INPLASY

THE ASSOCIATION BETWEEN LARGE TRAUMATIC EVENTS AND RISK PREFERENCE FORMATION AND CHANGE: A SYSTEMATIC REVIEW PROTOCOL

INPLASY202590031
doi: 10.37766/inplasy2025.9.0031
Received: 9 September 2025
Published: 9 September 2025

Roth, G; Roth, S.

Corresponding author:
Gisela Roth

gisela.roth@uwa.edu.au

Author Affiliation:
The University of Western Australia.

ADMINISTRATIVE INFORMATION

Support - No External Funding Received.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202590031

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 9 September 2025 and was last updated on 9 September 2025.

INTRODUCTION

Review question / Objective Do large traumatic events, such as natural disasters, economic and financial crises, and conflict and violence, cause systematic changes in individual risk preferences? This systematic review aims to synthesize the current evidence on the causal relationship between exposure to large traumatic events and changes in individual risk preferences. If sufficient information allows, the systematic review also aims to (1) quantify the direction and magnitude of risk preference changes by traumatic event type (i.e., natural disasters, financial crises, conflict/violence), (2) identify individual characteristics and contextual factors that moderate trauma-induced preference changes, (3) evaluate the persistence and temporal dynamics of preference changes over time, (4) assess the quality of causal identification strategies employed across studies, and (5) identify methodological factors that may explain inconsistencies in findings across the literature.

Rationale Risk preferences shape crucial life decisions, such as those relating to education (Outreville, 2015), career (Bonin et al., 2007), investment (Cardak & Wilkins, 2009), and health (Mulligan et al., 2024), and thus have significant implications for both individual welfare and the broader economy (Roth et al., 2025; Shaw, 1996; Tanaka et al., 2010). While such preferences have long been considered stable attributes (Stigler & Becker, 1977), recent evidence increasingly points to their susceptibility to extreme exogenous events (Miklian & Hoelscher, 2022), challenging foundational economic assumptions and models.

Notably, leveraging the exogenous and often unpredictable nature of large traumatic events presents a unique opportunity to study preference formation as a quasi-natural experiment. Unlike anticipated life transitions (Dohmen et al., 2017) — such as marriage or retirement, which may reflect pre-existing preferences (Kettlewell, 2019) — the timing and geography of disasters, crises, or conflicts are largely outside individual control. This natural randomness enables stronger causal

inference regarding the effect of trauma on risk preferences. However, such research faces challenges, including limited availability of pre-event baseline data, difficulty identifying appropriate control groups, the potential for selective migration, and disentangling true preference changes from alterations in constraints or opportunities.

Despite a rapidly growing literature, findings remain inconsistent. For instance, studies on natural disasters report divergent effects on risk aversion, with some showing increases (Chantarat et al., 2019; Johar et al., 2022), others decreases (Hanaoka et al., 2018; Kettlewell et al., 2024), and some no detectable impact (Callen, 2015). Research on financial crises suggests a more consistent pattern of increased risk aversion (Guiso et al., 2018; Jetter et al., 2020), while work on violent conflict reveals mixed results, with both heightened (Jakiela & Ozier, 2019; Moya, 2018) and reduced risk aversion (Voors et al., 2012) observed across different contexts and populations. These inconsistencies may reflect substantive heterogeneity in traumatic experiences or variation in study design and measurement, or both.

To date, Chuang & Schechter (2015) have provided the only comprehensive review, focused primarily on the stability of preferences over time rather than trauma-induced change. Since then, methodological advances — such as pre-event baselines, improved causal identification, and attention to heterogeneity — have yielded a more nuanced field. More recent work by Magnusson & Roth (2024) has also highlighted gender and temporal dynamics in trauma responses (see also Magnusson & Roth, 2023, for an earlier, more complete detailed investigation of these respective dynamics and others in an earlier version of the manuscript; see also Roth, 2020). A systematic synthesis is now needed to integrate these advances, resolve persistent contradictions, and provide clarity for future research and policy.

