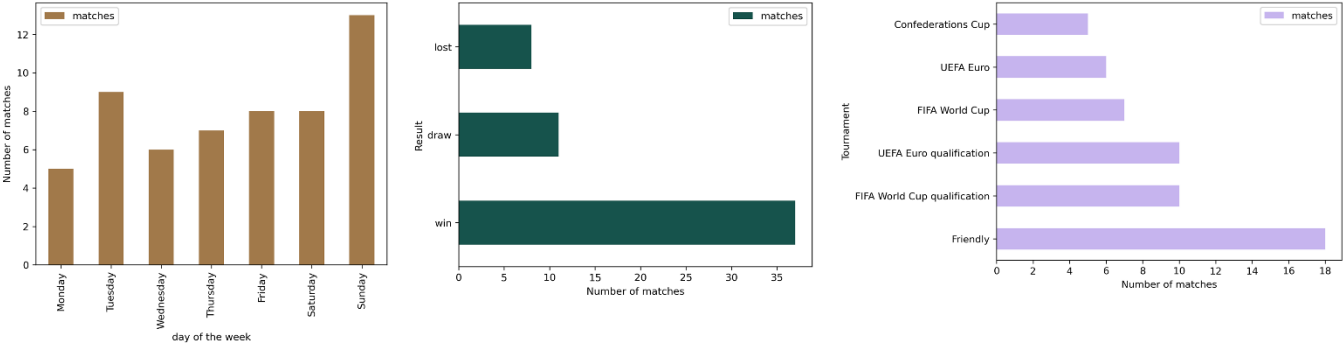


Figure 3 illustrates the distribution of the German national team during the relevant period, including competition type, match day, and outcomes (loss, win, draw). The majority of matches occur on Tuesdays and Sundays, except for those held in June (when FIFA World Cup and UEFA Euro typically occur).

