

Are Thugs Affected by External Nuisance? Evidence from the Swedish Hooligan Scene*

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Abstract

It is a widespread belief in economics that potential criminals take costs and benefits into account before shaping their decisions. But how do violent hooligans respond to external influence, such as weather? I address this question by using unique self-reported data on hooligan violence in Sweden and detailed weather data. I find that 10 ml of precipitation the night before game day significantly reduces the level of violence by approximately 33 per cent. This indicates that hooligans, like most other individuals, take basal considerations into account in their decision making. The result provides new insights into how group violence can be combated.

1 Introduction

Soccer hooliganism is on the rise in Europe as well as in Latin America. To combat violence, it is important to know how hooligans behave and respond to external incentives. Becker (1968) and Becker and Landes (1974) early suggested that criminals take

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the cost and benefits of a crime into account when deciding whether to commit it or not. But what factors do thugs consider before deciding whether to be violent or not? And how can they be influenced? This paper asks the question if violent hooligans take basal things, such as unpleasant weather, into account when making their decisions. To my knowledge, this topic has not been previously studied.

I use unique self-reported data from the Swedish hooligan scene to study how precipitation and temperature affect hooligan violence in the highest Swedish soccer league “Allsvenskan”. Weather data from the various towns where the games are played is used. Conditioning on specific game fixed effects, I find that an increased amount of precipitation in the night before a game day reduces the level of violence significantly. An increase by 10 ml between 20.00 in the evening before and 08.00 in the morning on average leads to a 33 percent reduction in the level of violence the next day. Hooligans are however not influenced by the temperature and by precipitation during the game day. These individuals engage in organized violence, and call each other in advance before games in order to coordinate a fight. It is therefore not surprising that they are influenced by previous weather.

The results indicate that hooligans, like many other individuals, respond to external costs. An implication may be that they are also sensitive to other costs, in the form of law and order. This is in line with Poutvaara and Priks (2006) who show that intelligence units are effective in reducing hooligan violence. More generally, Levitt (1997 and 2002), using instruments for policing, and Di Tella and Schargrodsky (2004) and Klick and Tabarrok (2005), using natural experiments, find that policing tends to reduce crime.

The outline of the paper is as follows. Section 2 describes the data and the empirical framework. The results are shown in section 3. Section 4 concludes.

2 Data and empirical framework

I study violence related to the highest Swedish soccer league “Allsvenskan” from 1999 to 2005. The data on self-reported violence is collected by the violent hooligan orga-

nization, “Firman Boys”, which supports the Stockholm club AIK.¹ I index violence from 0 to 3 where 0 denotes no violence and 3 denotes the most severe level of violence, like riots or the use of weapons. The results are robust to a definition where 0 implies no violence and 1 any positive level of violence. Data on weather is collected by the Swedish Meteorological and Hydrological Institute. I use data on precipitation and temperature from the town in which the game is played. Table 1 reports the summary statistics. Precipitation is measured in the morning at 08.00 and in the evening at 20.00 at the various weather stations. Temperature is measured at 15.00. Because supporter violence is typically a function of the combination of teams that meet, and also where they play, I use game specific fixed effects.²

To test if weather affects hooligans I use the following empirical specification. Let Y_{ij} denote the level of violence for match combination i in game j . I will run the regression

$$Y_{ij} = \alpha_i + \beta \text{Precipitation}_{ij} + \gamma \text{Temp}_{ij} + v_{ij}, \quad (1)$$

where α_i is a specific match-fixed effect and the parameters β and γ measures the effect of precipitation and temperature on violence respectively.

2.1 Results

Table 2 shows the results from estimating equation 1. Column 1 shows that 10 ml of precipitation (which almost always comes in the form of rain during the soccer season) during the night before game day, reduces the level of violence per game by 0.04. Relative to the average, which is 0.12, this reduction amounts to 33 percent. Column 2 controls for temperature, which does not significantly explain hooligan fights but increases the significance of the variable precipitation somewhat, to the 5 percent level. Column 3 shows how rain in the 12 hour period 08.00 - 20.00 during game day affect hooligan violence, and column 4 controls for temperature. This measurement of precipitation does not affect the level of violence, which is not surprising since hooligans

¹See www.sverigesenen.com.

²Team 1 playing team 2 at home is treated differently from team 1 playing team 2 away.

call each other to make an appointment in advance. So it is likely that, to the extent precipitation affects hooligans they react to the situation before the actual fight. In sum, the results indicate that the decision whether to fight and how much is heavily influence by how wet the hooligans expect the fight to be.

3 Summary

It is a common held view that criminals' decision making is influenced by external costs. There also exists a recent empirical literature that deals with the question how police affects crime. This paper looks at the problem from a different angel, namely on how violent hooligans are influenced by weather. While I find that hooligans are not sensitive to temperature, the results indicate that they do take precipitation into account when deciding whether to fight or not. The results shed some light into what is in the minds of violent hooligans. That is, the fact that hooligans are affected by weather says something about their determination, and sometimes lack of determination, to fight. This information may be used by policy makers. More empirical result on how sensitive hooligans, and thugs in general, are to external influence would help societies in their effort to reduce this type of behavior.

References

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Table 1. Summary Statistics

	Mean	St. Dev.	Min	Max	Number of obs.
Violence	0.12	0.5	0	3	1275
Precipitation 20.00 - 08.00	1.04	3.14	0	32.2	1254
Precipitation 08.00 - 20.00	1.09	3.04	0	41.5	1257
Temperature 15.00	14.28	5.73	-5.4	28.4	1223

Precipitation is in ml. Temperatures in degrees Celsius.

Table 2. Weather and Hooligan Violence

Dependent variable: Violent incidents (0-3)				
Sample	[1]	[2]	[3]	[4]
PRECIPITATION 08.00	-0.041* (0.02)	-0.043** (0.021)		
PRECIPITATION 20.00			-0.030 (0.045)	-0.057 (0.038)
TEMPERATURE		-0.024 (0.029)		-0.023 (0.029)
Match-specific fixed effect	Yes	Yes	Yes	Yes
Constant	1.286*** (0.282)	1.599*** (0.416)	1.289*** (0.250)	1.608*** (0.425)
OBSERVATIONS	1254	1219	1257	1221

Note: *** indicates significance at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. Standard errors are clustered at the level of specific game-combinations.