Condition being studied The condition being studied by this review will be changes in individual risk preferences following exposure to large traumatic events. Risk preferences refer to individuals' attitudes toward uncertain outcomes and their willingness to accept risk in exchange for higher expected returns (Weber, 2010). The traumatic events of interest include natural disasters such as earthquakes, floods, hurricanes, tsunamis, wildfires, droughts, volcanic eruptions, and other severe weather events; financial crises including stock market crashes, banking crises, currency crises, economic recessions, sovereign debt crises, and other severe economic disruptions; and violent conflicts encompassing civil wars, terrorism, criminal violence, forced displacement, and other forms of organized violence.

These events are characterized by their potential to cause severe disruption to individuals' lives, economic circumstances, social networks, and psychological well-being, potentially triggering changes in risk attitudes through multiple mechanisms including wealth effects, psychological trauma, belief updating, and social capital erosion (Chuang & Schechter, 2015).

METHODS

Search strategy In line with the PRISMA guideline to ensure transparency and complete reporting of the review process (Page et al., 2021), systematic searches will be conducted in multiple electronic databases including EconLit, PsycINFO, Web of Science, PubMed, MEDLINE, Business Source Ultimate, and Scopus. The search strategy combines two main concept areas using Boolean operators, with database-specific adaptations (e.g., MeSH terms where applicable):

Concept 1 – Large Traumatic Events: (trauma* OR disaster* OR cris* OR conflict* OR violen* OR earthquake* OR flood* OR hurricane* OR typhoon* OR cyclone* OR tornado* OR tsunami* OR fire* OR drought* OR volcan*) OR ("financial crisis" OR "economic crisis" OR "banking crisis" OR "currency crisis" OR recession* OR “great depression” OR "market crash" OR "sovereign debt") OR (war OR "civil war" OR terrorism OR "criminal violen*" OR displacement OR refugee*)

Concept 2 – Risk Preferences: “risk preference” OR “risk attitude” OR “risk toleran*” OR “risk seek*“ OR “risk avers*” OR “risk tak*” OR “risk lov*”

The entire sampling process including search terms, strategies and modification will be recorded and reported to ensure transparency and reproducibility (Gusenbauer & Gauster, 2025).

Participant or population Study participants investigated will encompass individuals from all geographic locations and cultural contexts, including both general population samples as well as specific subgroups such as students, farmers, investors, and conflict-affected populations. As such, studies of hypothetical or anticipated trauma exposure without actual event occurrence, and animal studies or laboratory studies not involving human participants, will be excluded.

Intervention None.

Comparator Depending on data availability of the studies, control groups and comparisons may include unexposed individuals from unaffected geographic areas, pre-event baseline measurements (of risk preference) for panel studies, lower intensity exposure groups within affected populations, historical controls from pre-event time periods, matched controls using propensity score or other matching methods, and instrumental variable approaches using quasi-random variation in exposure.

Study designs to be included Study designs examined in this review will include panel studies with pre-event baseline measures of risk preferences, natural experiments exploiting quasi-random variation in trauma exposure, cross-sectional post-event studies with credible identification strategies, twin studies and family-based designs controlling for genetic and family factors, instrumental variable studies using plausibly exogenous variation, and regression discontinuity designs using geographic or temporal thresholds. Importantly, minimum study requirements will include empirical analysis with statistical hypothesis testing, clear measurement of individual-level risk preferences and identifiable trauma exposure with temporal precedence.

Eligibility criteria Studies reviewed will include peer-reviewed journal articles, working papers, and dissertations published in English from January 2000 to December 2024. Studies must contain (1) empirical analysis with quantitative assessment of individual-level data; (2) clear measurement of risk preferences using experimental, survey, or revealed preference methods; (3) identifiable exposure to natural disasters, financial crises, and/or violent conflicts (as described above), and (4) statistical analysis examining the relationship between trauma exposure and risk preferences.

Conversely, studies will be excluded if they are (1) purely theoretical papers without empirical analysis; (2) qualitative studies without quantitative preference measures; (3) case studies or descriptive reports without statistical hypothesis testing; (4) studies examining only other preference domains without risk measures; (5) studies of anticipated or hypothetical trauma exposure without actual events; (6) abstracts without full text availability, and/or (7) duplicate publications, in which case only the most recent or comprehensive version will be retained.