Figure 4: Anti-immigrant attacks

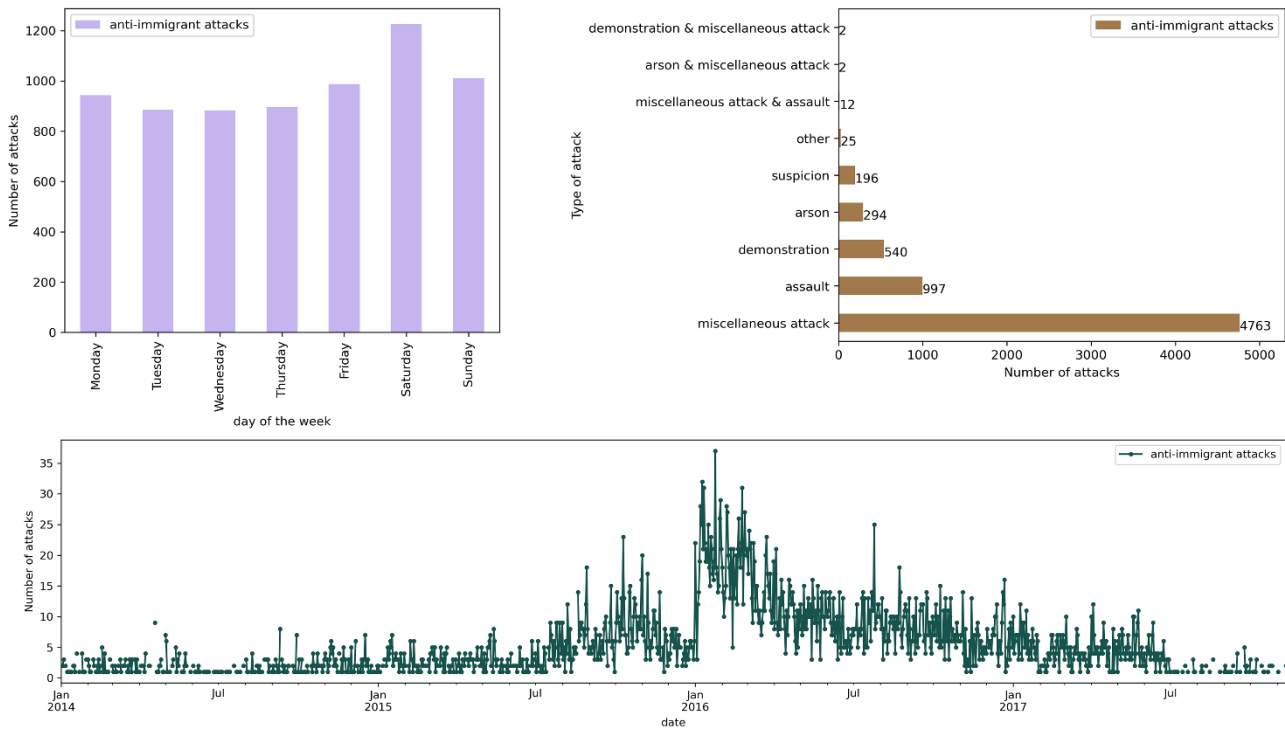


Figure 4 depicts the attack distribution by type, day of occurrence, and the overall trend across the examined period. The top-left panel reveals that the majority of attacks are categorized as "miscellaneous attacks." These encompass instances that defy singular classification and involve actions like rocks being thrown at shelters or xenophobic graffiti (Benček & Strasheim, 2016).

Figure 5: Example of the Treatment-Control schedule

Day	Match	Results	Post-Match dummy	Post-Win dummy	Post-Loss dummy
10 oct 2017	-	-	0	0	0
11 oct 2017	-	-	0	0	0
12 oct 2017	Germany vs Finland	2-0 (win)	0	0	0
13 oct 2017	-	-	1	1	0
14 oct 2017	-	-	1	1	0
15 oct 2017	-	-	0	0	0
...	-
11 nov 2017	-	-	0	0	0
12 nov 2017	-	-	0	0	0
13 nov 2017	Germany vs Cyprus	1-2 (loss)	0	0	0
14 nov 2017	-	-	1	0	1
15 nov 2017	-	-	1	0	1
16 nov 2017	-	-	0	0	0
...	-

