

Hate is too great a burden to bear: Hate crimes & the mental health of refugees

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MOTIVATION

The world witnessed a sharp increase in migration and hate crime directed towards migrants in the last decade. Especially refugees were at the center of the attention. At the same time, hate crime has been shown to have considerable effects on aggregate measures of output, financial markets, foreign direct investment and tourism. However, evidence on the individual level is scarce and evidence for refugees is non-existent. This is a major short-coming since hate crime potentially affects individuals' mental health, which can be linked to economic decision making (Becker and Rubinstein, 2011). This decision making can be especially relevant for refugees, who are often considered permanent migrants. As such, their lifetime utility depends highly on the initial decisions they make after arrival. Therefore, the long-term well-being of refugees can be worsened considerably by experiences of hate crime. We add to this literature by estimating the effect of hate crime on refugees' mental health.

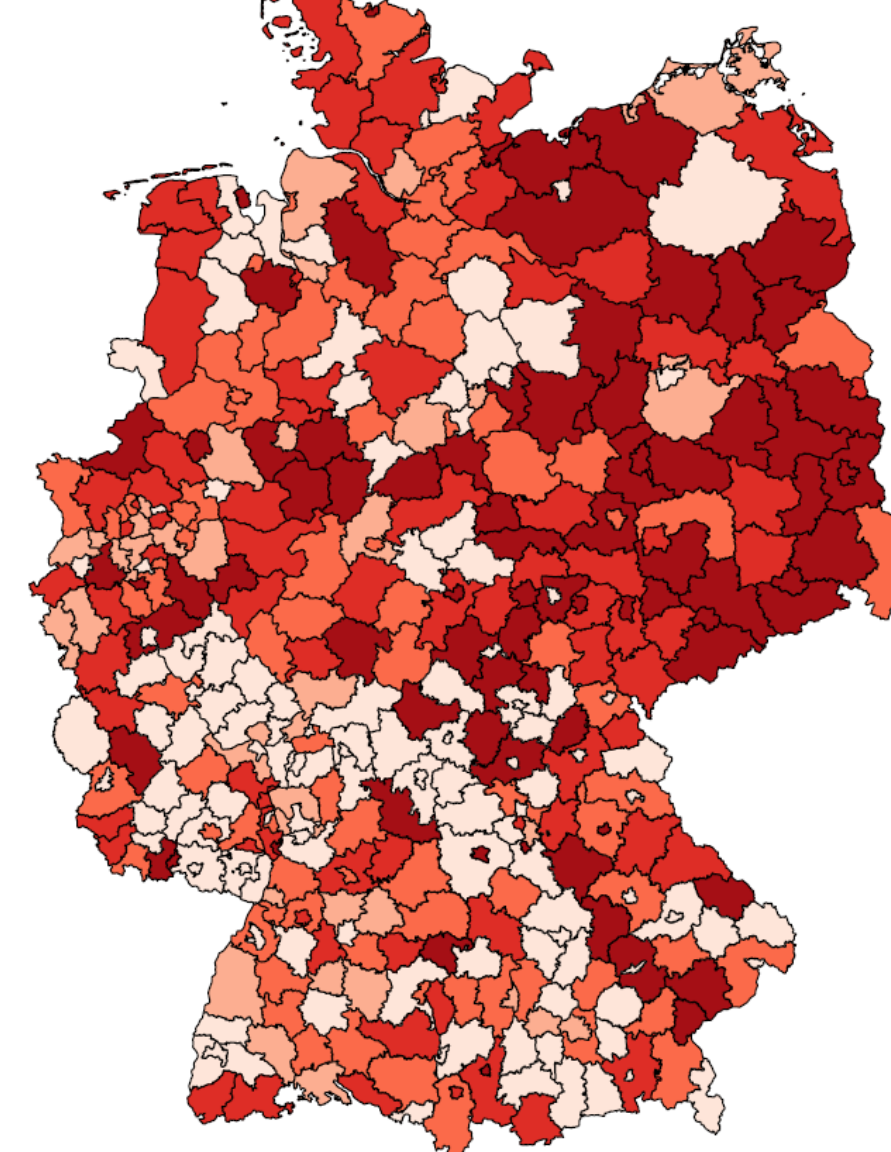
DATA AND EMPIRICAL SPECIFICATION

Data

- Representative data on refugees from the **SOEP-IAB-BAMF Survey of Refugees**.
- Sample of refugees who arrived between January 2013 and January 2016 ("Refugee crisis").
- Main Outcomes:** Mental Component Summary (MCS) score & Patient Health Questionnaire-4 (PHQ-4) score. Both are factors of a PCA of the items of the Short-Form-12 questionnaire and Patient Health-4 questionnaire, which are instruments to infer mental health.
- Additional outcomes:** Life satisfaction (LS) and intention to stay (ITS) in Germany forever. This allows us to compare our results to other results in the previous literature.
- We also have information on wide range of predetermined characteristics.
- Information on hate crimes from the **Federal Criminal Office**.
- The data is made available as responses to small inquiries of the political party "DIE LINKE" in the German parliament ("Bundestag").
- The data contains location, date and type of crimes against refugees' accommodations.
- Geo-linkage:** We link the refugees' county of residence to the closest hate crime, measured in elapsed days since this focal hate crime happened.
- Period of observation:** 2nd half of 2016.



A refugee accommodation after an arson attack



Number of hate crimes per capita on the county level in 2016

STATE OF THE LITERATURE

- Scarce literature estimates the effect of terror events on individuals' life satisfaction (e.g., Akay et al. 2020, Clark et al. 2020, Metcalfe et al. 2011).
- Additional literature investigates the effect of hate crime on (economic) migrants' integration & health outcomes as well as life satisfaction (e.g. Gould & Klor, 2014; Steinhardt, 2018; Deole, 2019).

Our contributions:

- Focus on refugee population.
- New outcome dimension: Mental health.
- Evidence for country specific human capital as mediator between hate crime and mental health.