Information sources Primary sources for the review will include electronic databases such as EconLit, PsycINFO, Web of Science, PubMed, MEDLINE, Business Source Ultimate, and Scopus, as well as (and if required) grey literature from Google Scholar, RePEc, SSRN, NBER Working Papers, and institutional repositories from major universities and research institutions.

Supplementary sources, if required, may also include handsearching reference lists of included studies and relevant systematic reviews, forward citation searches using Web of Science and Google Scholar, contact with corresponding authors of key studies for unpublished data or studies, and conference proceedings from major economics and psychology conferences.

Main outcome(s) The primary outcome of the review will be changes in individual risk preferences following a large traumatic event (as described above), and elicited via either (1) an experimental approach including incentivized lottery choice tasks with real monetary payoffs, investment games and portfolio allocation tasks, insurance decision experiments, and risk-return tradeoff tasks; (2) a survey questionnaire including validated risk attitude scales such as the Weber et al. (2002) Domain-Specific Risk-Taking (DOSPERT) scale, single-item risk tolerance questions, hypothetical choice scenarios, and Likert-scale risk preference measures; and/or (3) a revealed preference measure including actual portfolio allocation decisions, insurance purchasing behavior, occupational choice and entrepreneurship decisions, and investment and savings behavior.

Where available, effect size measures (of risk preferences) will include standardized mean differences between exposed and unexposed groups, regression coefficients from multivariate models, odds ratios for binary risk preference outcomes, and correlation coefficients for preference change over time.

Additional outcome(s) If sufficient data allows, additional outcomes may include domain-specific risk preferences for financial risk, health risk, social risk, and recreational risk; risk perception measures including subjective probability assessments and perceived vulnerability; related behavioral outcomes such as entrepreneurship, investment behavior, and insurance demand; temporal dynamics including short-term versus long-term preference changes and persistence of effects; mediating mechanisms including wealth effects, psychological distress, and social capital changes;

and moderating factors including gender, age, education, personality traits, and cultural context.

Data management A preliminary search will first be conducted on PsycINFO to verify the relevance of the search string. Following which, literature search will be conducted and information regarding the article title, author, year of publication and abstract will be extracted from all relevant databases. Data screening and extraction will be managed on Covidence (*Covidence Systematic Review Software*, 2025), where duplicated sources will first be removed upon import. Articles will then be first screened by the title and abstract, according to the inclusion and exclusion criteria, before full-text screening to ensure relevancy. All data will be extracted and screened by the first author. A second review author will then screen the articles independently at both stages. In the event of disagreement, a third reviewer will determine whether to include the article based on the inclusion and exclusion criteria. Cohen's kappa will be used to determine the inter-rater reliability for screening.

To facilitate collaboration, data will be stored electronically on Covidence. Extracted data including title, journal, location, year of publication, study methods, statistical analysis, participant demographics, measure of risk preference, traumatic event characteristics, effect sizes, confidence intervals, significance levels, and quality assessment indicators will be analyzed on RStudio (Posit team, 2025). All data will be retained for 5 years following publication with regular backups maintained and access restricted to authorized research team members.

Quality assessment / Risk of bias analysis Quality assessment of the final sample of articles will adhere to the JBI Critical Appraisal Checklist (Aromataris et al., 2024). To ascertain the evidence across varying exogenous traumatic events, the GRADE approach will consider factors such as inconsistency and publication biases (Schünemann, 2022). In the event of heterogeneity of exogenous traumatic events, the GRADE-CERQual approach will be applied instead (Lewin et al., 2018). Two independent reviewers will conduct the quality assessment, with disagreements resolved through discussion and third reviewer consultation when necessary. The quality assessments will inform sensitivity analyses and subgroup comparisons to examine the robustness of findings across studies of varying methodological quality.

Strategy of data synthesis The qualitative synthesis of the systematic review will include narrative synthesis organized by traumatic event type and methodological approach, systematic comparison of findings across different identification strategies, theoretical framework development integrating proposed mechanisms, and assessment of methodological evolution and quality trends over time.