} 2 days

Figure 6: boxplots distribution of the main variables of interest

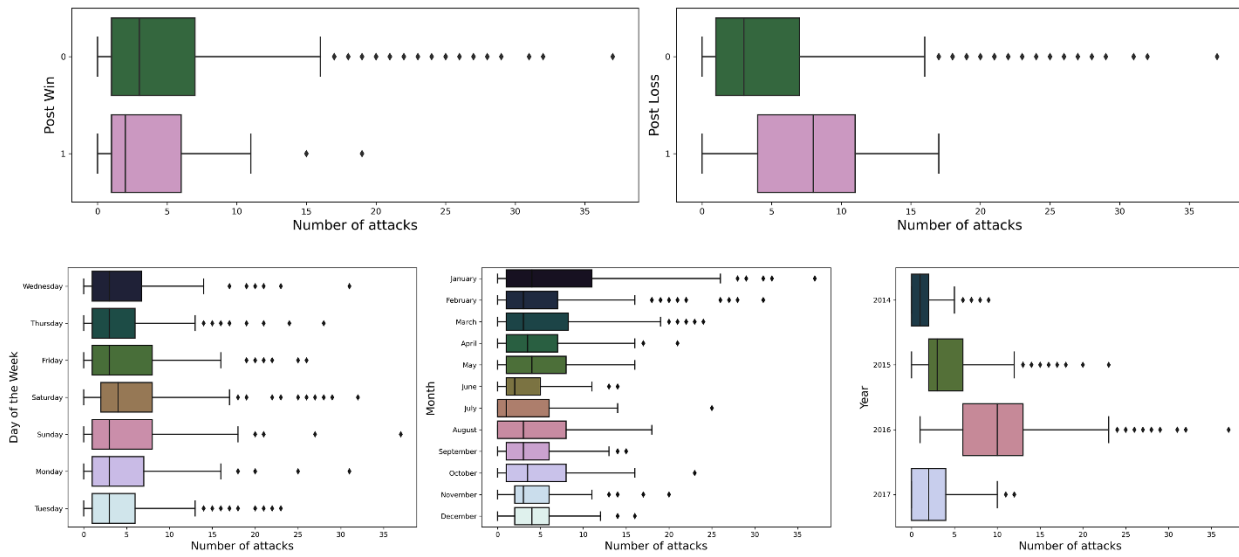


Figure 7: Coefficient plots

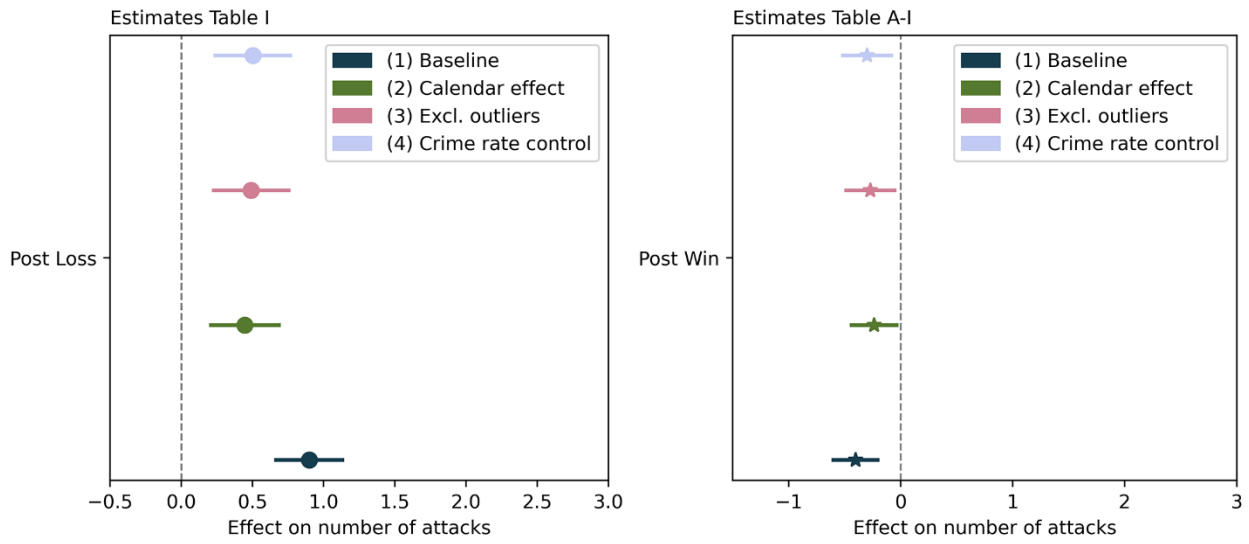
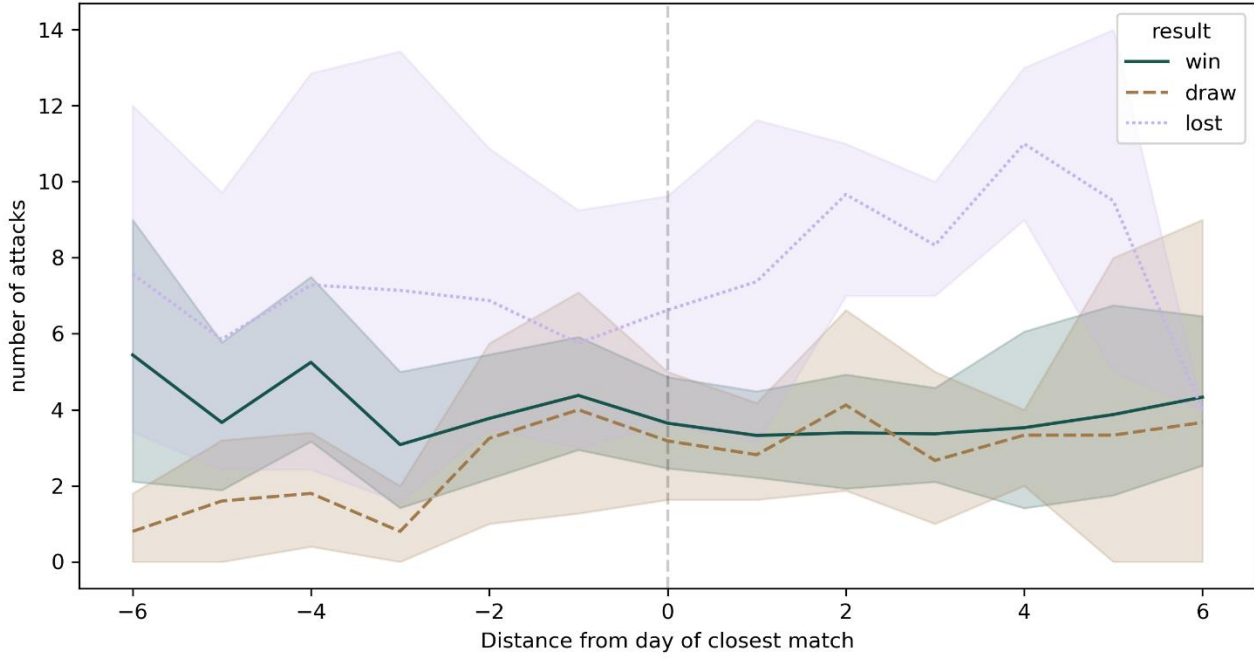


