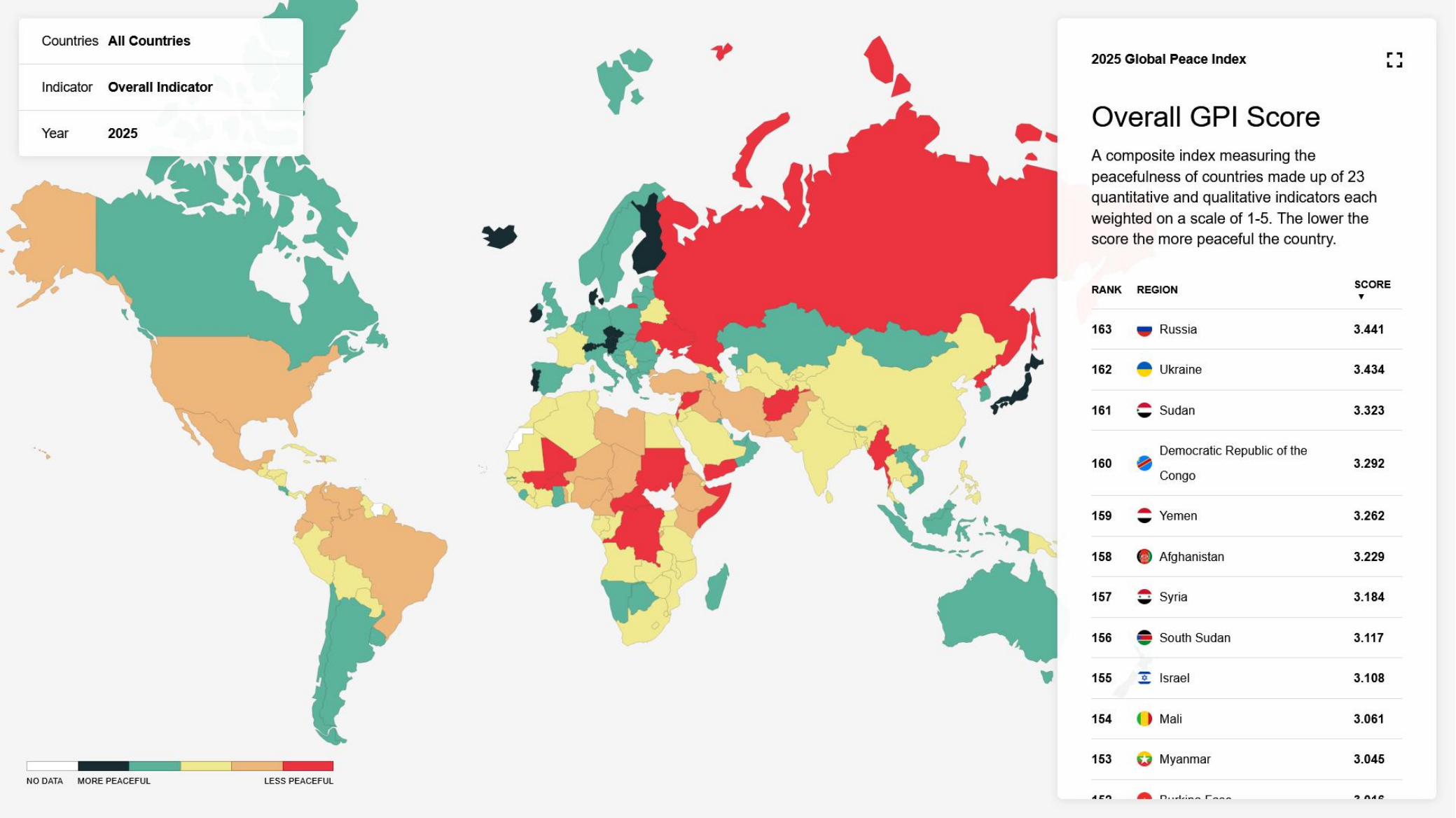


War, peace, and entrepreneurship: an institutional and socio-cognitive perspective on how violent conflict affects (necessity) entrepreneurship

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Global Peace Index 2025



Motivation

- Human history is driven by **peace and violent conflicts**
- In 2024 alone, there were more than **152,000 fatalities resulting from 59 active state conflicts** (Institute for Economics & Peace, 2025)
- Violent conflict or peace are **critical institutional framework conditions** with significant consequences for the country's inhabitants
- Broad research on **how entrepreneurial endeavors foster peace processes** (e.g., Joseph et al., 2023)
- **Conflicting evidence** on how single violent conflicts shape the likelihood of individuals to engage in entrepreneurship
- However, we know little about how the extent to which a country engages in violent conflicts shapes the individual decision to engage in entrepreneurship and in what types of activities

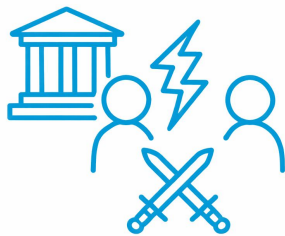


Research Question: How does violent conflict influence individuals' likelihood of engaging in entrepreneurship? How does violent conflict affect the likelihood of necessity entrepreneurship pursued? And to what extent do socio-cognitive characteristics moderate these relationships?

