



The Impact of Social Capital on Managing Shocks to Achieve Resilience: Evidence from Ethiopia, Kenya, Uganda, Niger and Burkina Faso

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Social Capital

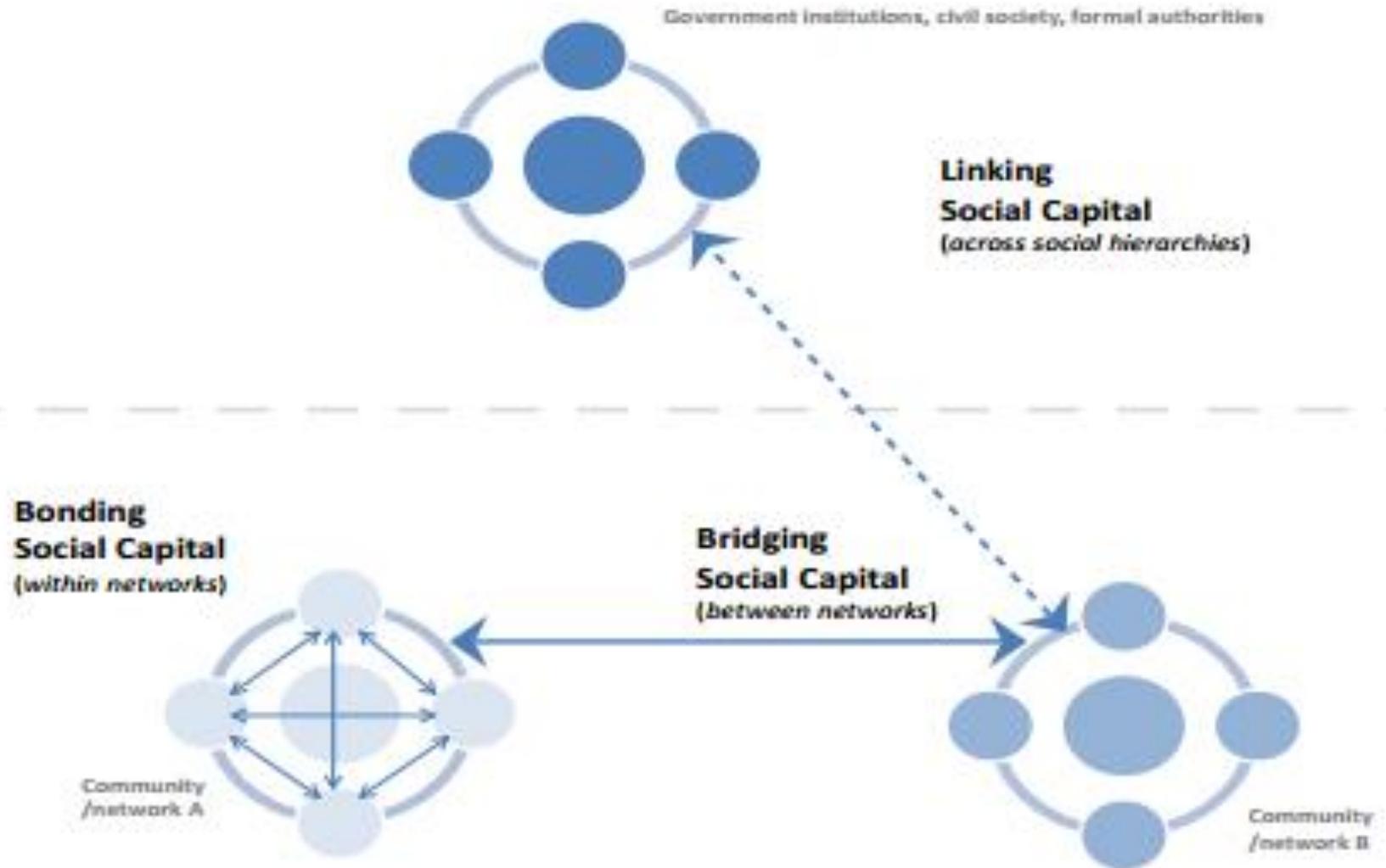
- Social capital can be described as the quantity and quality of social resources (e.g., networks, membership in groups, social relations, and access to wider institutions in society) upon which people draw in pursuit of livelihoods.
- Close interaction between people through tight-knit communities, the ability to rely on others in times of crisis, and open communication between stakeholder groups are all generally seen as signs of well-developed social capital

Importance of Social Capital

- Previous research demonstrates that the extent and application of social capital strongly influences community level resilience.
- Disasters may sometimes enhance social capital because they activate or give rise to neighborhood associations and collective organizations that can be used to disseminate vital information, provide community members with a voice, and afford leverage to assist in taking control of rebuilding efforts.