Figure 8: Event-study analysis



Shaded area reports the 95% confidence interval.

Figure 9: Coefficient Plots

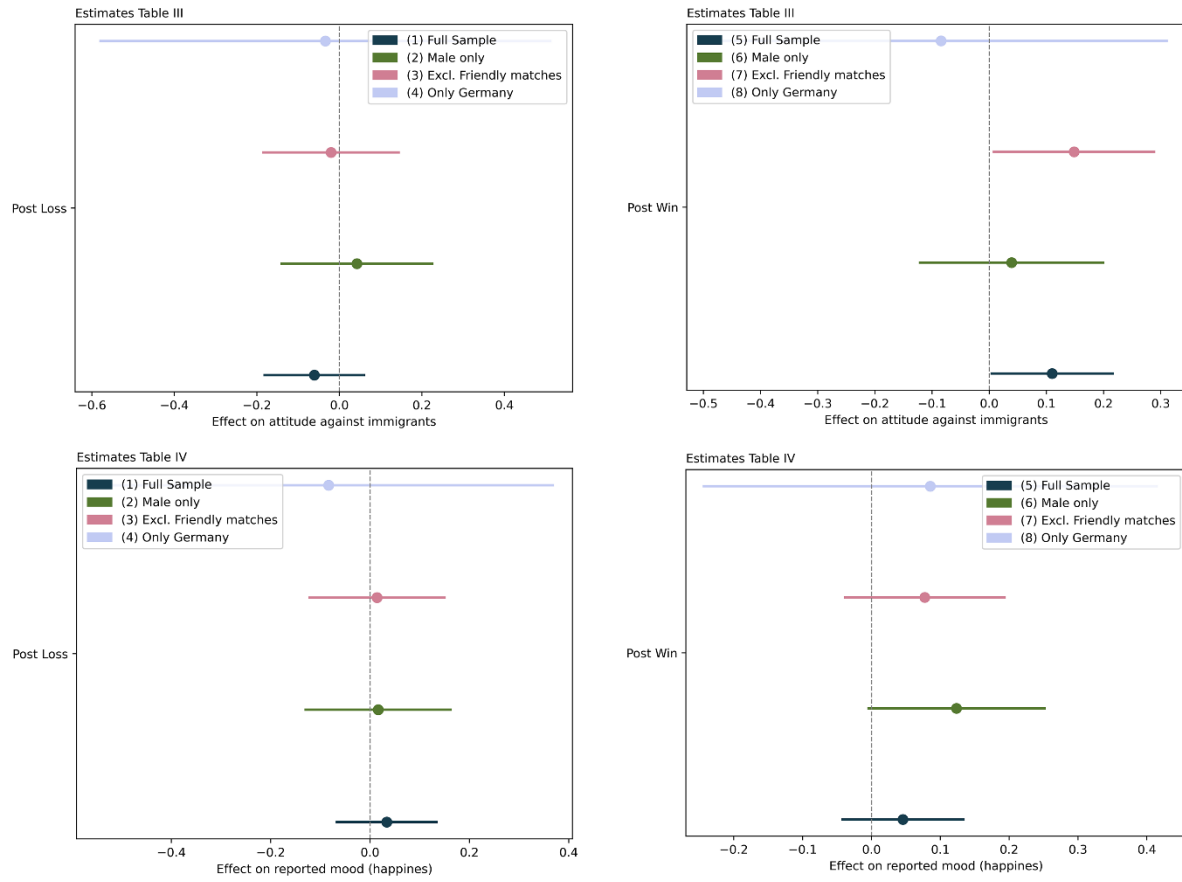
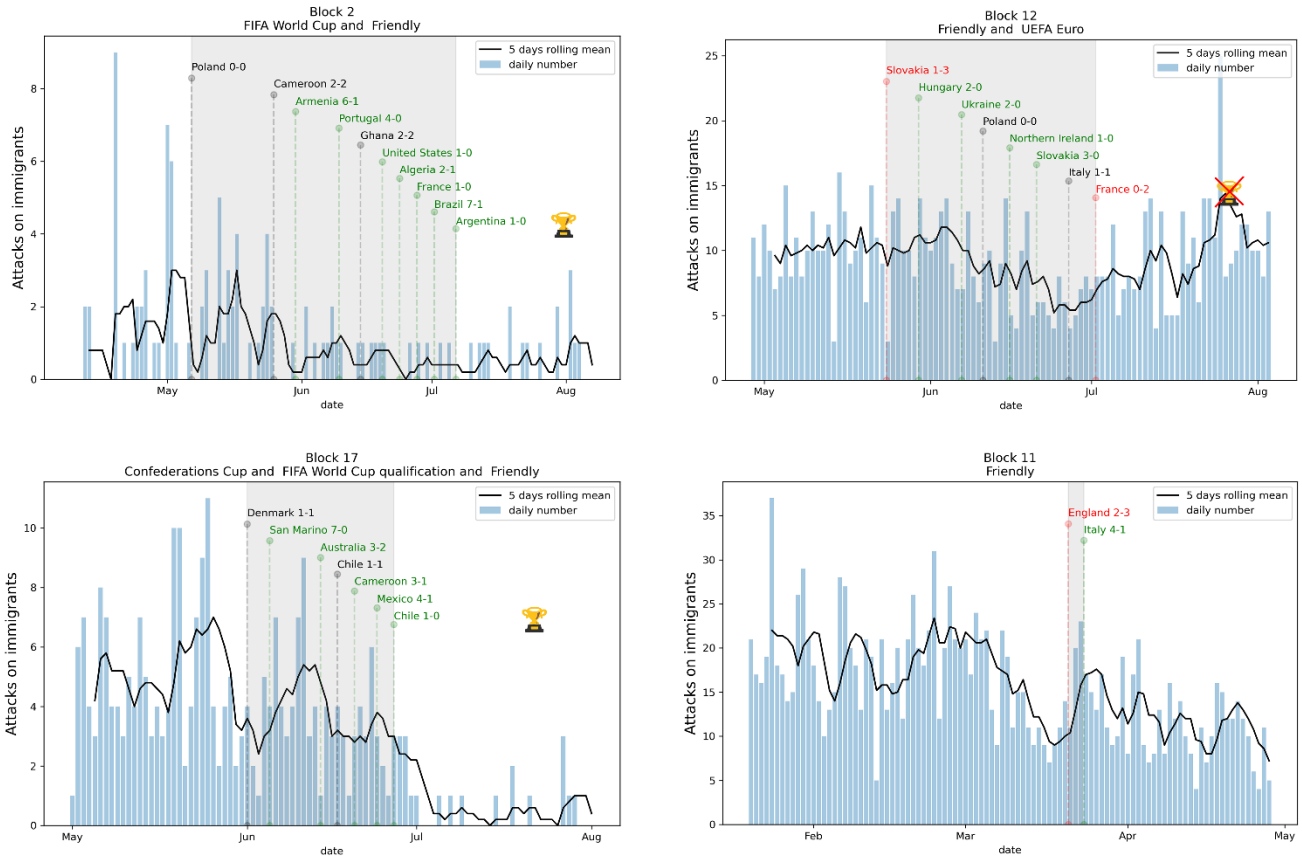


Figure 10



The grey-shaded area shows the start and the end of the block; the line and the bar report the number of attacks. Within the plot, we report the opposite team with the results (victory=green, draw=black, loss=red)