Theoretical framework

Institutional theory

- Institutions are “humanly devised constraints” that structure economic and social interaction (North, 1991)
- Formal (rules, regulations) and informal (norms, traditions) institutions shape entrepreneurship
- They establish the parameters of trust and predictability that new ventures depend on



Social cognitive theory

- Personal dispositions are shaped by the environment and individual characteristics (Bandura, 1986)
- Socio-cognitive traits — self-efficacy, fear of failure, alertness — drive entrepreneurial engagement
- Traits and institutional/economic conditions interact (Boudreaux et al., 2019; Hirschmann et al., 2025)



Hypotheses – Main effects

- During times of a violent crisis, **institutional factors** are compromised. Prior research shows that **violent conflicts negatively shape formal and informal institutional contexts** and can lead to **institutional voids** (e.g., Brück et al., 2013; Kwong et al., 2019).
- Fear of losing investments due to unforeseen conflicts or disruptions can be a **significant deterrent** and stress associated with living in conflict zones can **impact individuals' mental well-being**, potentially **reducing their risk appetite** and **willingness to embark on entrepreneurial journeys** (e.g., Shahriar and Shepherd, 2019)

H1: A higher level of conflict in a country is associated with a lower likelihood that an individual will engage in entrepreneurship.

- Conflicts disrupt the **regular functioning of economies** => higher unemployment rates, etc.
- In countries with high levels of violent conflict, the **scope of viable opportunities narrows, risk tolerance declines**, and **entry into entrepreneurship becomes more reactive**
- Individuals in conflict zones are often **excluded from formal labor markets** (e.g., Audretsch et al., 2023)

H2: A higher level of conflict in a country is associated with an increased likelihood that an individual will have necessity entrepreneurship motives for starting a business.

Hypotheses – Socio-cognitive moderators

- Individuals with **high entrepreneurial alertness** may be **more adept** at recognizing **unconventional niche opportunities**, even in adverse settings
- By contrast, individuals with **low alertness** may **fail to identify such possibilities**, making them more susceptible to necessity-based motivations.

H3a: The positive relationship between the level of violent conflict in a country and necessity entrepreneurship is less pronounced among entrepreneurs with high entrepreneurial alertness.

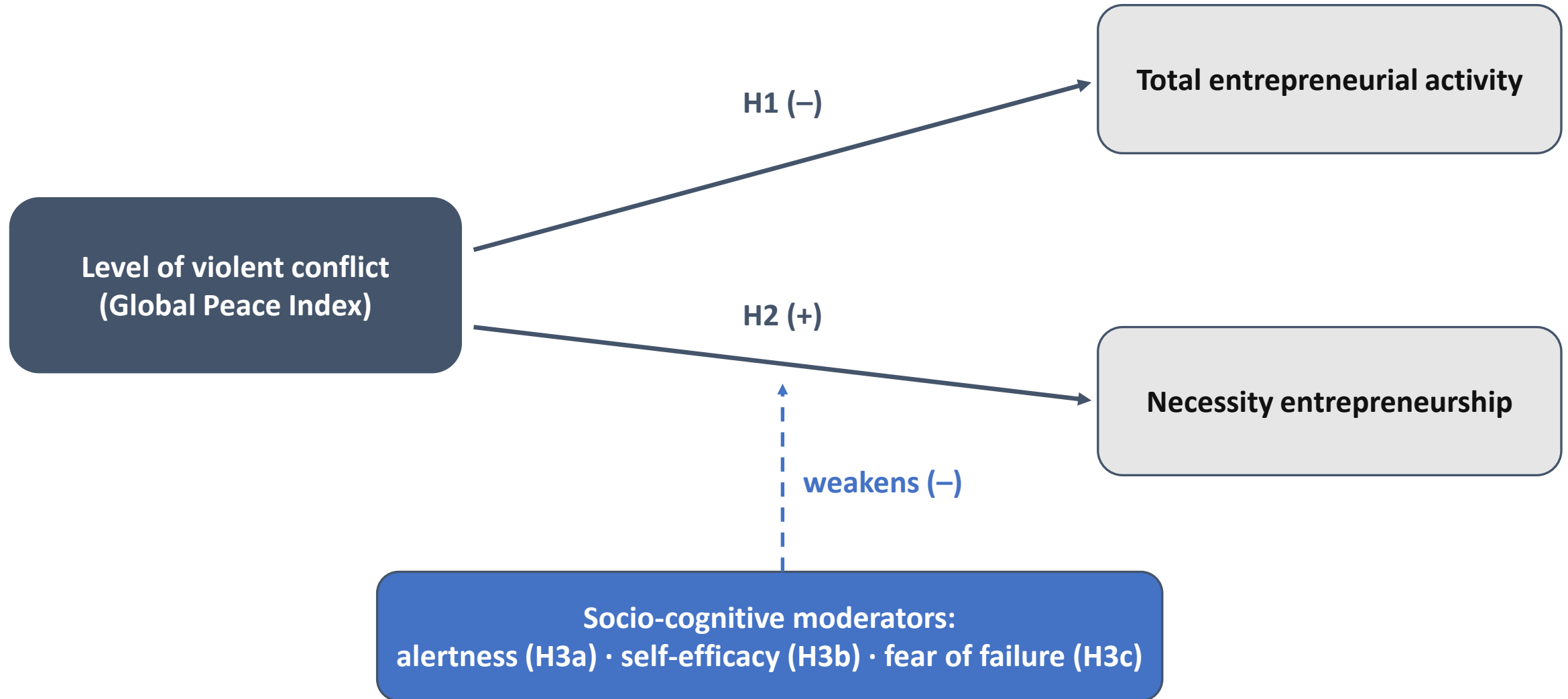
- Individuals with high perceived entrepreneurial self-efficacy are **better equipped to adapt** to unstable or challenging circumstances (Cumberland et al., 2015)

H3b: The positive relationship between the level of violent conflict in a country and necessity entrepreneurship is less pronounced among entrepreneurs with high entrepreneurial self-efficacy.

