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Online Appendix

The Impact of Refugee Shocks on Host Countries: A Scoping Review*

Chloé Salathé, Natalia C. Malancu, Didier Ruedin

1 Coder agreement and procedure

The data were collected by two researchers (Coder A) and difficult cases were discussed with the corresponding author (Didier Ruedin). To assess the reliability of the data, 12 randomly selected articles were coded by a pair of student assistants who resolved coder disagreement among themselves (for a fully independent assessment) to provide an alternative set of coding (Coder B). Effects on society were re-coded by Didier Ruedin after Coder A/B agreement revealed insufficient agreement (67 percent agreement), which turned out to reflect a misunderstanding in both sets of coders.

* This Online Appendix contains additional information regarding the article: https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/712/445

Tab. A1: Coder agreement

Variable	Coder agreement	Notes
Inclusion of effect	70 %	Considered missing at random. Most of the disagreement comes from a large appendix (missed by Coder A) and a smaller table (missed by Coder B), accounting for 60 % of the disagreement. 15 % of the disagreement stems from Coder B using a stricter understanding of the non-economic variables to include, and 25 % of the disagreement stems from Coder A missing what appear to be random lines in long tables that may point to a lack of concentration. We could not identify a pattern to this missingness, and consider both skipping tables in the appendices and skipping lines in long tables as missing at random. Given the nature of the review – a scoping review rather than a systematic review or a meta-analysis (*Munn et al.* 2018) we consider this acceptable, though admittedly not ideal.
Country of shock	100 %	
Year of shock	100 % [91 %]	For the year of the shock, there was disagreement in 9 % of cases, all obviously due to improper copying of the dates in Excel (see *Koh et al.* 2022 for a discussion of how Excel can autocorrect data in a problematic way). Didier Ruedin fixed these errors manually.
Country of origin	100 %	
Regional classification	100 %	
Effect measured	97 %	Coder agreement is 95 % when disaggregated; these disaggregated analyses were removed.
Kind of model	86 %	These analyses were removed, also because of limited variance.
Significance	93 %	Two-thirds of the disagreement was due to Coder A identifying significance where it was not determined; no systematic bias could be determined in the incorrect entries.

Source: own calculation

2 Type of data used

Tab. A2: Type of data used by the studies

Data	n
Administrative	59
Administrative and Sample	39
Sample	25

Source: own calculation

3 Number of studies by country

Tab. A3: Number of studies by host country

Country	n
Austria	2
Brazil	2
Colombia	10
Ethiopia	1
Finland	1
France	2
Germany	17
Greece	6
Guinea	1
Israel	2
Italy	2
Jordan	12
Lebanon	1
Multiple countries	6
Netherlands	1
Nigeria	1
Norway	1
Pakistan	1
Poland	1
Portugal	1
Rwanda	1
Sweden	4
Tanzania	6
Turkey	32
UK	4
USA	7
Uganda	2

Notes: "Multiple countries" refers to studies that grouped multiple countries in individual analyses; where multiple countries were covered in separate analyses, they are listed separately.

Source: own calculation

4 Region of origin

Tab. A4: Number of studies by refugee region of origin

Region of origin	n
Asia	2
Central Africa	1
East Africa	4
Europe	5
Middle East	56
Multiple countries	39
North Africa	2
North America	1
South America	15
West Africa	2

Notes: In one case, a study was counted multiple times because it contained multiple analyses that address distinct receiving regions, resulting in four distinct entries.

Source: own calculation

5 Post-shock time period

Tab. A5: Studied period of the effect, short- and long-term

Post-shock period	n
Unclear by our definition	234
Long-term	833
Short-term	3509

Notes: Short-term effects are those measured between 0 and 5 years after the shock; long-term effects are those measured 6 years and longer after the shock.

Source: own calculation

6 Topic by world region

Tab. A6: Topics studied in the analysis by world region (as %)

	Economic	Environmental	Health	Multi-topic	Political	Social
Asia (N=2 effects)	100	0	0	0	0	0
East Africa (N=363)	39.1	0	24.5	12.7	0	23.7
Europe (N=1291)	43.9	0	0	18.8	21.8	15.4
Middle East (N=1979)	75.6	0	3.7	8.6	7.3	4.8
North America (N=308)	80.2	0	0	0	0	19.8
South America (N=573)	92.8	0	0	0	7.2	0
West Africa (N=51)	0	84.3	15.7	0	0	0

Source: own calculation

7 Narrower topics studied

Tab. A7: Narrower topics studied in the analysis

Topic	n
Attitudes/voting	638
Crimes/violence	304
Economy	609
Education	149
Employment	1508
Environment	62
Finances	53
Health/welfare	185
Housing	230
Migration/population	111
Social/political	68
Wages	659

Source: own calculation

8 Statistically significant effects

Tab. A8: Effect

Statistically significant	n
No	2102
Yes	2474

Source: own calculation

9 Statistical effect by post-shock period

Tab. A9: Statistical effect by post-shock period (as %)

	No	Yes
Unclear by our definition	41.9	58.1
Long-term	37	63
Short-term	48.3	51.7

Source: own calculation

10 Normatively positive and negative effects on society by context

In this appendix, we explore the association between contextual variables (GDP per capita, cultural distance) and whether the effect of the refugee shock on society was normatively positive or negative. In the models, we adjust for the topic measured. The outcome is a normatively positive effect on society at large (instead of a negative or no significant one), respectively, a negative effect on society at large (instead of a positive or no significant one).

