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The Impact of Terrorism on Expectations, Trust and Happiness: The Case of the November 13 Attacks in Paris, France

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Abstract: I use quasi-experimental evidence to measure the impact of the November 13, 2015 attacks in Paris, France on various channels through which terrorism can affect the economy. The evidence suggest the attacks reduced optimism and increased trust in the national government but did not affect current life satisfaction nor political orientation.

Keywords: Terrorism, Trust, Happiness, Expectations

JEL Classifications: I31, F52, Z13

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Introduction

There is by now a sizeable literature that studies the economic impact of terrorism. Tavares (2004), for example, finds the output cost of terrorist attacks to be small in a large panel of countries, while Abadie and Gardeazabal (2003) estimate that terrorism cost the Basque Country 10% of its per-capita GDP.

Terrorist acts typically only directly affect a small number of individuals and organizations, so to have a sizeable influence on the overall economy, they would need to affect political outcomes or have a psychological impact on the wider population (Krueger (2008)).

Examples of the impact of terrorism on political outcomes are Montalvo (2011), who finds a significant effect of the 2004 Madrid Bombings on the outcome of the Spanish elections, and Bozzoli and Mueller (2009) who find that the July 2005 London Bombings increased people's willingness to trade off liberties for security.

Examples of the impact of terrorism on the mood of the population are Metcalfe et al. (2011), who find a significant negative effect of the 9/11 attacks on happiness in the UK, and Clark and Stancanelli (2016) who find a significant negative effect of the Boston Marathon Bombing on happiness in the US. Romanov et al (2012), however, find little evidence of terrorism on life satisfaction in Israel. These studies capture the impact of terrorism by comparing answers of respondents interviewed just before the terrorist attacks to the answers of respondents interviewed just after the attacks.

Such quasi-experimental approach has also been used to assess the impact of terrorism on trust. Dinesen and Jaeger (2013), for example, find that the 2004 Madrid Bombings had a short-lived positive effect on trust in political institutions. Wollebæk et al. (2012) similarly document an increase in interpersonal and institutional trust after the Utoya murders in Norway while Gates and Justesen (2016) find a decrease in trust in the president after a Tuareg attack in Mali.

In this note, we estimate the impact of the November 13, 2015 attacks in Paris, France. On November 13, terrorists attacked 4 different places in Paris, killing 130 people and injuring over 350 people. While France had suffered an earlier attack on Charlie Hebdo, in January 2015, the November 2015 attack was the first attack by Islamic extremists in France aimed not at a selected group of people, but rather aimed to maximize victims in the population.

We analyze the channels that can cause an economic impact by analyzing how the attack influenced the mood, expectations and trust of the French. We use the November 2015 Eurobarometer survey, which interviewed about 1000 French people data in the period November 7-November 16, 2015. About 90% of the interviews took place on or before November 13, and 10% after the attack (mainly on Saturday November the 14th). We also use the Eurobarometer survey done weeks before the attack (October 17-26, 2015) and the survey done weeks after (November 28th-December 7th, 2015). Using these additional surveys we can assess whether possible immediate effects of the attack persist; though, admittedly, the longer the period between the attack and the survey period, the more likely our outcome variables are not only affected by the attack itself.

All 3 surveys included questions on life satisfaction, on whether the country goes in the right direction and on one's political orientation. The November survey includes additional questions on the importance of terrorism, on the quality of life now and in the past, on confidence in the future and on trust in various political institutions.

Econometric Analysis.

While we have data from different periods in time, the surveys do not follow the same people over time. Hence, changes over time could be due to changes in the sample composition. We therefore report the results of a regression analysis which control for differences in the sample by including a fixed set of control variables. In all regressions reported below, we include the respondents' age and residential status as urban residents (Yang and Zeng (2016)) and retired persons (Sutter and Kocher (2007) have been found to trust less. Women have been found to be less optimistic (Jacobsen et al. (2014)) so we include a dummy for women. A dummy for respondents who regularly have difficulties paying bills and a set of dummies reflecting the employment status capture the possible influence of an individual's economic situation on his/her happiness, a set of dummies reflecting the relationship status tests whether married people indeed are happier (Stevenson and Wolfers (2008)) while a set of dummies reflecting different levels of education checks the possible negative direct effect of education on happiness (Powdthavee et al. (2015)).

