



Social capital effects on food security resilience: evidence from Kyrgyzstan

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Motivation

Limited attempts to conceptualize household resilience towards food insecurity

Need to conceptualize resilience to food insecurity in the presence of social capital indicators

Understand the role of social aspects of neighborhood in Kyrgyzstan for strengthening food security resilience

Objectives

Estimate pillars (factors) and resilience under Resilience Index Measurement and Analysis (RIMA)

Construct social capital indicator through Trust and Group Membership

Analyze the impact of Trust and Group Membership on resilience pillars and resilience itself

Data

The life in Kyrgyzstan (LiK) data for individual, household, community and agriculture surveys

The LiK data for 2013 and 2016 years

3,000 households and 8,000 individuals over seven Kyrgyz regions (oblasts) and two cities



Source: International Data Service Center of the Institute for Study Labour (IDSC IZA)

Methodology

$$RCI_h = f(IFA_h, ABS_h, AP_h, AC_h)$$

where

RCI = Resilience Capacity Index; IFA = Income and Food Access; ABS = Access to Basic Services; AP = Agricultural Practices; AC = Adaptive Capacity

$$Pillars/RCI_h = \beta_0 + \beta_1 Trust_h + \beta_2 Membership_h + \beta_3 X_h + u_h$$

where

h = Household; Trust = Individual trust level (household head); Membership = Individual group membership (household head); X = Household characteristics; u = Error term

$$Trust_h = \gamma_0 + \gamma_1 Z_h + \gamma_2 X_h + v_h$$

$$Membership_h = \eta_0 + \eta_1 Y_h + \eta_2 X_h + \omega_h$$

where

Z = Instrumental variable (the existence of mosques and churches in the community); Y = Instrumental variable (the existence of groups in the community); v and ω = Corresponding error terms

Results and Conclusions

Both constructed Trust and Group Membership positively impact on majority pillars (IFA, AP and AC) and resilience capacity (RCI) (Table-1).

	IFA	ABS	AP	AC	RCI
Trust	1.19***	0.66***	1.02***	0.47***	0.87***
Group Membership	1.61***	-4.62***	3.11***	0.98***	1.15***

Table-1: Social Capital and Resilience (2SLS Bootstrapping Method)

***p<0.01, **p<0.05, *p<0.1.

IFA: Income and Food Access; ABS: Access to Basic Services; AP: Agricultural Practices and AC: Adaptive Capacity

Household control variables: head age, head female, head married, head education, household size and community stability

Regional control variables: Issyk-Kul and the Tian Shan, Ferghana valley, and Bishkek and the Northwest.

Other Robust Models: IV-SEM and 2 SLS

Robustness checking: There are three clustered households according to resilience levels (Figure-1).

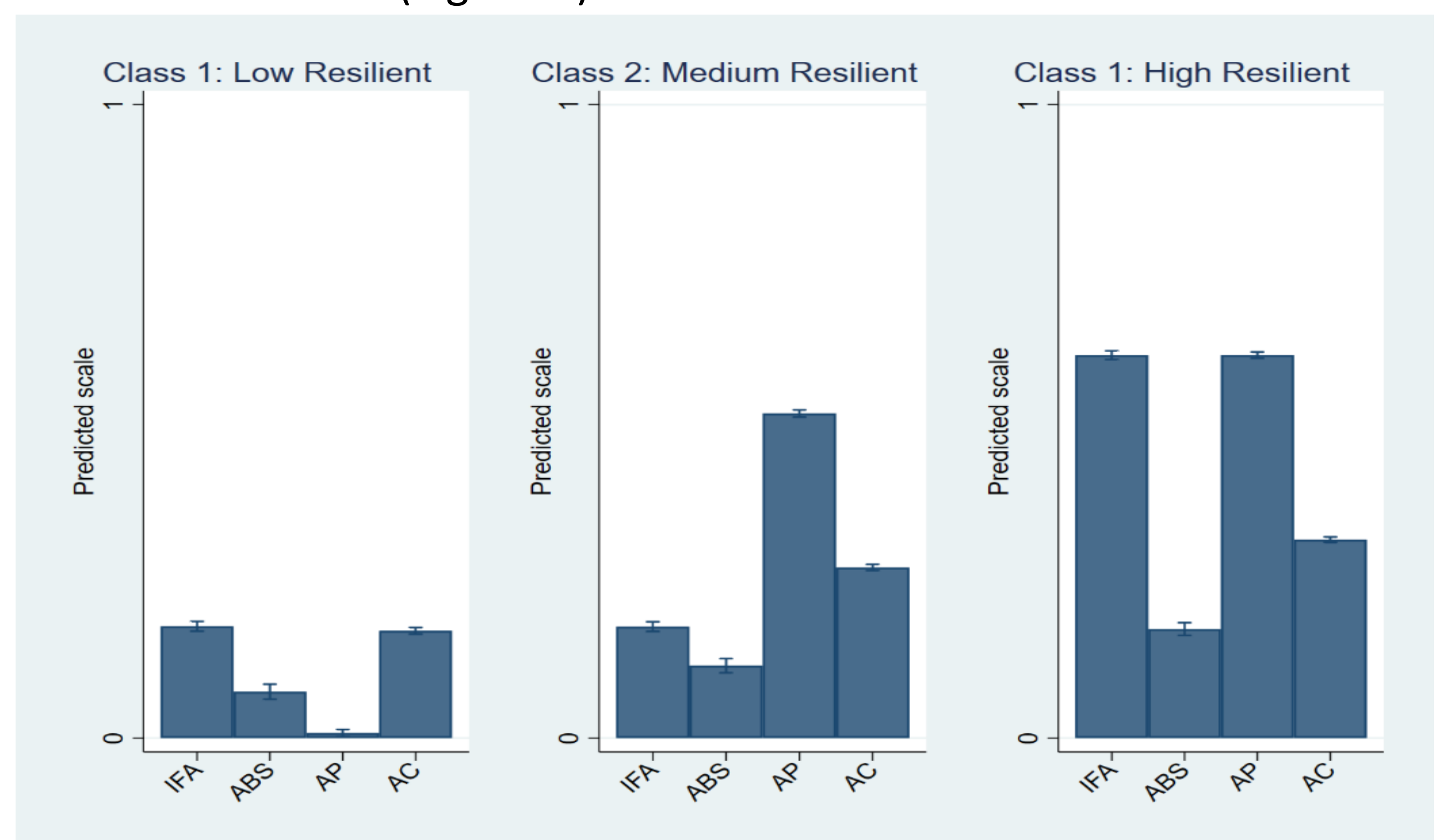


Figure-1: Resilience Classes

IFA: Income and Food Access; ABS: Access to Basic Services; AP: Agricultural Practices and AC: Adaptive Capacity

High Trust and Group Membership are observed in highly resilient households (Table-2).

	Low Resilient	Medium Resilient	High Resilient	P-values
Trust	0.58	0.62	0.66	0.000
Group Membership	0.15	0.15	0.16	0.000

Table-2: Trust and Membership across Resilience Classes

Building household resilience depends on strengthening multi factors (pillars in our case).

Social capital, particularly trust and membership, potentially improves resilience to food insecurity.

Future interventions should recognize trust in the community and individual group membership.

Publication

Egamberdiev, B. (mimeo): Social Capital Effects on Food Security Resilience: Evidence from Kyrgyzstan: Latent Class and Instrumental Variable Approaches. Journal of International Development (under review).