As for the quantitative synthesis, and if data permits, a random-effects meta-analysis will be conducted with standardized mean differences as the primary effect size measure. Alternative effect sizes will also be considered for non-standard outcome measures, whereas separate meta-analyses by traumatic event type will be conducted if sufficient studies are available. Effect size calculations will involve direct extraction of reported effect sizes where available, calculation from means, standard deviations, and sample sizes, conversion from t-statistics, F-statistics, or p-values when necessary, and multiple imputation for missing effect size components where possible. Heterogeneity assessment will include I-squared statistics and tau-squared for between-study variance, Q-tests for statistical heterogeneity, visual inspection of forest plots and funnel plots, and meta-regression to explore sources of heterogeneity. Publication bias assessment will involve funnel plot asymmetry visual inspection, Egger's regression test for small-study effects, Begg's rank correlation test, trim-and-fill analysis to estimate adjusted effect sizes, and examination of grey literature inclusion rates.

Subgroup analysis Planned subgroup analyses will examine differences by traumatic event type, comparing natural disasters versus financial crises versus violent conflicts, specific disaster types such as earthquakes, floods, and hurricanes, and crisis severity and duration measures. Differences by study methodology will be examined by comparing panel studies versus cross-sectional studies, natural experiments versus observational studies, and high-quality versus low-quality studies.

Where possible and the available data allows, population characteristic subgroups will include gender comparing male versus female participants, age groups including young adults, middle-aged, and older adults, geographic regions comparing developed versus developing countries, and educational attainment levels. Risk preference measurement subgroups will compare experimental versus survey versus revealed preference measures, incentivized versus non-incentivized tasks, and domain-specific versus

general risk preferences. Temporal factor subgroups will examine time elapsed between trauma and measurement, comparing different periods of time since the event, studies with multiple time points versus single measurement, as well as pre-2015 versus post-2015 publications reflecting methodological advances. Separate meta-analyses may also be conducted for each subgroup when sufficient studies are available, including performing formal tests of subgroup differences using chi-square tests, conducting meta-regression analysis for continuous moderating variables, and providing visual comparison using forest plots organized by subgroup.

Sensitivity analysis Proposed sensitivity analyses will examine study quality by excluding studies with overall quality scores below the median, excluding studies with poor causal identification, and restricting analysis to panel studies with pre-event baselines (depending on the number of studies available). Different statistical methods will also be tested to compare fixed-effects versus random-effects meta-analysis models, alternative heterogeneity estimators, and robust variance estimation for clustered data, where possible.

If the available data permits, additional sensitivity analyses may be carried out, including (1) effect size calculation sensitivity using alternative standardization methods for effect sizes, exclusion of extreme outlier studies, and analysis using different outcome transformations; (2) publication bias sensitivity involving analysis excluding smaller studies, trim-and-fill adjusted meta-analysis, as well as selection model approaches for publication bias correction, and (3) missing data sensitivity comparing complete case analysis versus multiple imputation for missing effect sizes, exclusion of studies with missing outcome data, and alternative assumptions about missing data mechanisms.

Note that all sensitivity analyses will be reported with comparison to main results, assessment of robustness across different analytical choices, and discussion of implications for overall conclusions.

Language restriction English language publications only. This restriction is applied due to resource constraints and the predominance of relevant research published in English-language journals. However, we acknowledge this may introduce some selection bias, and we will discuss this limitation in our review.

Country(ies) involved Australia - The University of Western Australia.

Other relevant information This review will include studies from all countries and geographic regions worldwide. No restrictions will be placed on study location, allowing for global representation of trauma-induced risk preference changes. The global scope will also allow examination of cross-cultural and institutional factors that may moderate trauma-induced preference changes.

Keywords Risk preferences; Risk attitudes; Risk aversion; Risk-taking; Risk-loving; Traumatic events; Natural disasters; Financial crises; Violent conflict; Preference formation; Behavioral economics; Systematic review; Trauma; Exogenous shocks; Preference stability; Causal identification

Dissemination plans The primary dissemination plan endeavors to see the proposed systematic review published in a high-impact peer-reviewed journal, presented at major economics and/or other relevant conferences, as well as potentially submitted as a working paper in RePEc and SSRN (in the case of early dissemination of the review). Open science practices will be followed including open access publication, when possible, data and code sharing via public repositories such as GitHub and Open Science Framework, pre-registration of protocol before data collection begins (as in here with INPLASY), and PRISMA checklist compliance with supplementary materials availability.

