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Divided for Good: Football Rivalries and Social Cohesion in Latin America

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June 18, 2022

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This paper explores the impact of football rivalries on social cohesion in Latin America. These rivalries create intracommunity divisions that are orthogonal to other cleavages, such as socioeconomic status or ethnicity. This context provides the opportunity to study whether salient events that involve opposing groups within a community can improve social outcomes. Exploiting quasi-experimental variation in the timing of football matches and public opinion surveys across eleven countries and twenty rivalries, I find that social cohesion tends to improve in the days after a match, except when players behave violently or unethically. Effects are broadly shared by everyone, not only football fans, and are not explained by changes in insecurity or a generalized better mood. Taken together, these findings show that certain divisive events can improve the cohesiveness of a community, especially when mediated by the good behavior of role models.

JEL Codes: D83, D91, O15, Z13, Z21

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1 Introduction

With the surge in polarization of recent decades (Iyengar et al., 2019; Boxell et al., 2020) and the deeper understanding of the origins of intergroup conflict and its consequences for development (Michalopoulos and Papaioannou, 2016; Arbatlı et al., 2020), research on the determinants of social cohesion and the mechanisms that improve it has become highly relevant in economics (Bazzi et al., 2019; Lowe, 2021) and in the social sciences in general (Mousa, 2020; Baron et al., 2021).

This paper considers the impact of football[1] rivalries in Latin America on the cohesiveness of the communities they represent. Football, and football rivalries in particular, is a highly salient cultural phenomenon in many parts of the world. The distinctive characteristic of Latin America is that the vast majority of big clubs have traditional rivals in the same city or region, which generates frequent events (matches) that bring communities together while dividing them into two groups at the same time. This resembles the nature of other important events, such as elections. Importantly, though, the separation induced by football rivalries is orthogonal to other cleavages, creating an opportunity for bonding on each side of the divide.

By exploiting quasi-experimental variation in the timing of matches and public opinion surveys, I estimate how social cohesion changes because of the occurrence of a football match. Findings indicate that social cohesion improves substantially in the five days after the event (0.23 standard deviations, p=0.01) and in a longer time frame of fifteen days, although with a lower magnitude (0.09 standard deviations, p=0.05).

The findings show that improvements in social cohesion crucially depend on the good behavior of football players, which is consistent with role-model effects. In particular, in matches with three red cards or more, the effects are overturned.[2] In this context, players, mediated by a spectacle that represents the confrontation of polarized groups within the community, serve as examples for the population at large. The importance of spectacles for the formation of beliefs has been highlighted since, at least, the work of Debord (1967).

The analysis relies on a dataset of 104 football matches between 2007 and 2019. These matches take place among the twenty most important rivalries in Latin America, which are spread across eleven countries. The data were mainly collected from online databases at LiveFutbol.com and the Rec.Sport.Soccer Statistics Foundation. They include the date of

[1] I use the term "football" rather than "soccer" following the usual practice in the social sciences when studying this sport in the context of Latin America.

[2] Pre-match levels of social cohesion do not predict the number of red cards.

the event, whether it was a high-stakes match, and the number of red cards awarded (which proxies violent or unethical behavior by the players).

Individual attitudes and beliefs are measured with the AmericasBarometer, a survey conducted every two years by the Latin American Public Opinion Project (LAPOP). The main outcome variable is the Social Cohesion Index, which I construct from two questions that measure trust in the local community and respondents' assessment of whether social problems are the most serious type of problem in the country.

Since the AmericasBarometer does not ask what football team the respondent supports, I build a regional-level measure of exposure to each rivalry using Google Trends data. I extract the search intensity for each rivalry in every first-level administrative division and normalize across rivalries. This results in an index—henceforth, GTI—that allows me to compare salience across all regions in Latin America.

The identifying assumption is that individuals within a given region that are interviewed in the few days after a match are not systematically different from those interviewed in the few days before, conditional on a set of calendar controls that account for match seasonality. In the main specification, I work with a binary treatment variable that indicates being in a region exposed to a rivalry that is in the top half of the GTI distribution. I also present alternative estimates from a treatment-intensity design in which the regressor of interest is the GTI directly. Throughout the paper, standard errors are clustered at the region-match level.

A battery of robustness checks provide confirmatory evidence that social cohesion improves in the aftermath of a match: (i) the effect holds under the alternative treatment-intensity specification, implying that in regions not strongly exposed to a rivalry there is no impact on social cohesion, which reassures us that the estimated coefficients reflect a causal effect of the match and not other phenomena; (ii) the result holds separately for the two variables that form the Social Cohesion Index; (iii) an event-study graph shows no pre-trends in social cohesion leading up to the match; and (iv) the result is not driven by any single country in the sample.

Besides the number of red cards, I also explore heterogeneous effects depending on whether the match ends in a draw or is high stakes. There are no significant differences when a match ends in a draw, which may indicate that the existence of winners and losers does not affect the results, consistent with the idea that what matters is the bonding nature of the experience. In contrast, effects tend to be stronger after high-stakes matches, possibly reflecting that the impact of the event grows with the amount of interest it attracts.

As for individual characteristics, the results show that improvements in social cohesion

are broadly shared by everyone: there are no significant differences across gender, age, or educational level. Although this is partly consistent with the widespread interest in football in Latin America, it also implies that matches do not affect football fans alone.

To further our understanding of what drives the main results, I also test the impact of matches on alternative outcomes, including perceived insecurity, overall mood or optimism, and trust in institutions. The results show no changes in how unsafe respondents feel after a match, discarding changes in criminal activity as a possible mechanism. Also, respondents do not feel more optimistic about their country's and their own economic situation relative to a year before, implying that football matches do not induce a generalized good mood. Finally, trust in the president and trust in the police also do not change, indicating that only trust in other members of the community improves. These results also imply that popular sport events do not affect the evaluation of incumbent politicians, a topic that has been studied before with conflicting results (Healey et al., 2010; Fowler and Montagnes, 2015; Corbi, 2018).

This research relates to several strands of literature. First, it relates to the large body of work that studies the determinants of social cohesion. Part of this literature has been concerned with the deep-rooted factors that explain differences in trust and other measures of cohesiveness across the globe. It includes analyses of historical political (Guiso et al., 2016) and religious institutions (Montero and Yang, 2021), historical literacy rates (Tabellini, 2010), the exposure of ancestors to the African slave trade (Nunn and Wantchekon, 2011), and whether ancestral societies were organized around a kinship system (Moscona et al., 2017), among other.

The other part of this literature –to which this paper is more closely related– focuses on how current factors affect social cohesion. The most closely related work is Depetris-Chauvin et al. (2020), which explores how national football-team matches affect the development of a national identity and reduce conflict. The authors find that in the days after victories by their national football team, individuals across Africa are more likely to identify with their nationality rather than their ethnicity and more likely to trust other ethnic groups. They also find that countries that qualified for an international competition have a significantly lower likelihood of going through civil conflict in the following months. Importantly, the effects are largely driven by teams that are ethnically diverse, giving rise to a role-model interpretation as one of the key mechanisms at play. This paper is a natural complement, as it examines local football rivalries in Latin America, where matches induce divisions within communities (instead of uniting everyone behind the same team).