- Conflicts can inhibit entry into necessity entrepreneurship if such ventures are **perceived as too risky**, even when driven by immediate income needs
- In disruptive situations entrepreneurial fear of failure becomes less relevant as **expectations of negative consequences change** (Hirschmann et al., 2025; Wei et al., 2024)

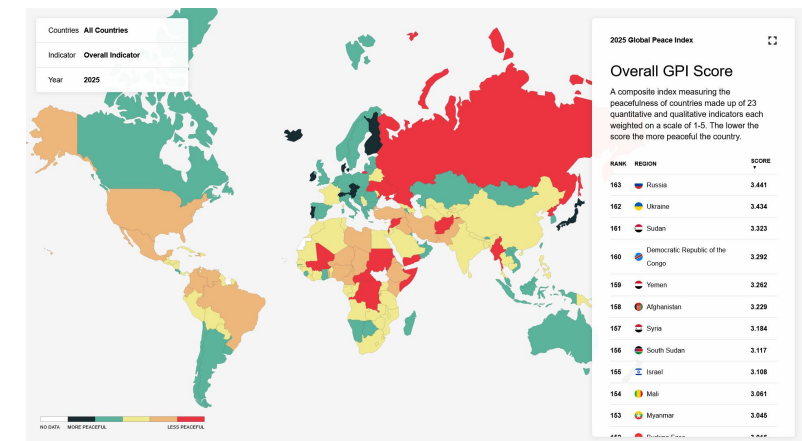
H3c: The positive relationship between the level of violent conflict in a country and necessity entrepreneurship is less pronounced among entrepreneurs with high entrepreneurial fear of failure.

Hypotheses – Conceptual model



Sample & method

- We merge data of the **Global Entrepreneurship Monitor (GEM)** with data of the **Global Peace Index (GPI)** → cross-sectional dataset
- GPI was initially launched in 2009 and “ranks 163 independent states and territories **according to their level of peacefulness**” (Institute for Economics & Peace, 2025, p. 2)
- Originally compiled by a group of international experts and **are re-evaluated every year**
- To assess the **validity of the GPI**, Fischer and Hanke (2009) compared other data on peacefulness of countries and their results suggest that the **overall score corresponds and strongly correlates with other measures**
- **26 individual metrics in three main domains:** (1) domestic and international conflict, (2) safety and security, and (3) degree of militarization
- Period of **13 years** (2009-2021)
- Sample of 1,485,332 individuals from 90 countries
- **Multilevel analyses** (individual- & nested country-level), random intercepts and slopes



Components of the GPI

THE INDICATORS

The GPI comprises 23 indicators of the absence of violence or fear of violence. The indicators were originally selected with the assistance of the expert panel in 2007 and have been reviewed by the expert panel on an annual basis. All scores for each indicator are normalised on a scale of 1-5, whereby qualitative indicators are banded into five groupings and quantitative ones are scored from 1 to 5, to the third decimal point.

ONGOING DOMESTIC & INTERNATIONAL CONFLICT	SOCIETAL SAFETY & SECURITY	MILITARISATION
■ Number and duration of internal conflicts Uppsala Conflict Data Program (UCDP) Battle-Related Deaths Dataset, Non-State Conflict Dataset and One-sided Violence Dataset; Institute for Economics & Peace (IEP) ■ Number of deaths from external organised conflict UCDP Georeferenced Event Dataset ■ Number of deaths from internal organised conflict UCDP Georeferenced Event Dataset ■ Number, duration and role in external conflicts UCDP Battle-Related Deaths Dataset; IEP ■ Intensity of organised internal conflict Qualitative assessment by EIU analysts ■ Relations with neighbouring countries Qualitative assessment by EIU analysts	■ Level of perceived criminality in society Gallup World Poll, IEP estimates ■ Number of refugees and internally displaced people as a percentage of the population Office of the High Commissioner for Refugees (UNHCR) Mid-Year Trends; Internal Displacement Monitoring Centre (IDMC) ■ Political instability Qualitative assessment by EIU analysts ■ Political Terror Scale Gibney, Mark, Linda Cornett, Reed Wood, Peter Haschke, Daniel Arnon, and Attilio Pisanò. 2021. The Political Terror Scale 1976-2019. Date Retrieved, from the Political Terror Scale website: http://www.politicalterrorscale.org. ■ Impact of terrorism IEP Global Terrorism Index (GTI) ■ Number of homicides per 100,000 people United Nations Office on Drugs and Crime (UNODC) Surveys on Crime Trends and the Operations of Criminal Justice Systems (CTS); EIU estimates ■ Level of violent crime Qualitative assessment by EIU analysts ■ Violent demonstrations Armed Conflict Location and Event Data Project (ACLED); IEP ■ Number of jailed population per 100,000 people World Prison Brief, Institute for Criminal Policy Research at Birkbeck, University of London ■ Number of internal security officers and police per 100,000 people UNODC CTS ■ Ease of access to small arms and light weapons Qualitative assessment by EIU analysts	■ Military expenditure as a percentage of GDP The Military Balance, IISS, EIU Estimates ■ Number of armed services personnel per 100,000 people The Military Balance, IISS ■ Volume of transfers of major conventional weapons as recipient (imports) per 100,000 people Stockholm International Peace Research Institute (SIPRI) Arms Transfers Database ■ Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people SIPRI Arms Transfers Database ■ Financial contribution to UN peacekeeping missions United Nations Committee on Contributions; IEP ■ Nuclear and heavy weapons capabilities Military Balance+, IISS; IEP