Contributions of each author

Author 1 – Gisela Roth.
Email: gisela.roth@uwa.edu.au
ORCID 0009-0007-1436-4453
Affiliation: The University of Western Australia
Contribution of author: Conceptualization of review, developing selection criteria and risk of bias assessment strategy, literature search, article screening, data extraction, quality assessment, drafts and final manuscripts

Author 2 – Sebastian Roth.
Email: sebastian.roth@unil.ch
ORCID 0000-0002-7487-9578
Affiliation: University of Lausanne, The University of Western Australia
Contribution of author: Article screening, data extraction, quality assessment, drafts and final manuscripts

Bibliography

Aromataris, E., Fernandez, R., Godfrey, C., Holly, C., Khalil, H., & Tungpunkom, P. (2024). Umbrella reviews. In E. Aromataris, C. Lockwood, K. Porritt, B. Pilla, & Z. Jordan (Eds.), *JBI Manual for*

Evidence Synthesis. JBI. https://doi.org/10.46658/JBIMES-24-08
Bonin, H., Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2007). Cross-sectional earnings risk and occupational sorting: The role of risk attitudes. *Labour Economics*, *14*(6), 926–937. https://doi.org/10.1016/j.labeco.2007.06.007
Callen, M. (2015). Catastrophes and time preference: Evidence from the Indian Ocean Earthquake. *Journal of Economic Behavior & Organization*, *118*, 199–214. https://doi.org/10.1016/j.jebo.2015.02.019
Cardak, B. A., & Wilkins, R. (2009). The determinants of household risky asset holdings: Australian evidence on background risk and other factors. *Journal of Banking & Finance*, *33*(5), 850–860. https://doi.org/10.1016/j.jbankfin.2008.09.021
Chantarat, S., Oum, S., Samphantharak, K., & Sann, V. (2019). Natural Disasters, Preferences, and Behaviors: Evidence from the 2011 Mega Flood in Cambodia. *Journal of Asian Economics*, *63*, 44–74. https://doi.org/10.1016/j.asieco.2019.05.001
Covidence systematic review software. (2025). [Computer software]. Veritas Health Innovation. www.covidence.org
Dohmen, T., Falk, A., Golsteyn, B. H. H., Huffman, D., & Sunde, U. (2017). Risk Attitudes across the Life Course. *The Economic Journal*, *127*(605), F95–F116. https://doi.org/10.1111/ecoj.12322
Guiso, L., Sapienza, P., & Zingales, L. (2018). Time varying risk aversion. *Journal of Financial Economics*, *128*(3), 403–421. https://doi.org/10.1016/j.jfineco.2018.02.007
Gusenbauer, M., & Gauster, S. P. (2025). How to search for literature in systematic reviews and meta-analyses: A comprehensive step-by-step guide. *Technological Forecasting and Social Change*, *212*, 123833. https://doi.org/10.1016/j.techfore.2024.123833
Hanaoka, C., Shigeoka, H., & Watanabe, Y. (2018). Do Risk Preferences Change? Evidence from the Great East Japan Earthquake. *American Economic Journal: Applied Economics*, *10*(2), 298–330. https://doi.org/10.1257/app.20170048
Jakiela, P., & Ozier, O. (2019). The Impact of Violence on Individual Risk Preferences: Evidence from a Natural Experiment. *Review of Economics and Statistics*, *101*(3), 547–559. https://doi.org/10.1162/rest_a_00763
Jetter, M., Magnusson, L. M., & Roth, S. (2020). Becoming sensitive: Males' risk and time preferences after the 2008 financial crisis. *European Economic Review*, *128*, 103512. https://doi.org/10.1016/j.euroecorev.2020.103512
Johar, M., Johnston, D. W., Shields, M. A., Siminski, P., & Stavrunova, O. (2022). The economic impacts of direct natural disaster exposure. *Journal of Economic Behavior & Organization*, *196*, 26–39. https://doi.org/10.1016/j.jebo.2022.01.023
Kettlewell, N. (2019). Risk preference dynamics around life events. *Journal of Economic Behavior & Organization*, *162*, 66–84. https://doi.org/10.1016/j.jebo.2019.04.018
Kettlewell, N., Rijsdijk, F., Siribaddana, S., Sumathipala, A., Tymula, A., Zavos, H., & Glozier, N. (2024). Natural disaster and risk preferences: Evidence from Sri Lankan twins. *Applied Economics*, *56*(5), 558–581. https://doi.org/10.1080/00036846.2023.2168616
Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., Bohren, M. A., Tunçalp, Ö., Colvin, C. J., Garside, R., Carlsen, B., Langlois, E. V., & Noyes, J. (2018). Applying GRADE-CERQual to qualitative evidence synthesis findings: Introduction to the series. *Implementation Science*, *13*(1), 2. https://doi.org/10.1186/s13012-017-0688-3
Magnusson, L. M., & Roth, S. (2023). *Distrustful men and risk-averse women: Evidence from the Black Saturday Fires in Victoria, Australia* (SSRN Scholarly Paper No. 4371972). Social Science Research Network. https://doi.org/10.2139/ssrn.4371972
Magnusson, L. M., & Roth, S. (2024). Trust, risk, and gender: Evidence from the Black Saturday Fires in Victoria, Australia. *Journal of Economic Behavior & Organization*, *223*, 21–39. https://doi.org/10.1016/j.jebo.2024.05.003
Miklian, J., & Hoelscher, K. (2022). SMEs and exogenous shocks: A conceptual literature review and forward research agenda. *International Small Business Journal*, *40*(2), 178–204. https://doi.org/10.1177/02662426211050796
Moya, A. (2018). Violence, psychological trauma, and risk attitudes: Evidence from victims of violence in Colombia. *Journal of Development Economics*, *131*, 15–27. https://doi.org/10.1016/j.jdeveco.2017.11.001
Mulligan, K., Baid, D., Doctor, J. N., Phelps, C. E., & Lakdawalla, D. N. (2024). Risk preferences over health: Empirical estimates and implications for medical decision-making. *Journal of Health Economics*, *94*, 102857. https://doi.org/10.1016/j.jhealeco.2024.102857
Outreville, J. F. (2015). The Relationship Between Relative Risk Aversion and the Level of Education: A Survey and Implications for the Demand for Life Insurance. *Journal of Economic Surveys*, *29*(1), 97–111. https://doi.org/10.1111/joes.12050
Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W.,

Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, *372*, n71. https://doi.org/10.1136/bmj.n71

Posit team. (2025). *RStudio: Integrated development environment for R* [Manual]. Posit Software, PBC. http://www.posit.co/

Roth, G., Weinborn, M., Mancini, V., Lim, Y. Y., Liang, P., & Pestell, C. (2025). *Association of risky behaviours with subsequent traumatic brain injury (TBI) in emerging adults: A systematic review protocol*. INPLASY - International Platform of Registered Systematic Review and Meta-analysis Protocols. https://doi.org/10.37766/inplasy2025.7.0062

Roth, S. (2020). *Three essays on economic behavior and preferences* [Doctoral dissertation, The University of Western Australia]. https://doi.org/10.26182/van7-ne59

Schünemann, H. J. (2022). Using Systematic Reviews in Guideline Development. In *Systematic Reviews in Health Research* (pp. 424–448). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119099369.ch22

Shaw, K. L. (1996). An Empirical Analysis of Risk Aversion and Income Growth. *Journal of Labor Economics*, *14*(4), 626–653.

Stigler, G. J., & Becker, G. S. (1977). De Gustibus Non Est Disputandum. *The American Economic Review*, *67*(2), 76–90. JSTOR.

Tanaka, T., Camerer, C. F., & Nguyen, Q. (2010). Risk and Time Preferences: Linking Experimental and Household Survey Data from Vietnam. *American Economic Review*, *100*(1), 557–571. https://doi.org/10.1257/aer.100.1.557

Voors, M. J., Nillesen, E. E. M., Verwimp, P., Bulte, E. H., Lensink, R., & Van Soest, D. P. (2012). Violent Conflict and Behavior: A Field Experiment in Burundi. *The American Economic Review*, *102*(2), 941–964.

Weber, E. (2010). Risk attitude and preference. *Wiley Interdisciplinary Reviews: Cognitive Science*, *1*, 79–88. https://doi.org/10.1002/wcs.5

Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, *15*(4), 263–290. https://doi.org/10.1002/bdm.414.