Additionally, Robinson (2016) provides experimental evidence about the interplay between

national and ethnic identities, showing that a strong national identity can eliminate trust barriers across ethnicities. Aksoy et al. (2021) compare the impacts of economic interests, shared values, and the COVID-19 pandemic on measures of social capital. Fouka et al. (2022) uses historical data in the United States to learn how the arrival of a new minority group affects the social acceptance of existing minorities. Another important set of papers within this literature investigates how intergroup contact can improve social cohesion. Bazzi et al. (2019) exploit a population-resettlement program in Indonesia and find that more fractionalized communities (that is, those with a larger number of small groups, as opposed to a few large groups) are more likely to adopt the national language and integrate across ethnicities. Rao (2019) also supports the idea of intergroup contact as a mechanism to improve social outcomes; he shows that when rich students share a classroom with poor ones, the former become more egalitarian and less likely to discriminate against the latter, among other findings. Mousa (2020) reaches somewhat mixed results on the potential of intergroup contact to increase social cohesion: the author runs an experiment mixing Christians and war-displaced Muslims in an amateur football league in post-ISIS Iraq and finds that Christians' attitudes toward Muslims improve, but only in the context of football interactions. Finally, Lowe (2021) organizes a cricket league in caste-segregated rural India by randomizing individuals into homogeneous or mixed-caste teams. The author finds evidence that collaborative contact (that is, playing on the same team) fosters congenial attitudes toward other castes, while adversarial contact (that is, being on opposing teams) has detrimental effects. Moreover, participating in the league improves attitudes overall, implying that the positive effects from contact outweigh the negative ones.

This paper adds to this strand of literature by providing quasi-experimental evidence that events that confront two opposing groups within a community along a cleavage that orthogonally cuts other cleavages (offering an opportunity for bonding) may result in better social outcomes.

Second, this paper relates to the growing body of work that documents the importance of role models as determinants of individual attitudes and beliefs. The seminal work by Jensen and Oster (2009) and La Ferrara et al. (2012) shows how cable TV and soap opera characters can significantly impact women's status and fertility. More recently, Riley (2018) and Porter and Serra (2020) provide experimental evidence on the importance of role models for female educational outcomes.

This paper speaks to this literature in the same way as Depetris-Chauvin et al. (2020), who argue that football players are role models for the communities they represent and that their behavior can significantly impact social cohesion. In this case, I provide evidence based

on eleven countries in Latin America.

Third, this paper relates to a set of studies that use sports as a window into human behavior. A number of papers have tested predictions from game theory, including the minimax theorem (Palacios-Huerta, 2003) and subgame-perfect Nash equilibrium (Palacios-Huerta and Volij, 2009). Casas and Fawaz (2016) test predictions from the theory of rank-order tournaments. Other papers have tested hypotheses from social psychology and behavioral economics, including Card and Dahl (2011), who provide evidence that unexpected wins and losses by professional American football teams can have significant effects on household violence; Munyo and Rossi (2013) and Eren and Mocan (2018) who conduct similar studies on violent crime and judiciary decisions respectively; Miguel et al. (2011) who find that exposure to civil conflict increases violence among professional football players; Garicano et al. (2005) who show that social pressure can induce corrupt behavior; Apesteguia and Palacios-Huerta (2010) who show that psychological pressure can have detrimental effects on performance; and Marble et al. (2021) who find evidence that incorporating a star football player that is Muslim improves that team's followers' attitudes toward Muslims in general.

This paper complements this literature by exploiting football matches between traditional rivals in Latin America to understand how events that divide communities from within can affect social cohesion.

2 Background: Football Rivalries in Latin America

In the vast majority of Latin American countries, football is by far the most popular sport: around 75% of men and 45% of women are interested in it.[3] Far from being only a recreational activity, football represents a fundamental element of Latin American culture (Alabarces, 2003). This is reflected in the fact that people are more likely to identify with a local football team than to be interested in the sport: almost 85% of men and 65% of women claim to support a local team.

An important feature of football in Latin America is that teams generally have a traditional rival—a team they have long confronted and toward which they came to develop a special sense of antagonism. Some famous examples include Boca Juniors versus River Plate in Argentina, Flamengo versus Vasco da Gama in Brazil, and América versus Chivas in Mexico. Matches against the rival are generally the most important ones during the season and represent highly salient events.[4] Moreover, they are rather frequent, typically taking place

[3]Based on Repucom (2014), NielsenSports (2018), and country-specific reports (available upon request).

[4]Figure A1 in the appendix compares Google searches on some of the most important rivalries in Latin

around four times per year.

The other fundamental feature of Latin American football is that the followers of rival teams are not significantly segregated by such characteristics as location, ethnicity, or religion, unlike famous examples in other parts of the world, such as Scotland's Celtics versus Rangers (Catholics versus Protestants), Spain's Barcelona versus Real Madrid (Catalans versus Madrileños), and, in US baseball, the Red Sox versus the Yankees (Boston versus New York residents). Instead, they belong to the same communities and share social networks, interacting with each other on a daily basis as friends, relatives, or neighbors.[5]

This implies that the cleavage induced by football rivalries tends to cut across other cleavages in the community, meaning that the events bring together people from all socioeconomic groups, ages, genders, and religions behind the lines of each of the two teams. Figure A2 in the appendix exploits Google Trends data on the distribution of searches for each team across cities within a region to provide suggestive evidence of limited segregation. Moreover, although some teams' followers are associated with stereotypes in the popular culture, these stereotypes arose decades ago when fan bases were small and clubs were neighborhood based. Nowadays, all the teams studied in this paper have hundreds of thousands or millions of followers.

3 Data

3.1 Individual Attitudes

The data on individual attitudes and characteristics come from the AmericasBarometer, a public opinion survey conducted by the LAPOP.[6] I include all waves between 2007 and 2019 collected in eleven Latin American countries.[7]

While the AmericasBarometer surveys a large range of attitudes, I focus on questions related to social cohesion and other potentially relevant outcomes. To measure social

America in their respective countries to searches on the Superbowl in the United States. It shows spikes around the date of each match, with the football rivalries being at least as salient as the Superbowl.

[5]It may be possible to find segregation among followers of smaller teams, but this is not the case for big first-division teams with hundreds of thousands (or millions) of followers, such as the ones considered in this paper. Unfortunately, to the best of my knowledge, there is no data set that collects characteristics of football-team followers in Latin America. However, country-specific reports (available upon request) prepared by consulting firms show little differences in socioeconomic status between followers of the rival teams studied in this paper.

[6]See http://www.vanderbilt.edu/lapop/.

[7]The countries are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Honduras, Mexico, Paraguay, Peru, and Uruguay.

cohesion, I exploit two questions that were asked in all waves of the sample. One concerns interpersonal trust: "Speaking of the people from around here, would you say that people in this community are very trustworthy, somewhat trustworthy, not very trustworthy or untrustworthy?" The other question asks what the respondent perceives to be the most serious problem in the country: "In your opinion, what is the most serious problem faced by the country?" This is open ended, so responses are classified into thirty-seven topics by LAPOP, which I further classify into six broad categories: Society, Economy, Government, Infrastructure, Health & Education, and Other.[8]

With these two variables I build a standardized index (Anderson, 2008), which is the main variable of interest in the paper. Other potentially relevant outcomes include attitudes and beliefs about institutions, national identity, insecurity, and the respondent's economic situation.

Finally, I also collect individual characteristics, including region of residence, gender, age, years of education, employment status, civil status, a rural- or urban-residence indicator, and religion.

3.2 Football Matches

The data set on football matches includes 104 events that took place within one week of a survey round of the AmericasBarometer in their corresponding country, and it was constructed using online databases from LiveFutbol and the Rec.Sport.Soccer Statistics Foundation.[9] It includes match date and characteristics, including match result, number of yellow and red cards, and whether the match qualifies as a friendly game, a regular-season game, or an international competition.