RANK	COUNTRY	SCORE	CHANGE	RANK	COUNTRY	SCORE	CHANGE	RANK	COUNTRY	SCORE	CHANGE
1	Iceland	1.124	↔	29	Poland	1.634	↓ 6	57	Moldova	1.873	↑ 4
2	Denmark	1.31	↑ 1	30	Bulgaria	1.643	↓ 5	58	Chile	1.874	↓ 5
3	Ireland	1.312	↓ 1	31	Romania	1.649	↑ 4	59	The Gambia	1.888	↓ 8
4	New Zealand	1.313	↑ 2	32	Spain	1.649	↔	60	Greece	1.89	↓ 6
5	Austria	1.316	↓ 1	33	Taiwan	1.649	↑ 2	61	Bosnia and Herzegovina	1.892	↓ 4
6	Singapore	1.332	↑ 4	34	Italy	1.662	↓ 2	62	Jordan	1.895	↑ 6
7	Portugal	1.333	↑ 1	35	Kuwait	1.669	↑ 3	63	Zambia	1.898	↓ 4
8	Slovenia	1.334	↓ 4	36	Lithuania	1.671	↓ 2	64	Cyprus	1.904	↑ 1
9	Japan	1.336	↔	37	United Kingdom	1.693	↓ 1	65	Serbia	1.921	↓ 7
10	Switzerland	1.339	↑ 1	38	North Macedonia	1.713	↓ 1	66	Armenia	1.929	↑ 3
11	Canada	1.35	↑ 2	39	Costa Rica	1.731	↑ 2	67	France	1.939	↔
12	Czechia	1.379	↓ 5	40	Albania	1.745	↔	=68	Panama	1.942	↓ 8
13	Finland	1.399	↑ 3	41	Vietnam	1.745	↑ 4	=68	Paraguay	1.942	↑ 12
14	Croatia	1.45	↑ 1	42	Botswana	1.762	↑ 6	=70	Trinidad and Tobago	1.946	↑ 1
15	Germany	1.456	↑ 2	43	South Korea	1.763	↑ 2	=70	Kosovo	1.946	↑ 5
16	Netherlands	1.49	↑ 5	44	Mongolia	1.765	↓ 5	=70	Liberia	1.946	↑ 8
17	Bhutan	1.496	↓ 5	45	Montenegro	1.772	↑ 5	73	Cambodia	1.947	↓ 1
18	Hungary	1.508	↓ 4	46	Laos	1.779	↑ 3	74	Malawi	1.97	↓ 4
19	Malaysia	1.513	↔	47	Sierra Leone	1.792	↔	75	United Arab Emirates	1.979	↑ 3
20	Belgium	1.523	↑ 4	48	Oman	1.794	↑ 18	76	Kazakhstan	1.98	↑ 21
21	Qatar	1.524	↑ 1	49	Timor-Leste	1.796	↑ 3	77	Jamaica	1.986	↑ 3
22	Australia	1.525	↑ 4	50	Uruguay	1.798	↓ 5	78	Bolivia	2.001	↓ 1
23	Mauritius	1.546	↑ 5	51	Ghana	1.799	↓ 8	79	Nepal	2.006	↓ 5
24	Norway	1.55	↓ 6	52	Senegal	1.827	↑ 4	80	China	2.009	↑ 6
25	Estonia	1.563	↑ 1	53	Indonesia	1.829	↓ 12	81	Tunisia	2.01	↑ 1
26	Slovakia	1.578	↓ 6	54	Argentina	1.837	↑ 10	82	Equatorial Guinea	2.013	↓ 19
27	Latvia	1.582	↑ 3	55	Madagascar	1.846	↔	83	Dominican Republic	2.019	↑ 5
28	Sweden	1.625	↑ 1	56	Namibia	1.859	↑ 6				

Main results

Model	(1)	(2)	(3)	(4)	(5)	(6)
Statistic	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Dependent variable	EA	Necessity EA	Necessity EA	Necessity EA	Necessity EA	Necessity EA
Hypothesis	H1	H2	H3a	H3b	H3c	-
<i>Individual level controls</i>						
Age	0.078 (0.001)***	0.022 (0.003)***	0.022 (0.003)***	0.022 (0.003)***	0.022 (0.003)***	0.022 (0.003)***
Age ²	-0.001 (0.000)***	-0.000 (0.000)*	-0.000 (0.000)*	-0.000 (0.000)*	-0.000 (0.000)*	-0.000 (0.000)*
Female	-0.165 (0.006)***	0.299 (0.012)***	0.299 (0.012)***	0.299 (0.012)***	0.299 (0.012)***	0.299 (0.012)***
University degree	0.092 (0.007)***	-0.602 (0.016)***	-0.600 (0.016)***	-0.602 (0.016)***	-0.602 (0.016)***	-0.601 (0.016)***
Entrepreneurial network	0.821 (0.006)***	-0.242 (0.013)***	-0.243 (0.013)***	-0.242 (0.013)***	-0.242 (0.013)***	-0.243 (0.013)***
Entrepreneurial alertness	0.401 (0.006)***	-0.376 (0.013)***	-0.795 (0.064)***	-0.375 (0.013)***	-0.375 (0.013)***	-0.797 (0.065)***
Entrepreneurial self-efficacy	1.313 (0.007)***	-0.213 (0.016)***	-0.216 (0.016)***	-0.019 (0.081)	-0.213 (0.016)***	0.093 (0.082)
Fear of failure	-0.351 (0.006)***	0.215 (0.013)***	0.214 (0.013)***	0.215 (0.013)***	0.526 (0.066)***	0.528 (0.066)***
<i>Country level controls included</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Independent variables</i>						
Level of violent conflict _{t-1}	✓ -0.528 (0.052)***	✓ 0.193 (0.098)*	0.065 (0.100)	0.274 (0.104)**	0.244 (0.098)*	0.245 (0.106)*
Level of violent conflict _{t-1} × Entrepreneurial alertness			✗ 0.214 (0.032)***			0.216 (0.032)***
Level of violent conflict _{t-1} × Entrepreneurial self-efficacy				✓ -0.098 (0.040)*		-0.156 (0.041)***
Level of violent conflict _{t-1} × Fear of failure					✓ -0.157 (0.033)***	-0.159 (0.033)***
<i>Year dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
Number of groups (countries)	90	90	90	90	90	90
Observations	1,485,332	181,208	181,208	181,208	181,208	181,208
Chi ²	93,903.115	8,451.849	8,486.871	8,456.954	8,470.859	8,515.306
Log Likelihood	-453,496.343	-89,809.507	-89,787.196	-89,806.539	-89,797.846	-89,770.485
AIC	907,066.686	179,693.014	179,650.392	179,689.079	179,671.692	179,620.969