GDP, positive effects:

Tab. A10: Positive effects, N=1826 effects

Variable	Median	Median absolute deviation around the median
GDP per capita	0.00	0.00
Attitudes/voting	-0.28	0.08
Crime/violence	-0.03	0.10
Economy	0.20	0.04
Education	0.26	0.08
Environment	0.31	0.21
Finance	-0.04	0.08
Health/welfare	0.01	0.10
Housing	-0.07	0.07
Migration/population	-0.44	0.10
Social/political	0.31	0.07
Wages	-0.03	0.04

Source: own calculation

GDP, negative effects:

Tab. A11: Negative effects, N=1826 effects

Variable	Median	Median absolute deviation around the median
GDP per capita	0.00	0.00
Attitudes/voting	0.28	0.08
Crime/violence	0.04	0.09
Economy	-0.20	0.04
Education	-0.26	0.08
Environment	-0.31	0.21
Finance	0.03	0.08
Health/welfare	-0.01	0.09
Housing	0.08	0.07
Migration/population	0.44	0.10
Social/political	-0.31	0.07
Wages	0.03	0.04

Source: own calculation

GDP (high/low-income level countries), positive effects:

Tab. A12: Positive effects, N=1826 effects

Variable	Median	Median absolute deviation around the median
GDP high	-0.06	0.08
GDP low	-0.15	0.12
GDP lower middle	-0.13	0.26
Attitudes/voting	-0.25	0.08
Crime/violence	0.00	0.09
Economy	0.21	0.04
Education	0.26	0.08
Environment	0.33	0.22
Finance	-0.03	0.07
Health/welfare	0.03	0.10
Housing	-0.08	0.07
Migration/population	-0.44	0.10
Social/political	0.31	0.06
Wages	-0.03	0.04

Source: own calculation

GDP (high/low-income level countries), negative effects:

Tab. A13: Negative effects, N=1826 effects

Variable	Median	Median absolute deviation around the median
GDP high	0.07	0.08
GDP low	0.16	0.11
GDP lower middle	0.12	0.25
Attitudes/voting	0.24	0.08
Crime/violence	0.01	0.09
Economy	-0.21	0.04
Education	-0.26	0.08
Environment	-0.32	0.22
Finance	0.03	0.08
Health/welfare	-0.03	0.10
Housing	0.08	0.07
Migration/population	0.44	0.10
Social/political	-0.31	0.07
Wages	0.03	0.04

Source: own calculation

Cultural elements:

Tab. A14: Positive effects on attitudes/vote, subsample with N=122 effects

Variable	Median	Median absolute deviation around the median
Cultural distance	0.09	0.06

Source: own calculation

Tab. A15: Negative effects on attitudes/vote, subsample with N=122 effects

Variable	Median	Median absolute deviation around the median
Cultural distance	-0.08	0.07

Source: own calculation

Tab. A16: Negative effects, only interaction terms are shown, no coefficients for environment, health/welfare, and housing because of perfect correlation with the cultural distance variable, N=1826 effects

Variable	Median	Median absolute deviation around the median
Cultural distance * Attitudes/voting	0.03	0.18
Cultural distance * Crime/violence	-0.52	0.24
Cultural distance * Economy	0.06	0.08
Cultural distance * Education	0.40	0.15
Cultural distance * Finance	-0.30	0.43
Cultural distance * Migration/population	-0.24	0.21
Cultural distance * Social/political	0.48	0.27
Cultural distance * Wages	0.20	0.08

Source: own calculation

References

Munn, Zachary et al. 2018: Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. In: BMC Medical Research Methodology 18,143. https://doi.org/10.1186/s12874-018-0611-x

Koh, Clara W. T. et al. 2022: Gene Updater: a web tool that autocorrects and updates for Excel misidentified gene names. In: Scientific Reports 12, 12743. https://doi.org/10.1038/s41598-022-17104-3

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Chloé Salathé. University of Geneva. University of Neuchâtel. Switzerland.
E-mail: chloe.salathe@unine.ch

Dr. Natalia C. Malancu. University of Neuchâtel. Switzerland.
E-mail: natalia.malancu@gmail.com

Prof. Dr. Didier Ruedin (✉). University of Neuchâtel. Switzerland. University of the Witwatersrand. Johannesburg, South Africa.
E-mail: didier.ruedin@unine.ch
URL: https://druedin.com/

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