These matches represent twenty of the most important football rivalries in Latin America. These rivalries were selected with the objective of working with matches that count as very salient events, at least in the teams' region.[10] The list of rivalries includes, in Argentina, the Boca Juniors versus River Plate (Buenos Aires City) and Rosario Central versus Newell's Old Boys (Santa Fe); in Bolivia, Blooming versus Oriente Petrolero (Santa Cruz) and Bolivar versus The Strongest (La Paz); in Brazil, Bahia versus Vitória (Bahia), Corinthians versus Palmeiras (São Paulo), Cruzeiro versus Atlético Mineiro (Minas Gerais), Flamengo versus

[8] Section A.2.1 in the appendix shows the mapping between topics and categories.

[9] Other sources were used to complement missing values, including each country's football-association website and Wikipedia page.

[10] All rivalries involve first-division teams with very big fan bases, and they are generally considered the most important rivalries in their countries. A detailed description of the selection process can be found in Section A.2.2 of the appendix.

Vasco da Gama (Rio de Janeiro), and Gremio versus Internacional (Rio Grande do Sul); in Chile, Colo-Colo versus Universidad de Chile (Santiago); in Colombia, América de Cali versus Deportivo Cali (Valle del Cauca), Independiente de Medellín versus Atlético Nacional (Antioquia), and Millonarios versus Santa Fe (Cundinamarca); in Ecuador, Barcelona versus Emelec (Guayas); in Honduras, Motagua versus Olimpia (Francisco Morazán); in Mexico, América versus Chivas (Mexico City-Jalisco) and Monterrey versus Tigres (Nuevo León); in Paraguay, Cerro Porteño versus Olimpia (Asunción); in Perú, Alianza Lima versus Universitario (Lima); and in Uruguay, Nacional versus Peñarol (Montevideo).

3.3 Rivalry Salience

The AmericasBarometer does not ask what football team the respondent supports, so I use Google Trends data to build a measure of exposure to each rivalry at the regional level (first-level administrative divisions). This measure captures search intensity across regions for rivalries between March 2015 and March 2020, under queries of the form $<$*Team1 Team2*$>$, and it allows me to determine which regions are exposed to treatment when a match takes place. This measure is normalized within each country so that the region most strongly exposed to a given rivalry in this period receives value 100 and all other region-rivalry pairs receive a value that represents the search intensity relative to the reference one. I call this the GT-Country Index and consider all region-rivalry pairs with at least 10% of the search intensity of the highest region-rivalry in that country to be exposed to treatment.[11]

In order to make valid comparisons across countries, I also need a measure that accounts for cross-country differences in salience. That is, the search intensity for the highest region-rivalry pair in one country is in general not the same as the search intensity for the highest region-rivalry pair in another country, even though both receive a score of 100 on the GT-Country Index. Thus, I adjust for cross-country differences and obtain the GTI, on which one region-rivalry pair in the whole sample receives a value of 100 and all others receive a value that represents the search intensity relative to the reference pair.[12] For further details on the process of constructing the GT-Country Index, see Section A.2.3 in the appendix.

[11] This is a low threshold chosen to drop from the analysis all regions that are unrelated to a given rivalry and thus should not be considered exposed to matches instantiating that rivalry. For example, Rosario Central versus Newell's is a rivalry in the province of Santa Fe, Argentina, with the vast majority of followers located in that province, so all other provinces in Argentina have a GT-Country Index below 10 with respect to that rivalry.

[12] The region-rivalry pair with highest search intensity in Latin America is Cerro Porteño versus Olimpia in San Pedro, Paraguay.

Working with a treatment defined at the regional level has important implications for interpreting the results. This paper provides evidence on how football matches affect social cohesion in the regions where they are highly salient, which is different from estimating how matches affect the attitudes of football fans compared to those of non-football fans, to do which one would need an individual-level treatment, which could lead to different results.

4 Identification Strategy

The objective of the paper is to identify how individual attitudes and beliefs change in the aftermath of football matches between traditional rivals in Latin America. The identifying assumption is that there are no systematic differences between individuals surveyed before or after a match, after controlling for certain covariates described below.[13]

The baseline empirical model is as follows:

$$Y_i = \alpha + \beta T^p_{r(i),m(i)} + \Delta' X_i + \Theta_{m(i)} + \Gamma_{d[m(i)]} + \epsilon_i \tag{1}$$

Here, $r(i)$ refers to individual i's region of residence (first-level administrative division), $m(i)$ which match they were exposed to, and $d[m(i)]$ the date of that match. Y_i is any of the outcome variables considered. $T^p_{r(i),m(i)}$ is a treatment indicator taking a value of 1 if the individual was interviewed during the p days after match $m(i)$ in a region $r(i)$ that is in the top half of the GTI distribution for the rivalry represented by that match. X_i is a vector of individual characteristics (gender, age, education, and indicators for living in an urban [versus rural] area, being unemployed, identifying as Catholic, and being single). $\Theta_{m(i)}$ is a set of match fixed effects; imposing that identification comes from variability around each match. $\Gamma_{d[m(i)]}$ is a set of calendar fixed effects, including day of the week, day of the month, and month of the year, that control for the fact that matches tend to take place on certain days and at certain times of the year. Since treatment exposure varies at the region-match level, standard errors are clustered at that level throughout the paper.

Regressions are run on the sample of individuals interviewed between p days before and after a match who reside in regions that have variability in treatment (that is, regions that have at least one individual interviewed before and at least one after the match). This results in a sample size of around 6,100 observations under $p = 5$, which is the main time window considered, coming from thirty-two matches and ninety-three region-match clusters.

[13] Similar strategies based on the exogeneity of the timing of sporting events have been exploited in the past. See, for example, Dohmen et al. (2006); Healey et al. (2010); Depetris-Chauvin et al. (2020).

As an alternative specification, I replace the binary treatment indicator for the GTI with the GTI interacted with a post-match indicator as the regressor of interest. This represents a treatment-intensity type of analysis, in which the coefficient of interest represents how much larger is the impact of exposure to a match when increasing salience by one unit (as measured by the GTI). This alternative specification has the benefit of using the full sample of respondents, and not only those from region-rivalry pairs in the top half of the GTI distribution, resulting in a sample size of around 10,300 observations under $p = 5$ coming from 45 matches and 181 region-match clusters.

Table 1 presents a balance test, in which the outcome is an indicator for being interviewed within five days after a match. All coefficients are small and statistically insignificant. Moreover, the F-statistic for joint significance in the last column is 0.67 (p=0.73), failing to reject the conjecture that individual covariates do not predict being interviewed after a match instead of before. Nevertheless, the main analyses in the paper incorporate controls for individual characteristics to further reduce concerns about bias and to improve precision.