Notes: This table reports the results of multilevel logistic regressions with random intercepts. AIC = Akaike's information criterion. Standard errors (SE) in parentheses. † p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001, two-tailed tests.

Conflicts, institutional theory, and entrepre- neurship

- **How** the absence of peace, warfare, and **violent conflicts** more generally **shape entrepreneurship** (e.g., Audretsch et al., 2023; Zahra, 2022)
- Limited contradictory evidence on **how violent conflicts influence entrepreneurial activities**, in particular, when considering multiple conflicts instead of single conflicts
- Our results align with those studies that find that **entrepreneurship overall decreases** in conflicts (Audretsch et al., 2023; Chowdhury, 2011; Deininger, 2003)
- New perspectives on the **type of entrepreneurship** and **socio-cognitive traits**

Antecedents of necessity entre- preneurship

- Prior research suggests that **unemployment** (e.g., Block and Wagner, 2010; Ritsilä and Tervo, 2002) and **fear of failure** (e.g., Carsrud and Brännback, 2011) drive necessity entrepreneurship on an individual level
- At the country level, **development** (e.g., Naudé, 2010; Vivarelli, 2013) or **economic freedom** (e.g., Nikolaev et al., 2018) correlate with necessity entrepreneurship
- We contribute to research that explores the **role of social-cognitive traits** for necessity entrepreneurship in violent conflicts (e.g., Brück et al., 2011; Shahriar and Shepherd, 2019)

Implications and future research agenda

Policy implications

- Stronger empirical basis for **designing entrepreneurship support programs** in conflict-affected regions
- **Targeted interventions** that address the structural disadvantages faced by necessity entrepreneurs
- Interventions should be matched to **intensity and duration** observed in conflict settings
- Interventions that enhance **self-efficacy and strategically reframe fear of failure** could encourage more selective, growth-oriented entrepreneurial activity

Future research potential

- **Panel or quasi-experimental designs**, such as difference-in-differences, event studies, or instrumental variable approaches
- Investigations of necessity entrepreneurship and mixed types in greater depth
- Moderators are **binary variables**, future surveys or interview studies could nuance our findings
- More research on the **nature of violent conflicts** and how this shapes entrepreneurship is needed
- Test **reciprocal effects** between different institutional/conflict characteristics and individual and organizational behavior

Thank you!

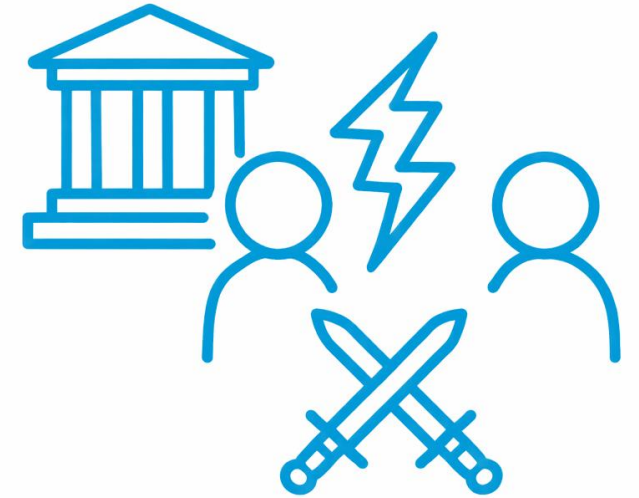
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Theoretical framework – Institutional theory

- Institutions constitute “humanly devised constraints that structure political, economic and social interaction” (North, 1991: 97)
- The institutional context typically manifest as **formal** (e.g., rules, regulations, policies) or **informal** (e.g., cultural norms, bureaucratic norms, and traditions)
- Both formal and informal institutions **shape entrepreneurship** (e.g., Beckert et al., 1999; Bruton et al., 2010; Busenitz et al., 2000)
- Establish the **parameters of trust and predictability**, crucial for mitigating the uncertainties inherent in entrepreneurial ventures
- Prior research extensively explores how institutions relate to the **choice to engage in entrepreneurial activities** (e.g., Boudreaux and Nikolaev, 2019; Fuentelsaz et al., 2015; Tonoyan et al., 2010)