Table 1 gives the results of an ordered probit model analyzing how satisfied a respondent is with the life (s)he leads. Respondents had a choice between four possible answers, ranging from 'Very Satisfied' to Not At All Satisfied. Table 1 gives the average marginal effects on the probability of answering 'Very satisfied'or 'Fairly satisfied'. Given marginal effects need to sum to one, one can also infer from the table the marginal effects on the probability of being in the remaining categories. The table shows that the probability of a respondent answering (s)he is very satisfied, is increasing over time, with no signs of the attack changing this trend. The same conclusion follows from analyzing the question whether a respondent thinks, currently, the country is going in the right direction: compared to weeks before the attack, more people think the country is going in the right direction but this trend already started before the attack[1].

We do find, however, that the attacks negatively affected expectations (table 2): after the attack, the probability respondents expect the quality of life to become better in the next 12 months, is 7 percentage points lower than before. Compared to the 18% of respondents who believed the quality of life to become better before the attack, this 7% points change is sizeable. Similarly, we find that respondents are 6 percentage points less likely to 'totally agree' with the statement they are confident in the future and 6 percentage points less likely to 'tend to agree' with such statement. For comparison, women are about 4.5 points less likely to 'totally agree' with such statement than men while those having regularly trouble paying bills are about 9% points less likely to 'totally agree' than others.

Focusing on the possible political impact of the attacks (table 3), we find that the chance a respondent indicates terrorism is among the two most important problems the country faces, increases by 29.4 percentage points, while the chance a respondent indicates terrorism is among the two most important problems (s)he personally faces increases by 6.1 percentage points. Compared to initial levels of 15% and 3.5%, these are massive increases. Table 4 further shows that the attacks significantly and positively affected trust in the national government, with the increase being 13 percentage point, which is almost a doubling compared to the base level of 18%. However, we do not find a significant impact on individuals' political left/right orientation, nor on trust in political parties or local governments.

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[1] We similarly do not find an impact on the probability people are happy with the quality of life or agree that quality of life before was better (see online appendix).

Conclusion

This note presents quasi-experimental evidence that suggests the November 13, 2015 terrorist attacks in Paris, France, worsened expectations about the future, increased trust in the national government and brought terrorism up in people's agenda. But they did not affect current satisfaction with life nor with the direction in which the country is going, nor the political orientation of respondents.

References

Abadie Alberto and Javier Gardeazabal. 2003. "The Economic Costs of Conflict: A Case Study of the Basque Country"`, American Economic Review, 93(1), p. 113-132.

Bozzoli, Carlos and Müller, Cathérine. 2011. "Perceptions and attitudes following a terrorist shock: Evidence from the UK", European Journal of Political Economy, 27(S1), p. S89-S106.

Clark, Andrew and Elena Stancanelli. 2016. "Individual Well-Being and the Allocation of Time Before and After the Boston Marathon Terrorist Bombing". PSE Working Paper.

Dinesen, Peter Thisted and Mads Meier Jæger. 2013. "The Effect of Terror on Institutional Trust: New Evidence from the 3/11 Madrid Terrorist Attack". Political Psychology, 34(6), p. 917–926.

Gates, Scott and Mogens K. Justesen (2016), Political Trust, Shocks, and Accountability: Quasi-Experimental Evidence from a Rebel Attack, working paper.

Jacobsen, Ben, John B. Lee, , Wessel Marquering, , Cherry Y. Zhang (2014), 'Gender differences in optimism and asset allocation', Journal of Economic Behavior & Organization, 107(B), P. 630–651.

Krueger, Alan B. 2008. 'What Makes a Terrorist: Economics and the Roots of Terrorism', Princeton University Press.