Table 1: Balance table

	Post-Match 5d.							
Female	-0.0012							-0.0013
	(0.0031)							(0.0032)
Age		0.0001						0.0001
		(0.0001)						(0.0002)
Primary education			0.0100					0.0108
			(0.0138)					(0.0141)
Secondary education			0.0059					0.0095
			(0.0149)					(0.0160)
Higher education			-0.0029					0.0020
			(0.0166)					(0.0178)
Urban				-0.0097				-0.0086
				(0.0182)				(0.0182)
Unemployed					0.0013			0.0027
					(0.0083)			(0.0084)
Single						-0.0073		-0.0054
						(0.0052)		(0.0055)
Catholic							-0.0034	-0.0039
							(0.0057)	(0.0056)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Adj. R2	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Obs.	10297	10297	10297	10297	10297	10297	10297	10297

Note: This table lists coefficients and standard errors obtained from regressing each variable in the first column on a binary variable indicating whether a respondent was interviewed within five days after a match. The only controls are a set of region-wave fixed effects, included to compare characteristics of treated individuals with their corresponding control group. Standard errors are clustered at the region-match level. * $p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

5 Results

5.1 Main Results

Table 2 presents the main results under the baseline specification (equation 1). I find robust evidence of an improvement in social cohesion after a match. The first column runs the five-day treatment specification with match and calendar fixed effects but no controls on individual characteristics; it shows an estimated increase in the SCI of 0.27 standard deviation units. The second column incorporates individual characteristics to the set of controls, with only a small negative impact on the coefficient (0.23). The third and fourth columns show that the effect is still significant (although smaller in magnitude) over ten- and fifteen-day windows after the match. Finally, the last column runs the alternative specification using the SCI directly as a continuous measure of treatment, with similar findings.[14]

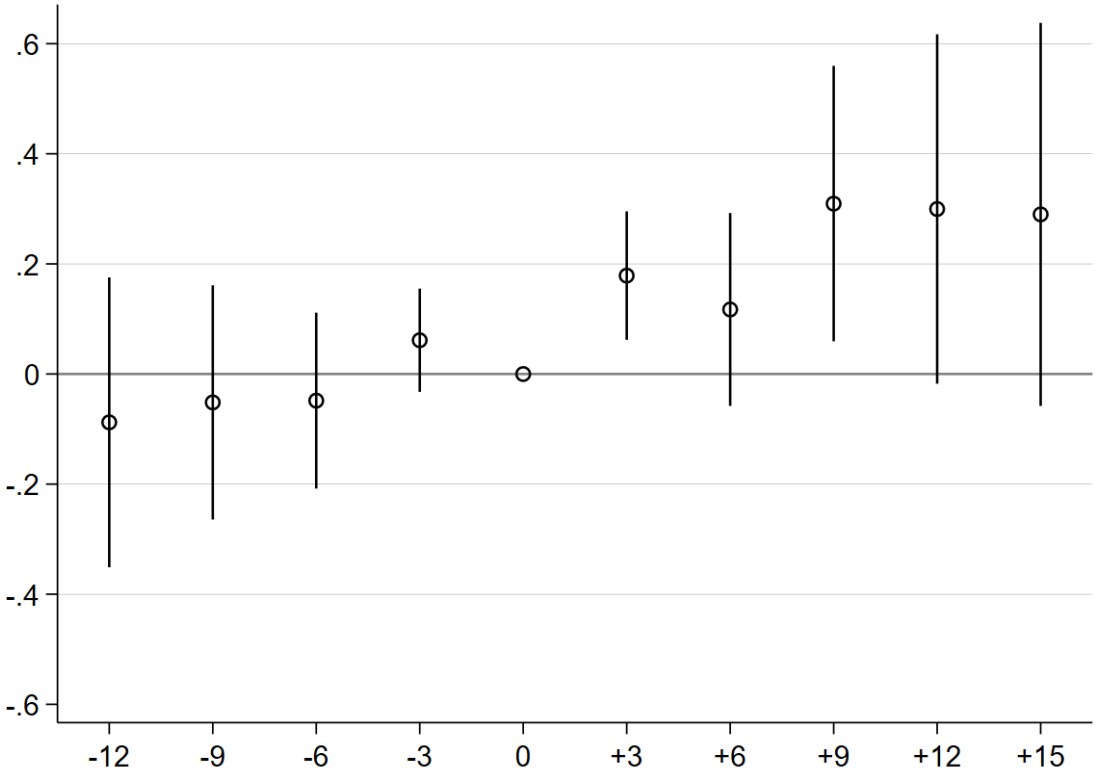
Table 2: Main results: Social Cohesion Index

	(1) 5d.	(2) 5d.	(3) 10d.	(4) 15d.	(5) 5d.	(6) 10d.	(7) 15d.
Post-Match	0.27***	0.23**	0.11**	0.09**			
	(0.09)	(0.09)	(0.06)	(0.04)			
Post-Match (GTI)					0.0028***	0.0014*	0.0008
					(0.0010)	(0.0008)	(0.0007)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	-0.02	-0.02	-0.03	-0.04	-0.02	-0.03	-0.04
Adj. R2	0.07	0.09	0.09	0.09	0.08	0.08	0.08
Obs.	6118	6118	9311	11478	10297	14889	17838
Clusters	93	93	105	110	181	194	197

Note: Post-Match takes a value of 1 if a respondent was interviewed within five days after a match and was located in a region-rivalry cluster with a GTI score in the top half of the distribution. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include a female indicator, age, and indicators for education level, living in an urban area, being unemployed, being single, and identifying as Catholic. Standard errors are clustered at the region-match level. * $p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

[14] Tables A1 and A2 in the appendix show that the results hold when considering the two components of the SCI separately.

Figure 1: Event-study graph



Note: This graph plots the coefficients from regressing the Social Cohesion Index on a set of binary variables indicating three-day periods in the thirty-day window around a match. The full set of controls is included. The coefficient for bin including day of the match and two previous days is normalized to 0. The confidence intervals are at the 95% level, and standard errors are clustered at the region-match level.

Figure 1 presents the event-study graph version of column 4 in Table 2.[15] Each value corresponds to the coefficient of a three-day bin with respect to the date of a match. The coefficient on the date of a match and the two previous days is normalized to zero. The graph covers the thirty-day window around a match. Although the coefficients are noisy, it shows that there is no clear pre-trend in social cohesion leading up to a match and that social cohesion tends to increase in the after-match period and remain high for at least two weeks after the event.

Figures A3 and A4 in the appendix show that the findings are not driven by any single country in the sample under the binary treatment or the treatment-intensity specification.

[15]Note that the bulk of observation are in the first few days around a match, implying that those bins weigh more in the regression and are more precisely estimated. Differences with the five- and ten-day window specifications are due to differences in the sample of matches picked up in each case.

In all cases, the effect remains similar in magnitude and statistically significant at the 5% level.

5.2 Heterogeneous Effects

This section presents heterogeneity analyses to gain a better understanding of why football matches affect social cohesion. Table 3 presents results for the baseline specification incorporating different interaction terms. Columns 1–3 explore heterogeneous effects by individual characteristics (gender, age, and education), and columns 4–6 explore them by match characteristics (whether it ended in a draw, whether it was a high-stakes match, and number of red cards). In columns 2, 3, and 6, the interaction-term variable is de-meaned.[16]

Table 3: Social Cohesion Index, heterogeneous effects

	(1) I: Female	(2) I: Age	(3) I: Educ.	(4) M: Draw	(5) M: High-stakes	(6) M: Red cards
Post-Match 5d.	0.21**	0.23***	0.23***	0.21**	0.22**	0.23***
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)
Post-Match 5d. x Interaction	0.04	0.003*	-0.00	0.04	0.14	-0.09***
	(0.05)	(0.001)	(0.00)	(0.07)	(0.09)	(0.02)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	-0.02	-0.02	-0.02	-0.02	-0.02	-0.04
Adj. R2	0.09	0.09	0.09	0.09	0.09	0.09
Obs.	6118	6118	6118	6118	6118	5640
Clusters	93	93	93	93	93	88

Note: Post-Match takes a value of 1 if a respondent was interviewed within five days of a match and was located in a region-rivalry pair with a GTI score in the top half of the distribution. In columns 2, 3, and 6, the interaction variable is de-meaned. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include a female indicator, age, and indicators for education level, living in an urban area, being unemployed, being single, and identifying as Catholic. Standard errors are clustered at the region-match level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The effects do not differ much across individuals of different gender, age, or level of education. While this is partly to be expected given how widespread the interest in football

[16] In the appendix, Table A4 shows that the results remain similar in magnitude under the alternative specification using the GTI as the regressor of interest, although they tend to be less precisely estimated.

is in Latin America, such small differences also imply that football matches do not affect football fans exclusively but the community as a whole. This is consistent with the fact that these matches are highly salient events that capture the attention of the vast majority of people in their region of influence.