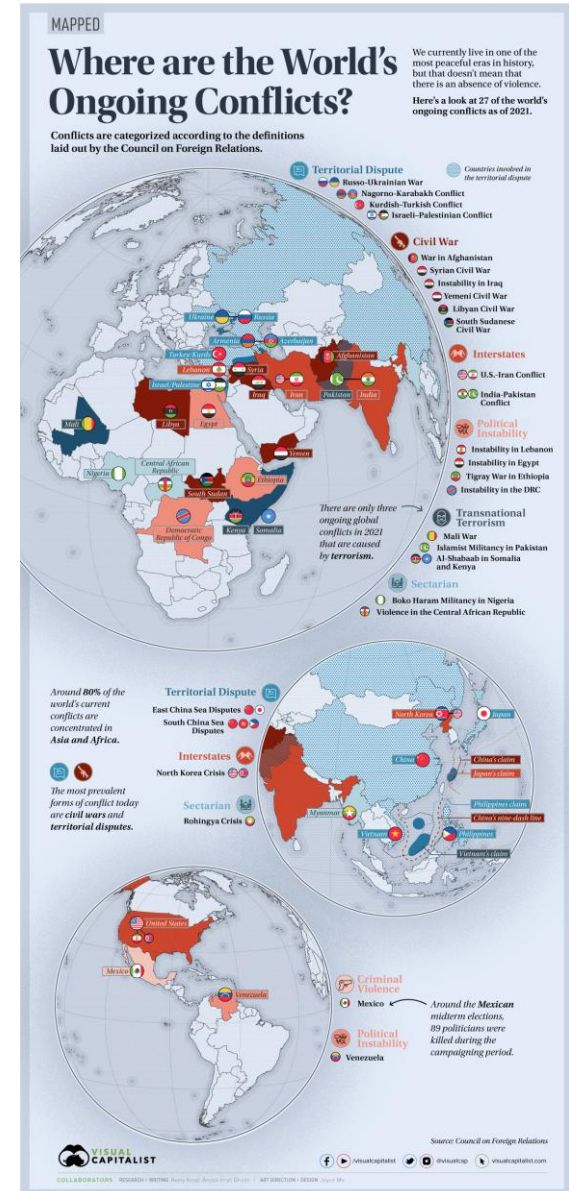
Theoretical framework – Social cognitive theory

- Social cognitive theory captures how personal dispositions are shaped by the environment and individual characteristics (e.g., Bandura, 1986; Wood and Bandura, 1989)
- Prior research extensively investigates **how socio-cognitive traits relate to engagement in entrepreneurial activities** (e.g., Gemmell et al., 2012; Hmieleski and Baron, 2009; Marshall et al., 2019)
- Socio-cognitive characteristics such as **self-efficacy** (e.g., Camelo-Ordaz et al., 2020), **fear of failure** (e.g., Marquardt et al., 2021), and **alertness to opportunities** (e.g., Boudreaux et al., 2023) are central in this literature
- Boudreaux et al. (2019, 2023) demonstrate **how social-cognitive traits and economic institutions interact**
- Hirschmann et al. (2025) and Wei et al. (2024) show that **climate impact** and socio-cognitive traits interact



Literature background: peace, conflicts, and entrepreneurship

- In recent years, the **contextualization of entrepreneurship** research has progressed rapidly (e.g., Welter et al., 2019)
- Within the **external circumstances**, the conditions of peace and conflict emerge as particularly influential factors, shaping the trajectory of entrepreneurial ventures
- Numerous conflicts, including the war in Afghanistan, the conflict in Colombia, civil unrest in the Philippines, the Israeli–Palestinian contention, and the Russian aggression in Ukraine, have **significantly impacted entrepreneurial dynamics** (Audretsch et al., 2023; Bullough et al., 2014; Cañares, 2011)
- Bullough et al. (2014) demonstrate that **specific individual characteristics (i.e., resilience and self-efficacy) are important** for individuals to engage in entrepreneurship in spite of the presence of violent conflict
- Hiatt and Sine (2014) show that **unstable environments reduce the survival of new ventures**



Descriptives

Table 1. Variables, descriptives, descriptions, and sources.

Variable	Mean	SD	Min	Max	Description
<i>Dependent variable</i>					
EA	0.121	0.327	0	1	Captures whether an individual is involved in early-stage entrepreneurial activity (=1) or not (=0).
Necessity EA	0.229	0.420	0	1	Captures whether an individual is involved in early-stage necessity entrepreneurial activity (=1) or not (=0, opportunity-driven EA).
<i>Independent variables</i>					
Level of violent conflict	1.952	0.405	1.151	3.111	Captures the level of peace in a country.
<i>Individual level controls</i>					
Age	37.540	12.204	16	99	Captures the age of an individual.
Age ²	1,558.202	1,005.404	256	9,801	Captures the squared age of an individual.
Female	0.432	0.495	0	1	Captures whether an individual is female (=1) or not (=0).
University education	0.247	0.431	0	1	Captures whether an individual has a university degree (=1) or not (=0).
Entrepreneurial network	0.673	0.469	0	1	Captures whether an individual perceives that he or she has an network (=1) or not (=0).
Entrepreneurial alertness	0.650	0.477	0	1	Captures whether an individual sees good opportunities for starting a new venture.
Entrepreneurial self-efficacy	0.850	0.357	0	1	Captures whether an individual perceives to have the necessary skills to start a new venture.
Fear of failure	0.313	0.464	0	1	Captures whether an individual perceives has fears of failing with a new venture (=1) or not (=0).
<i>Country level controls</i>					
GDP (log.)	26.389	1.763	22.149	30.694	Captures the logarithm of a country's GDP.
GDP growth	2.777	5.731	-17.821	123.140	Captures the annual GDP growth rate in a country (in %).
Population size (log.)	17.204	1.506	12.671	21.062	Captures the logarithm of a country's population size.
Population growth	1.087	1.114	-5.280	9.972	Captures the annual population growth rate in a country (in %).
Unemployment	7.917	5.235	0.25	32.35	Captures the annual unemployment rate in a country (in %).
IPR charges (log.)	17.304	5.493	0	25.531	Captures the logarithm of a country's charges for the use of intellectual property
Household wealth (log.)	11.198	1.138	8.809	14.632	Captures the average total wealth held by households in a country.
People displaced (log.)	7.098	2.737	0	13.577	Captures the number of refugees and asylum-seekers departing (outflow) from a country.
Development assistance	0.655	1.738	-0.424	11.591	Captures net official development assistance (ODA) received by a country.
World Governance Indicators	-	-	-	-	Captures the voice accountability, government effectiveness, rule of law, regulatory quality, and control of corruption in a country.
Year dummies	-	-	-	-	Captures the year in which a GEM survey was administered (2009–2021).