Empirical strategy

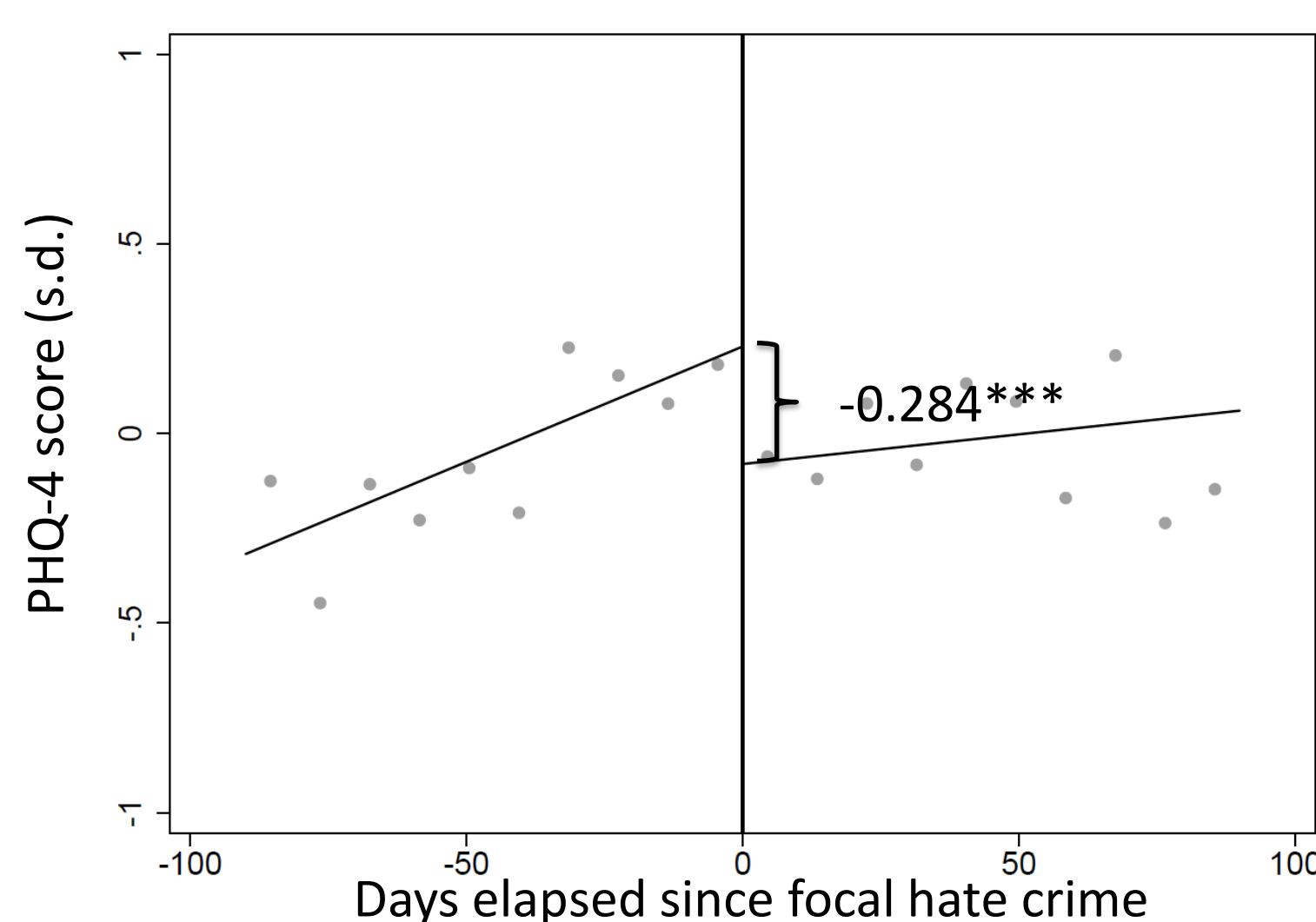
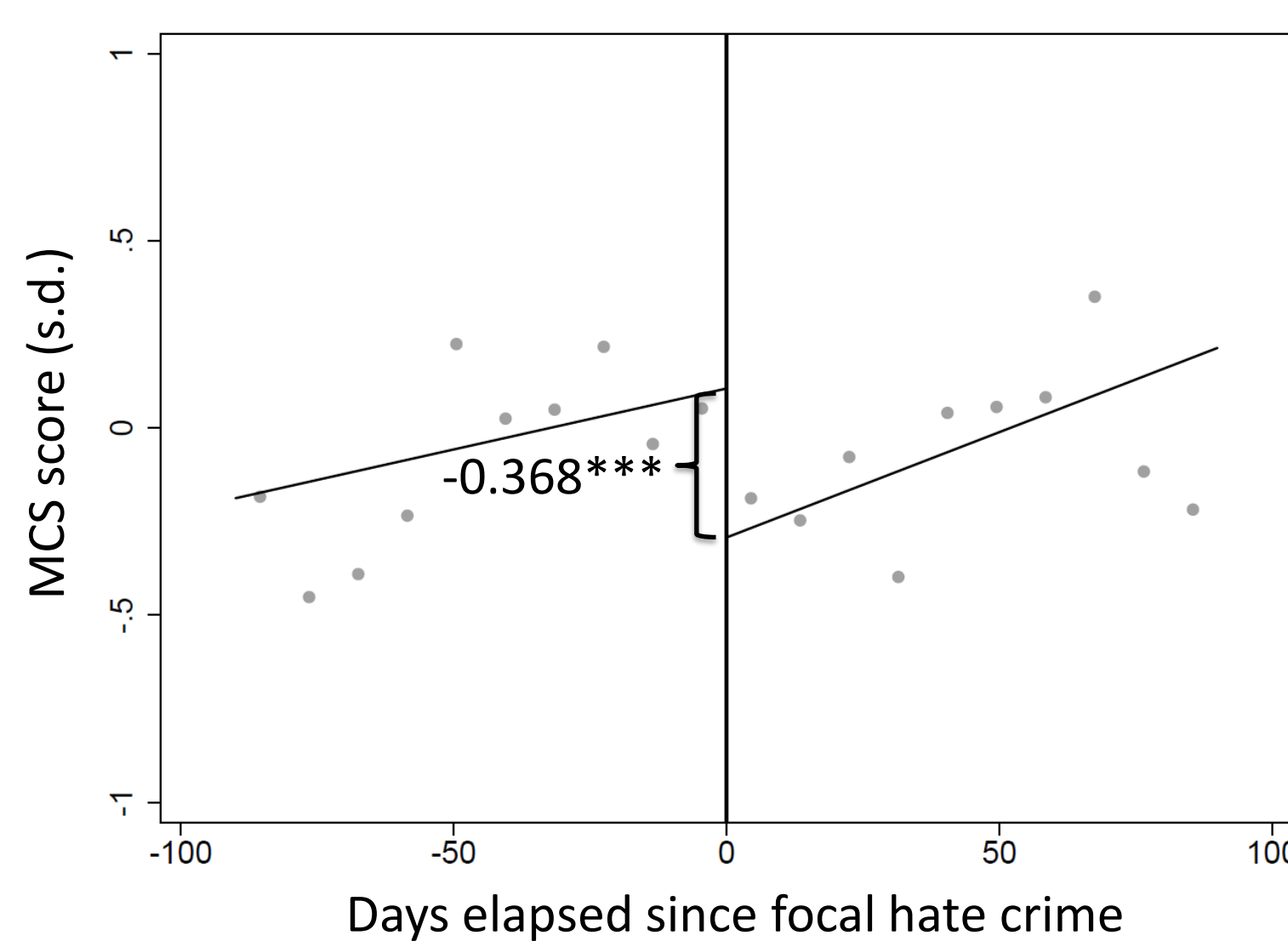
- We compare refugees' mental health outcomes just before and after a hate crime happened in their respective county. We estimate the following weighted local linear regression:

$$y_i = \alpha + \beta \text{treat}_i + \text{days}_i + \text{days}_i * \text{treat}_i + \text{dow}_i + \text{moy}_i + \epsilon_i$$

y_i : Refugee i's mental health outcome.
 treat_i : Refugee i's treatment status.
 days_i : Days elapsed since the focal hate crime.
 dow_i : Day of week fixed effect.
 moy_i : Month of year fixed effect.
 ϵ_i : Error term. Standard errors are clustered on the level of the running variable.

- We use a triangular kernel and a bandwidth of 90 days (average of the four MSE-optimal bandwidths).
- Identification assumption:** The refugees' population mean of the mental health outcome would have evolved continuously in absence of the focal hate crime. We find strong support for this conjecture relying on predetermined outcomes.
- Manipulation around the focal hate crime:** A formal discontinuity test for the empirical probability distribution function of the interviews around the focal hate crime does not allow us to reject the null hypothesis of no discontinuity around the focal hate crime.

RESULTS



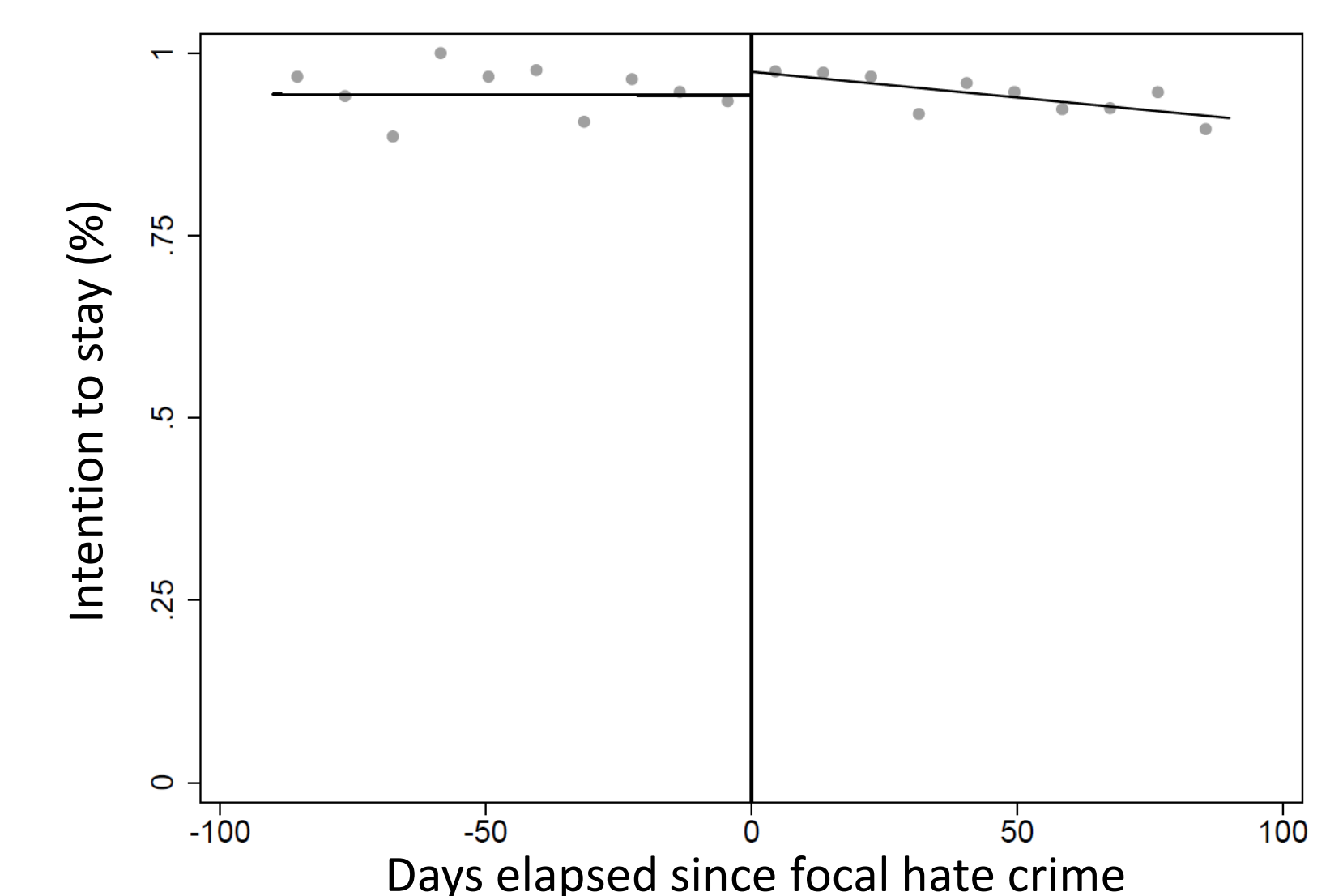
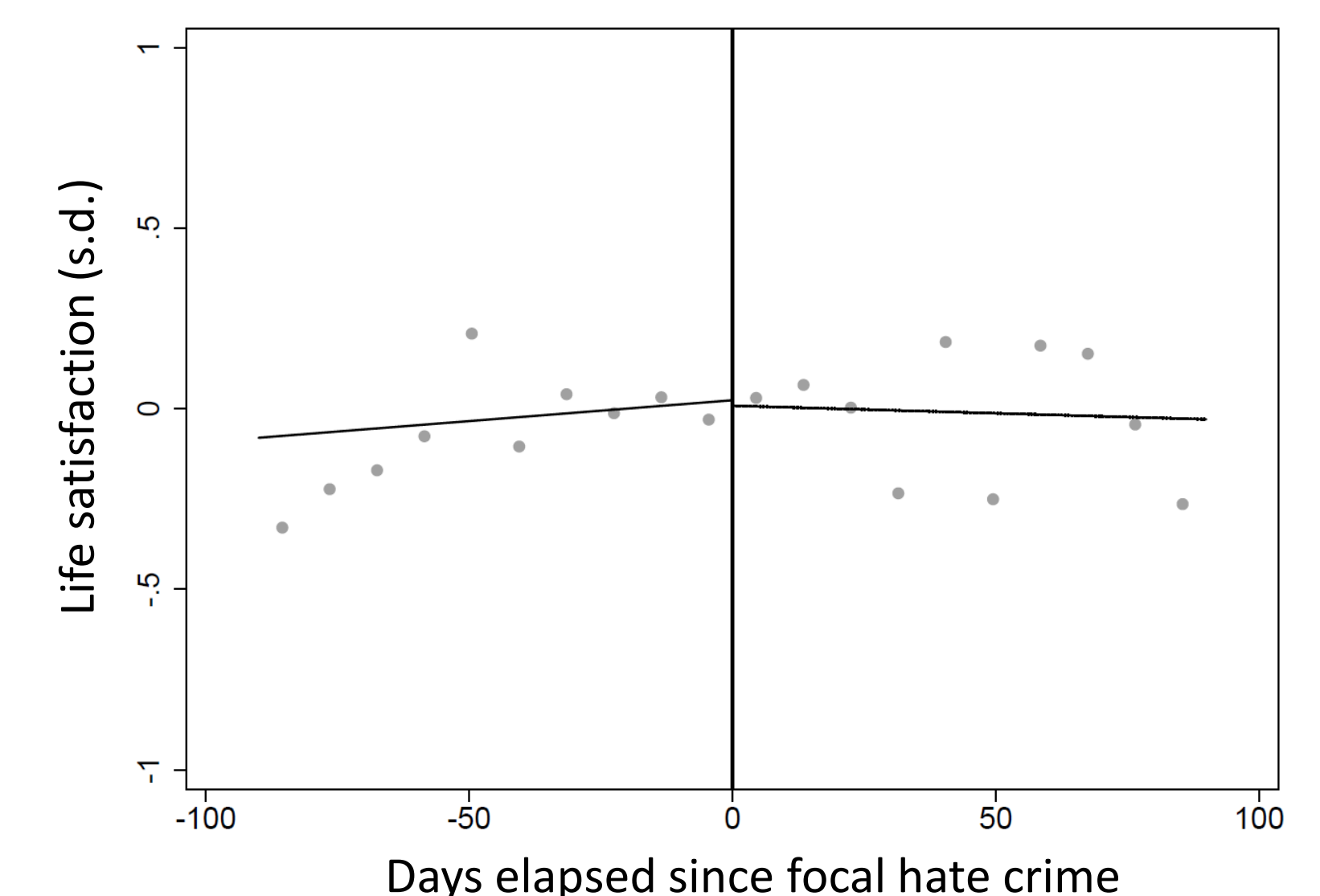
Main results