Regarding match characteristics, the effect is slightly larger when a match ends in a draw, although the coefficient is very noisy. This could imply that equal outcomes are more favorable for the development of social cohesion.[17] In contrast, we find considerably larger effects when matches have high stakes, meaning they take place in international competitions or elimination rounds of national tournaments. The large effects could be because high-stakes matches attract even more attention, which then leads to an even stronger effect on social cohesion. Unfortunately, only four matches fall under this category, so this coefficient is also noisy.

Finally, column 6 shows that effects strongly vary depending on the number of red cards awarded during the match.[18] Red cards are awarded for violent or unethical behavior and imply that the penalized player must leave for the remainder of the game. The empirical result implies that in matches with three red cards or more, the effect on social cohesion becomes virtually null or even negative (the average number of red cards per match is 0.77). In particular, when local rivals play violently or unethically against each another, the communities they represent tend to adopt more negative attitudes and beliefs about others.[19] This result is consistent with the idea that football players act as role models for the community at large, and it is similar in spirit to what Depetris-Chauvin et al. (2020) find for national football competitions.

5.3 Alternative Outcome Measures

This section explores alternative outcome measures to evaluate other mechanisms that could be driving the results and to consider other effects that could be taking place alongside the

[17] While it would certainly be interesting to consider the impact of football matches on attitudes and beliefs depending on whether one's team is winning or losing, this type of analysis is beyond the scope of this paper, partly because I lack data on what teams the respondents support.

[18] For some matches I could not access the number of red cards awarded, so the number of observations falls slightly in this specification. However, the average effect in this subsample is virtually the same as in the full sample.

[19] Importantly, one may worry that violence in a football match is endogenous to pre-match levels of social cohesion in the communities associated with the match's rivalry. In Table A6 in the appendix I test this using five-day and fifteen-day pre-match data, and I fail to reject the null hypothesis that pre-match social cohesion predicts the number of red cards in a game.

change in social cohesion. Table 4 presents the estimates for the baseline specification.[20]

Table 4: Social Cohesion Index, heterogeneous effects

	(1) Feeling unsafe	(2) Perceived econ. Sit.	(3) Trust in president	(4) Trust in police
Post-Match 5d.	0.02	-0.16*	-0.05	0.01
	(0.04)	(0.09)	(0.04)	(0.05)
Match-region FE	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes
Ind. controls	Yes	Yes	Yes	Yes
Control mean	0.43	0.03	0.37	0.35
Adj. R2	0.08	0.14	0.10	0.09
Obs.	6002	6105	6026	6118
Clusters	93	93	93	93

Note: Post-Match takes a value of 1 if a respondent was interviewed within five days of a match and was located in a region-rivalry pair with a GTI score in the top half of the distribution. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include a female indicator, age, and indicators for education level, living in an urban area, being unemployed, being single, and identifying as Catholic. Standard errors are clustered at the region-match level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Column 1 shows that the improvement in social cohesion is not driven by changes in perceived insecurity: In the aftermath of a match, respondents do not report feeling significantly less unsafe than before when responding to the question: "Speaking of the neighborhood where you live and thinking of the possibility of being assaulted or robbed, do you feel very safe, somewhat safe, somewhat unsafe, or very unsafe?" The outcome variable indicates whether the respondent answers "very unsafe" or "somewhat unsafe" rather than any other option.

Column 2 shows that the improvement in social cohesion is not driven (or accompanied) by a generalized sense of optimism or good mood: in the aftermath of a match, respondents are not more likely to think that their economic situation, or the economic situation of the country, is better than twelve months ago. The outcome measure is a standardized index (Anderson, 2008) built on answers to the following two questions: (i) "Do you consider that your economic situation is better, the same, or worse than 12 months ago?" and (ii) "Do you consider that the economic situation of your country is better, the same, or worse than 12 months ago?"

[20] In the appendix, Table A5 shows that the results are robust to the alternative specification using the GTI as the regressor of interest.

Columns 3 and 4 show that the improvement in social cohesion does not result in higher trust in incumbent politicians or public institutions: in the aftermath of a match, respondents are not more likely to trust the president or the police. The outcome measures are based on questions using a four-point Likert scale, and they indicate whether the respondent chooses one of the two higher points. Moreover, that trust in the president does not go up speaks to the limited effect of popular sport events on the image of incumbents, something that has been debated in the political-economy literature with conflicting results (Healey et al., 2010; Fowler and Montagnes, 2015; Corbi, 2018). That trust in the police does not go up reinforces the finding that changes in perceived insecurity are not driving the main results.

6 Conclusion

This paper demonstrates that events that create divisions within communities do not necessarily reduce social cohesion. By cutting across other cleavages, they can offer an opportunity for bonding on each side of the divide. The evidence shows that role-model effects are a crucial factor determining whether cohesion increases or decreases. Given the growing polarization in most Western democracies, these findings carry important lessons for the behavior of social and political leaders.

The paper focused on how social cohesion changes after football matches instantiating traditional rivalries in Latin America, which are highly culturally salient. It showed that these events tend to improve social cohesion for at least fifteen days.

The analysis of heterogeneous effects on individual characteristics and on alternative outcomes is consistent with the finding that the results are not being driven by (1) football fans alone (rather than the community as a whole), (2) a decrease in criminal activity, or (3) a generalized good mood. Meanwhile, heterogeneous effects by match characteristics show that the number of red cards awarded during the match has a strong impact on the effect, implying that football players represent role models for society at large.

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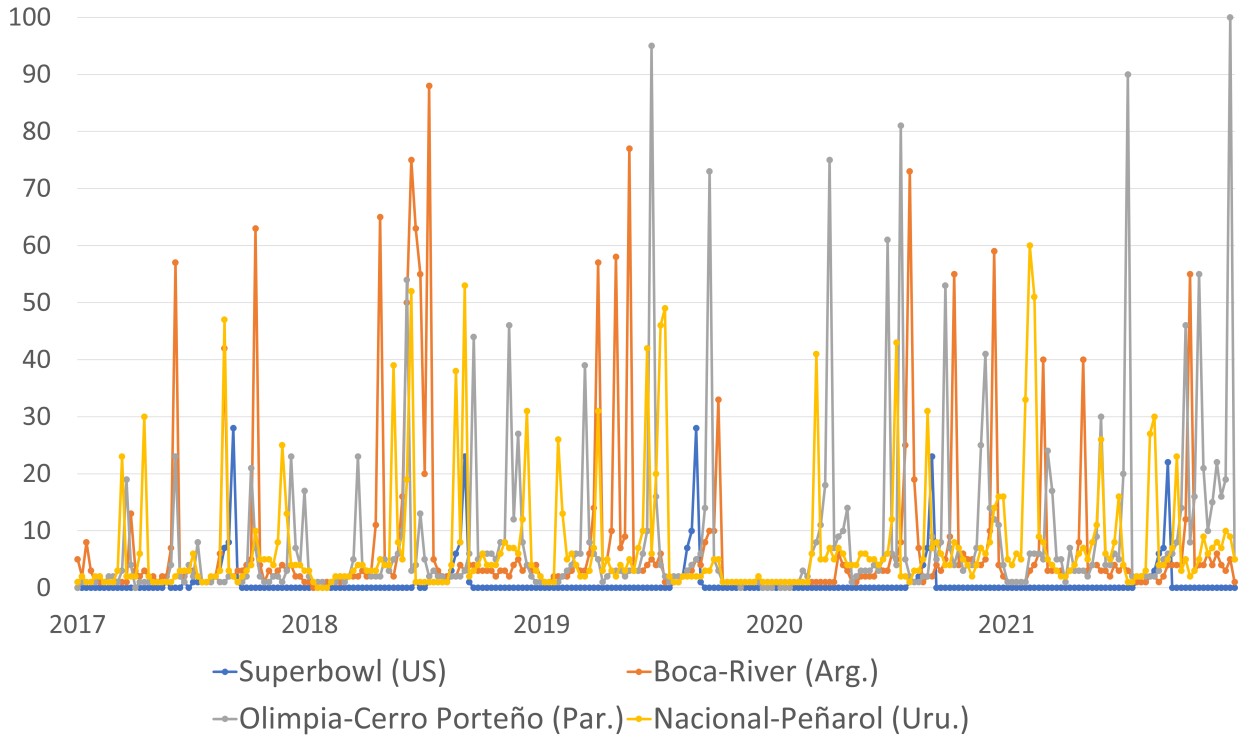
A Appendix

