

Micro-Foundations of Fragility

Concepts, Measurement and Application

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Introduction

- Strong institutions are vital for fostering economic development (Acemoglu et al, 2005), however causal pathways remain complex to disentangle (North, et al, 2007)
- Poor governance and insecurity main causes of weak institutions (Concept coined as “failed states” or “fragile states”)
 - absence of state monopoly to legitimate use of physical force within its borders
 - inability of a state to enforce laws uniformly and provide basic goods and services
 - presence of high crime, insurgency and political corruption

Fragility: State-Level Approach

- No real consensus on a universal definition of “failed states”
- Too much Weberian focus on capacity and effectiveness of the government (e.g., the Fragile States Index)
- Beyond state capacity, legitimacy also is important, however more difficult to measure (Goldstone, et al, 2004)
- Current indices ignore within-country variation and seldom overlap

Fragility: Our Approach

- The root issue lies in the state-centered approach
- We posit that fragility is:
 - better measured through its manifestation at the micro- and individual- level
 - dynamic and heterogenous across individuals, space and time
 - multi-dimensional (economic, social, and political)
 - not just about experiences (governance), but also about perceptions (legitimacy)

Fragility: Our Definition

Definition (of Fragility)

An absence, or perceive absence, of fair access to economic prosperity, combined with weak social cohesion and personal security and safety.

- Categorized into three domains: Human Security; Economic Inclusion; and Social Cohesion
- Constitutes both experiences and perceptions
- Measured through multiple indicators: fear, satisfaction, trust, engagement, etc

Fragility: Domains

- **Human Security:** individual protection and physical safety including experiences and fears of violence/crime, as well as engagement in the political process
- **Economic Inclusion:** provision of opportunity and ability to take an equal share in economic opportunity, as well as even access to public services or the experience of corruption
- **Social Cohesion:** ability of members of the community to cooperate within and across groups, as well as trust in formal and informal institutions

Fragility Exposure Index (FEI)

- Develop a simple fragility index which encompasses the three domains
- $D_{it} = Norm(\sum_{j=1}^N X_{ijt}) + Norm(\sum_{j=1}^M Y_{ijt}) + Norm(\sum_{j=1}^O Z_{ijt})$
- $FEI_{it} = 100 * Norm(D_{it})$
- where X_{it} , Y_{it} , and Z_{it} represent fragility in the three domains respectively for individual i at time t
- and $X_{ijt} = Norm(x_{ijt}) = \frac{x_{ijt} - \min(x_{jt})}{\max(x_{jt}) - \min(x_{jt})}$

Survey Module: Human Security Indicators

- Experiences:
 - presence of non-state actors
 - previous experiences in theft, sexual and physical assault, bribery
 - ease of service without bribe from governmental bodies, police, and courts
 - distance to nearest police station and preventive measure undertaken against crime
- Perceptions
 - Fear of crime, war, ethnic conflict, banditry, arbitrary control, police violence
 - satisfaction with personal, neighborhood, and district security
 - importance of owning firearms to protect oneself and reporting family members if committed a crime
 - Trust and perceived effectiveness of formal governmental bodies, police, and courts

Survey Module: Economic Inclusion Indicators

- Experiences:
 - East of service without bribe from private sector and NGOs
 - We did not include economic well-being, income, assets
- Perceptions
 - satisfaction with financial situation, living standards
 - Fear of corruption in village, worry about unemployment, loan sharking
 - Trust and perceived effectiveness of private sector and NGOs

Survey Module: Social Cohesion Indicators

- Experiences:
 - Membership in political parties and women and youth groups
 - Registration and participation in local and central elections
 - Stealing if stolen from
 - Ease of service without bribe from informal village gov, religious and traditional institutions
- Perceptions
 - satisfaction with leisure time, social equality in village, community integration, and family life
 - Future expectation in participation in elections
 - Trust and perceived effectiveness informal village gov, religious and traditional institutions

Country Background and Dataset

- Kenya
 - Ethnically and culturally diverse and witnesses political violence on a frequent basis
 - since 2007, remained in the high risk group of fragility (FSI)
 - Undergone constitutional reforms to decentralize governance
- Dataset
 - Module inserted in Agricultural Panel Dataset (HORTINLEA), not representative country-wide
 - 1000 households, 300 in peri-urban areas
 - not optimal however useful to test the FEI and module