Metcalfe, Robert, Nattavudh Powdthavee and Paul Dolan (2011), "Destruction and Distress: Using a Quasi-Experiment to Show the Effects of the September 11 Attacks on Mental Well-Being in the United Kingdom". Economic Journal, 121(550), p. F81–F103

Montalvo, Jose. 2011. "Voting after the Bombings: A Natural Experiment on the Effect of Terrorist Attacks on Democratic Elections", Review of Economics and Statistics, 93(4), p. 1146-1154.

Powdthavee, Nattavudh (Nick), Warn N. Lekfuangfu and Mark Wooden. 2015. 'What's the good of education on our overall quality of life? A simultaneous equation model of education and life satisfaction for Australia', Journal of Behavioural and Experimental Economics, 54, p. 10- 21.

Romanov, Dmitri, Asaf Zussman, and Noam Zussman, 'Does Terrorism Demoralize? Evidence from Israel', Economica, 79(313), p. 183–198.

Stevenson, Betsey & Justin Wolfers, 2008. "Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox," Brookings Papers, vol. 39(1), p. 1-102.

Sutter, Matthias and Martin Kocher. 2007. 'Trust and trustworthiness across different age groups', Games and Economic Behavior, 59(2), p. 364–382.

Tavares, Jose. 2004. "The open society assesses its enemies: shocks, disasters and terrorist attacks". Journal of Monetary Economics, 51(5), p. 1039–1070.

Wollebæk, Dag, Bernard Enjolras, Kari Steen-Johnsen, Guro Ødegård. 2012. 'After Utøya: How a High-Trust Society Reacts to Terror', Political Science & Politics, 45(1), p. 32-37.

Yang, Guanqiong and Shuxian Zeng. 2016. 'The Comparison of Trust Structure between Urban and Rural Residents in China', American Journal of Industrial and Business Management, 6, p. 665-673.

Tables

Tables give marginal effects after ordered probit (tables 1 and 2), and probit (tables 3 and 4, except the last column of table 4 which is OLS). All regressions include the same set of control variables mentioned in the text. The base category is a respondent either weeks before the attack (table 1 and the last column of table 4) or just before the attack. The number of observations varies across questions because we exclude respondents who don't know or refuse to answer a specific question and because only for table 1 and the last column of table 4 we have data from weeks before and after the attacks. Standard errors are in parentheses. One * indicates significant at the 10%, ** 5% and *** 1% significance level. Full tables can be found in an online appendix.

Table 1: impact on current assessment

	Current Life Satisfaction		Currently going in which direction?	
	Very Satisfied	Fairly Satisfied	Right	Neither Right nor Wrong
Immediately Before the attack	0.012	-0.002	0.068***	0.043***
	(0.01)	(0.001)	(0.01)	(0.01)
Immediately After the attack	0.021	-0.004	0.077**	0.048***
	(0.03)	(0.01)	(0.03)	(0.02)
Weeks After the attack	0.032**	-0.007**	0.068***	0.043***
	(0.01)	(0.003)	(0.01)	(0.01)
N	3015	3015	2845	2845

Table 2: impact on expectations

N=934	Quality of Life in the next 12 months will be		Do you agree with the statement that you have confidence in future	
	better	same	Totally agree	Tend to agree
Immediately After the attack	-0.070**	-0.01	-0.058**	-0.060***
	(0.03)	(0.01)	(0.02)	(0.02)

Table 3: impact on terrorism as priority

N=1000	Priority for France	Priority for oneself
Immediately After the attack	0.294***	0.061***
	(0.03)	(0.02)

Table 4: impact on trust and political orientation

	Political Parties	Local Gov.	National Gov.	Political Orientation
	Tend to Trust			Left(1)-Right(10)
Immediately Before the attack				-0.191*
				(0.11)
Immediately After the attack	0.041	0.043	0.133***	-0.145
	(0.03)	(0.06)	(0.04)	(0.27)
Weeks After the attack				-0.041
				(0.11)
N	855	888	888	2358