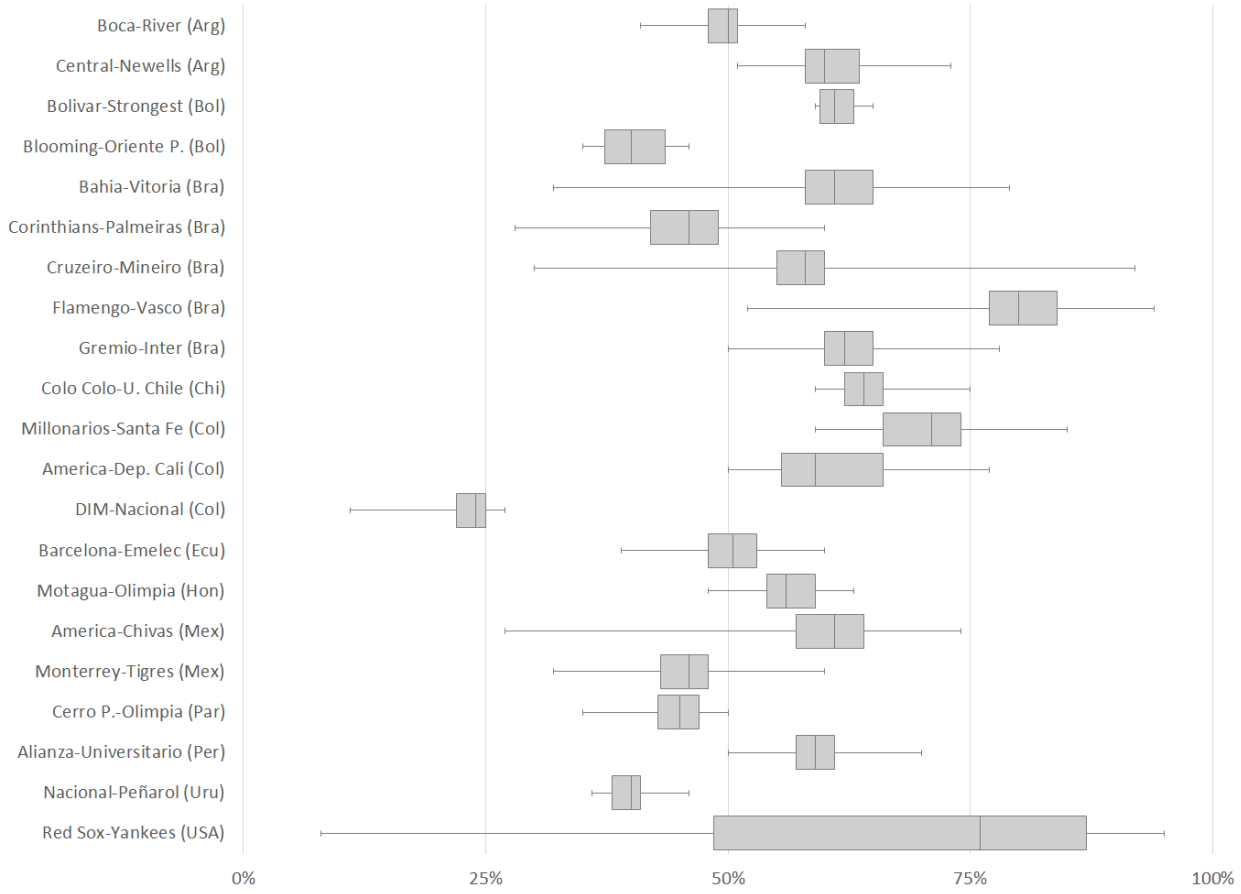
A.1 Background

Figure A1: Salience of selected football rivalries compared to Superbowl in the US



Note: This graph compares Google search intensity between May 2017 and May 2022 for the Superbowl in the United States to the analogous for the main football rivalries in Argentina (Boca Juniors v. River Plate), Paraguay (Olimpia v. Cerro Porteño), and Uruguay (Nacional v. Peñarol), which are some of the most important rivalries in Latin America and have country-wide support.

Figure A2: Segregation of followers across cities for each rivalry in the sample



Note: Each box plot represents the distribution of search intensity for the first team in each rivalry pair over total search intensity for both teams across cities within the corresponding country. This measure is a proxy for the distribution of followers of the first team over followers of both teams across cities. For example, an observation with a value of 60% implies that, in that city, the first team in the pair takes 60% of the searches over the total number of searches for the two teams. All rivalries except Red Sox v. Yankees (which is included as reference of a geographically segregated case) tend to have short boxes, implying that cities where one of the teams is relatively more popular do not have a much larger share of followers than cities where the other team is relatively more popular. This is consistent with little geographic segregation.

A.2 Data

A.2.1 Classification of "main problem in the country" responses

I reclassify the 37 topics mentioned as responses to the question of what is the main problem in the country into 6 broad categories, as follows:

- **Society**: crime, discrimination, drug addictions, gangs, insecurity, kidnappings, migration, popular protests, violence
- **Economy**: economy, external debt, inequality, inflation, lack of credit, lack of land to

farm, poverty, unemployment

- **Government**: bad government, corruption, impunity, politicians, violation of human rights
- **Infrastructure**: housing lack of electricity, lack of water, roads in poor conditions, transportation
- **Health & Education**: education, health services, malnutrition
- **Other**: armed conflict, demographic explosion, drug traffic, environment, forced displacement, terrorism, other

A.2.2 The selection of football rivalries

This section provides a description of the process of selection of football rivalries for the analysis. The key challenge to overcome is that I do not observe what football team the individual supports, which forces me to focus exclusively on rivalries that are very popular in at least one region.

The steps followed were the following:

1. Obtain the list of Latin American countries where football is the most popular sport.
2. Obtain the list of the most popular football rivalries for each country in the sample. For both items 1 and 2, since there is no obvious source to determine these lists, several sources were used: sport magazines articles, interviews to journalists, and Wikipedia pages, among other.
3. Whenever a team showed up more than once (i.e., it had more than one popular rivalry), keep only the main rivalry for that team. This was not common at all – typically teams have only one traditional rival – but in some cases, some sources indicated more than one rivalry. The objective of this step was to avoid including matches that could complicate the interpretation of the coefficients. Examples of rivalries dropped in this step include Chile's *U. de Chile v. U. Católica* (dominated by *Colo-Colo v. U. de Chile*) and Brazil's *Flamengo v. Fluminense* (dominated by *Flamengo v. Vasco da Gama*).
4. Compute the GTI index for each region-rivalry pair (impose zero exposure to foreign rivalries).