From Institutional Strength to Effectiveness

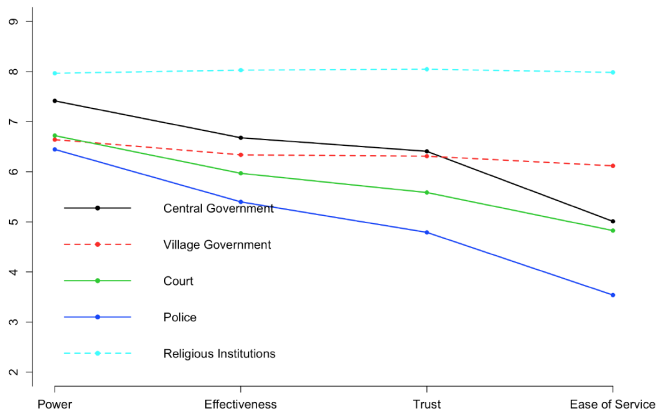


Figure 1. Governance Gap of Formal Institutions in Kenya

Fragility Distribution by Domain

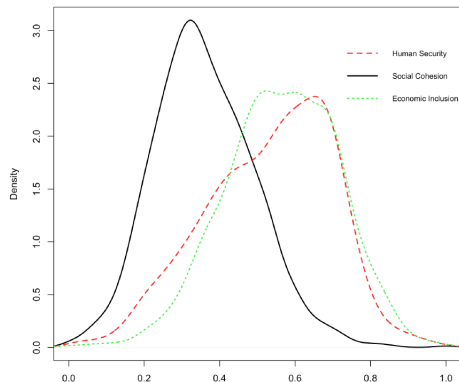


Figure 2a. Distribution of the Domains of Fragility Exposure Index – Kenya

Gap between Experiences and Perceptions

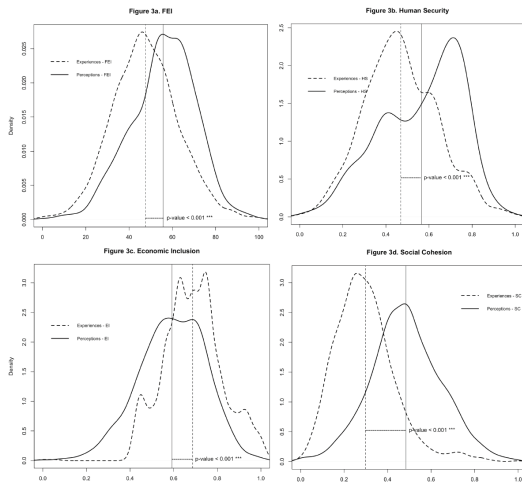


Figure 3. Differences between experiences and perceptions of the Fragility Exposure Index and its Domains - Kenya

Heterogeneity (1)

	FEI	Human Security	Econ Inclusion	Social Cohesion
Gender				
Female	52.96 (14.03)	0.54 (0.17)	0.56 (0.15)	0.37 (0.13)
Male	52.59 (14.24)	0.52 (0.17)	0.59 (0.15)	0.34 (0.13)
p-value	0.721	0.254	0.010**	0.019**
County				
Nairobi	55.84 (13.32)	0.55 (0.16)	0.58 (0.14)	0.40 (0.14)
Kisii	50.71 (14.05)	0.53 (0.18)	0.54 (0.16)	0.33 (0.12)
Kakamega	53.38 (14.46)	0.54 (0.17)	0.58 (0.15)	0.34 (0.13)
Nakuru	52.54 (14.14)	0.54 (0.17)	0.56 (0.16)	0.35 (0.12)
Kiambu	50.63 (14.03)	0.49 (0.17)	0.55 (0.15)	0.36 (0.14)
p-value	<0.001***	0.010**	0.046**	<0.001***

Heterogeneity (2)

	FEI	Human Security	Econ Inclusion	Social Cohesion
Religion				
Protestant	52.59 (13.71)	0.52 (0.17)	0.57 (0.15)	0.36 (0.13)
Catholic	55.25 (13.76)	0.56 (0.16)	0.58 (0.14)	0.38 (0.13)
Muslim	49.09 (13.88)	0.48 (0.18)	0.55 (0.17)	0.33 (0.08)
Other Christian	51.36 (14.95)	0.53 (0.16)	0.54 (0.15)	0.35 (0.14)
Other	55.72 (11.34)	0.46 (0.13)	0.63 (0.08)	0.44 (0.14)
p-value	0.033**	0.032**	0.05*	0.044**

Conclusion

- We introduce a new concept that studies the exposure to fragility at the individual level.
- We developed a 'Fragility Module' which was piloted in the HORTINLEA panel survey, collected in Kenya.
- We developed a multi-dimensional "Fragility Exposure Index".