Notes: n = 1,485,332 for EA and n = 181,208 for all other variables.

Further analyses (1/3) – Subdomains of the GPI

Model	(1)	(2)	(3)	(4)
Statistic	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Dependent variable	Necessity EA	Necessity EA	Necessity EA	Necessity EA
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Independent variables</i>				
Domestic and international conflict _{t-1}	0.315 (0.053)***	0.335 (0.060)***	0.301 (0.053)***	0.315 (0.053)***
Safety and security _{t-1}	-0.369 (0.074)***	-0.369 (0.074)***	-0.357 (0.079)***	-0.374 (0.074)***
Degree of militarization _{t-1}	0.073 (0.058)	0.079 (0.058)	0.089 (0.058)	0.213 (0.070)**
Domestic and international conflict _{t-1} × Entrepreneurial alertness		0.114 (0.023)***		
Domestic and international conflict _{t-1} × Entrepreneurial self-efficacy		-0.068 (0.029)*		
Domestic and international conflict _{t-1} × Fear of failure		-0.120 (0.023)***		
Safety and security _{t-1} × Entrepreneurial alertness			0.193 (0.024)***	
Safety and security _{t-1} × Entrepreneurial self-efficacy			-0.108 (0.030)***	
Safety and security _{t-1} × Fear of failure			-0.087 (0.024)***	
Degree of militarization _{t-1} × Entrepreneurial alertness				-0.066 (0.033)*
Degree of militarization _{t-1} × Entrepreneurial self-efficacy				-0.104 (0.040)**
Degree of militarization _{t-1} × Fear of failure				-0.051 (0.034)
<i>Year dummies</i>	Yes	Yes	Yes	Yes
Number of groups (countries)	90	90	90	90
Observations	181,208	181,208	181,208	181,208
Chi ²	8,496.985	8,542.898	8,570.214	8,509.566
Log Likelihood	-89,784.310	-89,757.072	-89,740.075	-89,777.702
AIC	179,646.621	179,598.145	179,564.150	179,639.403

Further analyses (2/3) – Alternative independent variable measures

Model	(1)	(2)	(3)	(4)
Statistic	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Dependent variable	Necessity EA	Necessity EA	Necessity EA	Necessity EA
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Independent variables</i>				
Military expenditures _{t-1}	0.356 (0.027)***			
Number of state-based conflicts _{t-1}		0.010 (0.012)		
Number of non-state conflicts _{t-1}			0.026 (0.013)*	
Conflict duration _{t-1}				-0.022 (0.005)***
<i>Year dummies</i>	Yes	Yes	Yes	Yes
Number of groups (countries)	80	90	90	90
Observations	170,729	181,208	181,208	181,208
Chi ²	7,221.049	7,646.764	7,653.504	7,648.801
Log Likelihood	-85,283.730	-90,257.764	-90,255.982	-90,247.431
AIC	170,639.460	180,587.523	180,583.964	180,556.863

Further analyses (3/3) – Further set of moderators

Model	(1)	(2)	(3)
Statistic	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Dependent variable	EA	Necessity EA	Necessity EA
<i>Controls</i>	Yes	Yes	Yes
<i>Independent variables</i>			
Level of violent conflict _{t-1}	-0.617 (0.056)***	-0.109 (0.112)	0.610 (0.113)***
Level of violent conflict _{t-1} × Development assistance _{t-1}	0.064 (0.016)***	0.200 (0.031)***	- -
Level of violent conflict _{t-1} × Age			-0.008 (0.001)***
Level of violent conflict _{t-1} × Gender			-0.064 (0.031)*
Level of violent conflict _{t-1} × University degree			-0.095 (0.038)*
Level of violent conflict _{t-1} × Entrepreneurial network			-0.103 (0.032)**
<i>Year dummies</i>	Yes	Yes	Yes
Number of groups (countries)	90	90	90
Observations	1,485,332	181,208	181,208
Chi ²	93,916.688	8,460.706	8,494.189
Log Likelihood	-453,488.308	-89,788.400	-89,780.574
AIC	907,052.615	179,652.800	179,643.147

Robustness tests

Model	(1)	(2)	(3)	(4)
	CRE model	Country fixed effects	Likert-scaled measure for opportunity EA (2019–2021)	Likert-scaled measure for necessity EA (2019–2021)
Statistic	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Dependent variable	Necessity EA	Necessity EA	Opportunity EA	Necessity EA
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Mean values of individual-level variables</i>	Yes	No	No	No
<i>Country fixed effects</i>	No	Yes	No	No
<i>Independent variables</i>				
Level of violent conflict _{t-1}	0.126 (0.110)	0.194 (0.120)	-1.365 (0.555)*	0.142 (0.289)
Level of violent conflict _{t-1} × entr. alertness	0.219 (0.032)***	0.219 (0.032)***	-0.085 (0.051) †	0.170 (0.056)***
Level of violent conflict _{t-1} × entr. self-efficacy	-0.146 (0.041)***	-0.157 (0.041)***	0.086 (0.075)	0.038 (0.081)
Level of violent conflict _{t-1} × entr. fear of failure	-0.144 (0.0353)***	-0.155 (0.033)***	0.051 (0.045)	-0.164 (0.050)***
<i>Year dummies</i>	Yes	Yes	Yes	Yes
Number of groups (countries)	90	90	51	41
Observations	181,208	181,208	35,488	35,488
Chi ²	8,722.828	13,286.032	1,482.804	1,039.517
Log Likelihood	-89,606.261	-89,528.106	-69,836.733	-44,263.277
AIC	179,306.522	179,312.213	139,747.466	88,592.554