5. Drop rivalries that are not highly salient in at least one region. A handful of popular rivalries are actually not highly salient per the GTI in any single region. This happens for two different reasons: (1) when a rivalry is located in a highly populated region and is second in importance to another rivalry in that same region. Thus, even though it has thousands of followers, its GTI is close to zero in all regions of the country. Examples of rivalries dropped in this step include *Independiente v. Racing* (Argentina) and *Estudiantes LP v. Gimnasia LP* (Argentina), which are both located in Buenos Aires. And (2) when a country displays relatively low interest in football compared to the other countries in the sample, so that not even its most popular rivalry in its most popular region receives a reasonably high GTI score. Three rivalries and their corresponding countries were dropped because of this: *Alajuelense v. Saprissa* (Costa Rica), *Municipal v. Comunicaciones* (Guatemala), and *Caracas v. Táchira* (Venezuela). Thus, even though football is arguably the most popular sport in these countries, the salience of the main rivalry there is low compared to rivalries in the other Latinamerican countries in the sample.

This process resulted in the 20 rivalries included in the sample, belonging to eleven different countries: Argentina, Bolivia, Brasil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay. The list of rivalries includes: in Argentina, Boca Juniors v. River Plate (Buenos Aires City) and Rosario Central v. Newell's Old Boys (Santa Fe); in Bolivia, Blooming v. Oriente Petrolero (Santa Cruz) and Bolivar v. The Strongest (La Paz); in Brazil, Bahia v. Vitória (Salvador, Bahia), Corinthians v. Palmeiras (Sao Paulo, SP), Cruzeiro v. Atlético Mineiro (Minas Gerais), Flamengo v. Vasco da Gama (Rio de Janeiro), and Gremio v. Internacional (Rio Grande do Sul); in Chile, Colo-Colo v. Universidad de Chile (Santiago City); in Colombia, América de Cali v. Deportivo Cali (Valle del Cauca), Independiente de Medellín v. Atlético Nacional (Antioquia), and Millonarios v. Santa Fe (Cundinamarca); in Ecuador, Barcelona v. Emelec (Guayas); in Honduras, Motagua v. Olimpia (Francisco Morazán); in Mexico, América v. Chivas (Mexico City-Jalisco) and Monterrey v. Tigres (Nuevo León); in Paraguay, Cerro Porteño v. Olimpia (Asunción City); in Perú, Alianza Lima v. Universitario (Lima); and in Uruguay, Nacional v. Peñarol (Montevideo City).

A.2.3 Measuring rivalry salience with Google Trends data

For each rivalry, I define a search term following the form *<Team1 Team2>*,[21] and retrieve the regional distribution of search intensity between March 2015 and March 2020. Search intensity refers to the number of queries for that term over the total number of queries in that region and period, and is reported by Google Trends normalized with respect to the highest region-period in the sample. Arguably, regions with higher search intensity for a given rivalry tend to be more interested in it. This is confirmed by the distribution of search intensities, as rivalries that are known to be local to a specific region display high search intensity only in those regions.

Importantly, in the case of countries with several rivalries, and because different rivalries may attract very different volumes of people, a concern is that a score of 100 may imply very different levels of saliency across rivalries. I deal with this by re-normalizing all region-rivalry scores within each country, so that only one region-rivalry attains a score of 100. For example, in Argentina, Central-Newell's scores 100 saliency in the province of Santa Fe. But after the re-normalization, and because Boca-River is a much more popular rivalry in that country, the score falls to 11 in that province. That is, in the region where it is most salient, Central-Newell's has a search intensity equal to 11% of the search intensity for Boca-River where it is most salient (which happens to be the province of Formosa). This process results in country-level distributions of region-rivalry saliency, which is only used to determine what rivalries are salient in what regions within each country.

However, this index does not allow to properly compare the salience of rivalries across countries. A score of 100 does not represent the same saliency across countries in general. To deal with this, I build the final Google Trends index —the GTI— by comparing search intensity across the top region-rivalries from each country, obtaining an adjustment factor for each of them.[22] This results in a single region-rivalry receiving a score of 100 in the full sample, and all others being normalized with respect to that one. Under the GTI, the top three region-rivalry pairs are: (San Pedro, PY - Cerro Porteño-Olimpia)=100; (Paraguari, PY - Cerro Porteño-Olimpia)=93; (Formosa, AR - Boca-River)=90.

[21] The objective is to mimic as best as possible the way people actually run searches on Google, possibly when checking the time of an upcoming match or looking for the outcome of a recent one. For this reason, I use a simplified version of each team's full name. For example, instead of writing *<"Clube de Regatas do Flamengo" "Clube de Regatas Vasco da Gama">* for this Brazilian rivalry, I use *<flamengo vasco>*. Importantly, the order of terms is irrelevant.

[22] Region-rivalry pairs that mix a region from one country and a rivalry from another are automatically set to 0. The assumption that motivates this decision is that football clubs in Latin America do not have a considerable impact on social cohesion outside of their home country.

A.3 Results

A.3.1 Main Results

Table A1: Main results: Trust

	(1) 5d.	(2) 5d.	(3) 10d.	(4) 15d.	(5) 5d.	(6) 10d.	(7) 15d.
Post-Match	0.21***	0.17**	0.06	0.04			
	(0.07)	(0.07)	(0.05)	(0.05)			
Post-Match (GTI)					0.0014	0.0004	0.0003
					(0.0010)	(0.0008)	(0.0007)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	2.76	2.76	2.73	2.71	2.70	2.69	2.67
Adj. R2	0.06	0.07	0.07	0.07	0.07	0.07	0.07
Obs.	5957	5957	9061	11178	10054	14527	17413
Clusters	93	93	105	110	181	194	197

Note: Post-Match takes value 1 if respondent was interviewed in the number of days after a match indicated in each column and, in the case of columns 1-4, was located in a region-rivalry pair with GT-Latam index in the top half of the distribution. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include female indicator, age, education level, and indicators for urban status, unemployed status, being single, and identifying as catholic. Standard errors clustered at the region-match level. * $p < 0.1$, **$p < 0.05$, ***$p < 0.01$.

Table A2: Main results: Main problem = society

	(1) 5d.	(2) 5d.	(3) 10d.	(4) 15d.	(5) 5d.	(6) 10d.	(7) 15d.
Post-Match	-0.07*	-0.07*	-0.05**	-0.04**			
	(0.04)	(0.04)	(0.02)	(0.02)			
Post-Match (GTI)					-0.0012***	-0.0007**	-0.0005*
					(0.0004)	(0.0004)	(0.0003)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	0.29	0.29	0.29	0.30	0.26	0.28	0.28
Adj. R2	0.10	0.11	0.11	0.11	0.10	0.10	0.10
Obs.	6109	6109	9295	11458	10285	14870	17815
Clusters	93	93	105	110	181	194	197

Note: Post-Match takes value 1 if respondent was interviewed in the number of days after a match indicated in each column and, in the case of columns 1-4, was located in a region-rivalry pair with GT-Latam index in the top half of the distribution. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include female indicator, age, education level, and indicators for urban status, unemployed status, being single, and identifying as catholic. Standard errors clustered at the region-match level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