- The experience of a hate crime reduces the refugees' MCS and PHQ-4 score by about 37% and 28% of a standard deviation, respectively.
- The effect sizes correspond to the highest tertile of comparable effect sizes in the literature.
- However, the effects seem to dissipate 100 days after the focal hate crime.
- LS:** Null effect, which contrasts existing literature on Germany that finds an effect on LS (e.g., Deole, 2019; Steinhardt 2018). We argue that this difference can be explained by the different populations under consideration (refugees v.s. economic migrants).
- ITS:** Null effect, but there exists very little variation in the outcome to begin with.

- The results are robust to standard and non-standard **robustness checks**.

Heterogeneities

- Country specific human capital:** Effects are smaller for refugees that command over higher levels of country specific human capital. This difference is more pronounced the higher the opportunity costs of acquiring this country specific human capital are.
- Proximity to the hate crime:** The closer the refugees live to the focal hate crime, the higher the magnitude of the mental health effects.
- Thus, it is most likely the direct exposure to the hate crime rather than hearsay that drives the results.



CONCLUSIONS

- We find sizeable effects of hate crimes on refugees' mental health. These effects are temporary. However, the period shortly after arrival is critical and mental health shocks during this time potentially affect the refugees' life time utility negatively.
- We find no effect on LS or ITS. The absence of any effect on LS contrasts the existing literature. We argue that this can be explained by the different populations under consideration, which are refugees and economic migrants.
- We find that country specific human capital is an important mediator between hate crimes and refugees' mental health. And the effect sizes vary strongly the closer the refugees are to the focal hate crime.
- Please feel free to contact Felicitas (fschikora@diw.de) or me (dgraeber@diw.de) if you have any questions.

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