Correlations

Table 2. Pairwise correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(1) Necessity EA																							
(2) Level of violent conflict _{t-1}	0.045*																						
(3) Age	0.059*	-0.117*																					
(4) Age ²	0.058*	-0.115*	0.985*																				
(5) Female	0.072*	0.029*	-0.003	-0.007*																			
(6) University education	-0.119*	-0.086*	0.043*	0.034*	-0.039*																		
(7) Entrepreneurial network	-0.094*	-0.020*	-0.067*	-0.072*	-0.055*	0.073*																	
(8) Entrepreneurial alertness	-0.105*	0.071*	-0.062*	-0.060*	-0.012*	0.001	0.146*																
(9) Entrepreneurial self-efficacy	-0.067*	-0.014*	0.022*	0.015*	-0.051*	0.047*	0.140*	0.133*															
(10) Entrepreneurial fear of failure	0.030*	0.004	0.008*	0.006*	0.046*	-0.003	-0.021*	-0.079*	-0.141*														
(11) GDP _{t-1} (log.)	-0.057*	-0.019*	0.113*	0.108*	-0.014*	0.101*	0.006*	-0.030*	-0.061*	0.049*													
(12) GDP growth _{t-1}	0.027*	0.145*	-0.045*	-0.044*	0.003	-0.039*	-0.023*	0.030*	-0.035*	-0.029*	-0.056*												
(13) Population size _{t-1} (log.)	0.009*	0.383*	-0.004	-0.006*	0.023*	-0.041*	0.015*	0.023*	-0.065*	0.049*	0.769*	0.076*											
(14) Population growth _{t-1}	0.010*	0.274*	-0.085*	-0.076*	0.038*	-0.113*	0.043*	0.110*	0.031*	-0.024*	-0.252*	-0.018*	0.052*										
(15) Unemployment _{t-1}	0.044*	-0.078*	0.016*	0.011*	-0.029*	0.042*	-0.031*	-0.088*	0.029*	0.001	-0.056*	-0.125*	-0.183*	-0.282*									
(16) IPR charges _{t-1} (log.)	-0.053*	-0.261*	0.111*	0.107*	-0.035*	0.119*	0.003	-0.071*	-0.046*	0.035*	0.570*	-0.185*	0.231*	-0.319*	0.076*								
(17) Voice accountability _{t-1}	-0.087*	-0.663*	0.158*	0.157*	-0.033*	0.155*	-0.009*	-0.042*	0.044*	-0.006*	0.224*	-0.260*	-0.307*	-0.353*	0.193*	0.461*							
(18) Government effectiveness _{t-1}	-0.100*	-0.629*	0.185*	0.182*	-0.054*	0.209*	0.010*	-0.051*	0.002	0.009*	0.442*	-0.194*	-0.137*	-0.378*	0.108*	0.606*	0.806*						
(19) Regulatory quality _{t-1}	-0.097*	-0.610*	0.170*	0.168*	-0.046*	0.194*	0.010*	-0.037*	0.010*	-0.006*	0.336*	-0.202*	-0.217*	-0.343*	0.090*	0.571*	0.843*	0.924*					
(20) Rule of law _{t-1}	-0.095*	-0.665*	0.175*	0.174*	-0.056*	0.204*	0.013*	-0.043*	0.014*	0.002	0.378*	-0.189*	-0.172*	-0.340*	0.153*	0.563*	0.846*	0.957*	0.941*				
(21) Control of corruption _{t-1}	-0.092*	-0.680*	0.171*	0.172*	-0.051*	0.185*	0.007*	-0.030*	0.019*	-0.010*	0.326*	-0.179*	-0.220*	-0.307*	0.111*	0.508*	0.847*	0.932*	0.916*	0.960*			
(22) Household wealth _{t-1} (log.)	-0.064*	-0.456*	0.138*	0.135*	-0.058*	0.160*	0.012*	-0.079*	-0.001	0.010*	0.510*	-0.181*	-0.001	-0.370*	0.201*	0.511*	0.609*	0.687*	0.596*	0.660*	0.632*		
(23) People displaced _{t-1} (log.)	0.075*	0.727*	-0.123*	-0.121*	0.025*	-0.105*	0.005*	0.065*	-0.011*	-0.022*	-0.062*	0.183*	0.396*	0.203*	-0.094*	-0.274*	-0.714*	-0.647*	-0.586*	-0.665*	-0.657*	-0.503*	
(24) Development assistance _{t-1}	0.049*	0.211*	-0.105*	-0.099*	0.022*	-0.118*	0.029*	0.061*	0.038*	-0.041*	-0.500*	0.109*	-0.103*	0.417*	-0.075*	-0.324*	-0.355*	-0.427*	-0.380*	-0.316*	-0.328*	-0.410*	0.229*

Notes: n=181,208, * p<0.05, Average VIF=5.72.

Margin plots