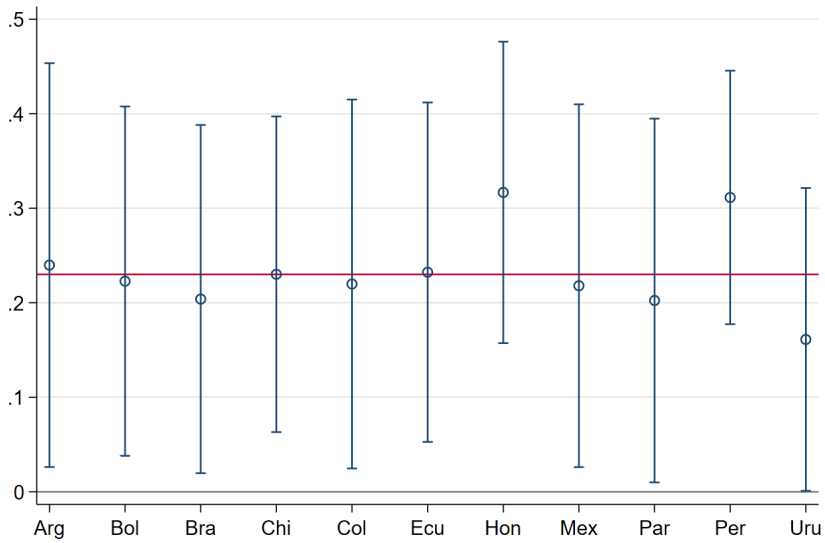
Table A3: All "main problem" outcomes, 5 day specification

	(1) Society	(2) Economy	(3) Government	(4) Infrastructure	(5) Health&Ed.	(6) Other
Post-Match, 5d.	-0.07*	0.01	0.02	0.01	0.00	0.04
	(0.04)	(0.04)	(0.02)	(0.01)	(0.02)	(0.03)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	0.29	0.34	0.13	0.02	0.05	0.19
Adj. R2	0.11	0.13	0.07	0.07	0.09	0.21
Obs.	6109	6109	6109	6109	6109	6109
Clusters	93	93	93	93	93	93

Note: Post-Match takes value 1 if respondent was interviewed in the 5 days after a match and was located in a region-rivalry pair with GT-Latam index in the top half of the distribution. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include female indicator, age, education level, and indicators for urban status, unemployed status, being single, and identifying as catholic. Standard errors clustered at the region-match level. * $p < 0.1$, **$p < 0.05$, ***$p < 0.01$

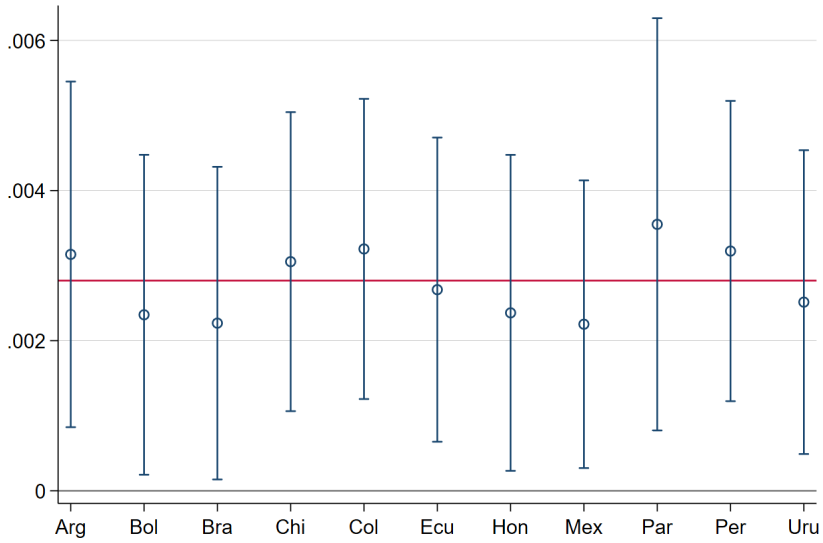
A.3.2 Robustness checks

Figure A3: Baseline specification, dropping one country at a time



Note: This figure plots the coefficients and 95% confidence intervals from running the baseline specification (5-day binary treatment with full controls) dropping one country at a time. The horizontal red line indicates the effect under the full sample.

Figure A4: Baseline specification (GTI), dropping one country at a time



Note: This figure plots the coefficients and 95% confidence intervals from running the 5-day treatment intensity specification with full controls dropping one country at a time. The horizontal red line indicates the effect under the full sample.

Table A4: Social Cohesion Index, heterogeneous effects - treatment intensity specification

	(1) I: Female	(2) I: Age	(3) I: Educ.	(4) M: Draw	(5) M: High-stakes	(6) M: Red cards
Post-Match 5d. (GTI)	0.0024**	0.0027***	0.0027***	0.0026**	0.0024**	0.0025**
	(0.0012)	(0.0010)	(0.0010)	(0.0012)	(0.0010)	(0.0011)
Post-Match 5d. (GTI) x Interaction	0.0006	0.0000	-0.0001	0.0003	0.0074***	-0.0008
	(0.0010)	(0.0000)	(0.0001)	(0.0017)	(0.0019)	(0.0007)
Match-region FE	Yes	Yes	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Control mean	-0.02	-0.02	-0.02	-0.02	-0.02	-0.04
Adj. R2	0.08	0.08	0.08	0.08	0.08	0.08
Obs.	10297	10297	10297	10297	10297	9603
Clusters	181	181	181	181	181	173

Note: Post-Match (GTI) interacts an indicator for being interviewed in the 5 days after a match with the GT-Latam index corresponding to the region of the individual and the rivalry that he or she was exposed to. In columns 2, 3, and 6, the interaction variable is demeaned. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include female indicator, age, education level, and indicators for urban status, unemployed status, being single, and identifying as catholic. Standard errors clustered at the region-match level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A5: Alternative outcomes - treatment intensity specification

	(1) Feeling unsafe	(2) Perceived Econ. Sit.	(3) Trust in president	(4) Trust in police
Post-Match 5d. (GTI)	0.0006	-0.0040***	-0.0010*	-0.0010*
	(0.0005)	(0.0013)	(0.0005)	(0.0006)
Match-region FE	Yes	Yes	Yes	Yes
Calendar FE	Yes	Yes	Yes	Yes
Ind. controls	Yes	Yes	Yes	Yes
Control mean	0.45	0.00	0.38	0.36
Adj. R2	0.07	0.13	0.11	0.09
Obs.	10161	10276	10155	10297
Clusters	181	181	181	181

Note: Post-Match (GTI) interacts an indicator for being interviewed in the 5 days after a match with the GT-Latam index corresponding to the region of the individual and the rivalry that he or she was exposed to. In columns 2, 3, and 6, the interaction variable is demeaned. Calendar fixed effects include day of the week, day of the month, and month of the year. Individual controls include female indicator, age, education level, and indicators for urban status, unemployed status, being single, and identifying as catholic. Standard errors clustered at the region-match level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A6: Social cohesion does not predict number of red cards in a match

	5d - Top 50%		15d - Top 50%		5d - All		15d - All	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SCI, Pre-Match	0.1352	0.2130	0.3185	0.2893	-0.3224	-0.1660	-0.6903	-0.3503
	(0.3335)	(0.5088)	(0.3135)	(0.5220)	(0.3944)	(0.3660)	(0.5458)	(0.3805)
Rivalry FE	No	Yes	No	Yes	No	Yes	No	Yes
Control mean	0.70	0.68	0.57	0.55	0.70	0.62	0.62	0.52
R2	0.00	0.14	0.02	0.26	0.02	0.15	0.04	0.23
Obs.	37	34	37	33	53	50	47	42

Note: Each column regresses the number of red cards in a match on pre-match SCI averages. Columns 1-4 consider only respondents exposed to the match from region-rivalry pairs in the top 50% of the GTI distribution, following the binary-treatment (baseline) specification. Columns 5-8 consider all respondents exposed to the match. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.