Three types of Social Capital

- Three types of social capital enhance resilience.
 - **Bonding social capital** is seen in the bonds between community or group members.
 - **Bridging social capital** connects members of one community or group to members of other communities/groups
 - **Linking social capital** is often conceived of as a vertical link between a network and some form of authority.



*Aldrich 2012; Wilson 2012; Magis 2010; Elliott et al. 2010

Figure Source: Reproduced with permission from Aldrich (2012, p. 34) in Frankenberger, T., Mueller M., Spangler T., and Alexander S. October 2013. Community Resilience: Conceptual Framework and Measurement Feed the Future Learning Agenda. Rockville, MD: Westat.

Bonding Social Capital

- **Bonding social capital** refers to the horizontal links between family members, close friends, and neighbors
- This type of social capital typically exists among a group of demographically, geographically, religiously, and/or ethnically similar people with shared norms and expectations
- Bonding social capital can help households respond to idiosyncratic shocks

Bridging Social Capital

- **Bridging social capital** connects members across communities or groups, often crossing ethnic/racial lines and geographic boundaries and can aid communities via access to resources, new perspectives, and assets, including remittances
- When resources are lacking locally, people may use their bridging social capital and request support, resources, or information from people in other communities, which can be especially important to bolstering community resilience
- Bridging social capital is especially effective for addressing covariate shocks

Linking Social Capital

- **Linking social capital** connects social networks with some form of authority in the social sphere, often across institutionalized and formal societal boundaries
- Such vertical links can provide otherwise unavailable resources and information, and are therefore important for economic development and resilience

Hypotheses to be Tested

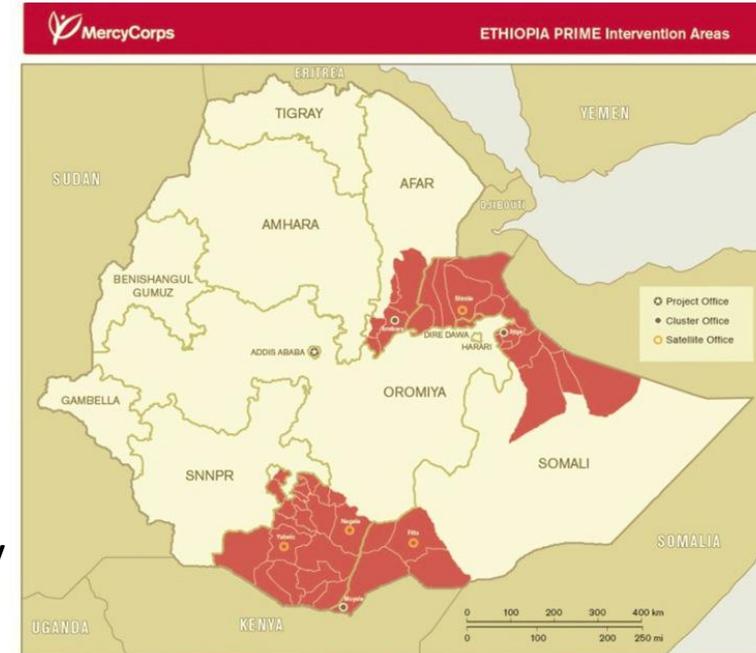
- Households with greater levels of social capital (bonding, bridging, and linking) achieve greater levels of food security than those with less social capital, all else equal.
- Households with greater levels of social capital (bonding, bridging, and linking) are able to recover better than those with less social capital, all else equal
- For a given level of exposure to shocks, households with more social capital report fewer negative impacts of shocks than households with less social capital, all else equal.

Empirical Evidence

- This presentation will examine empirical evidence from several studies focused on measuring resilience
- Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) program in Ethiopia
- Build the Resilience and Adaptation to Climate Extremes and Disasters Program
- *Resilience in the Sahel Enhanced* (RISE) initiative

Studies: PRIME

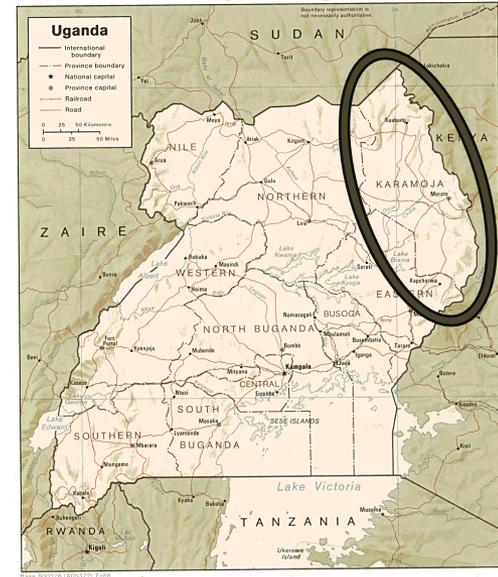
- **Pastoralist Areas Resilience Improvement through Market Expansion**
 - USAID Ethiopia Feed the Future
- **Project goals:**
 - increase household incomes
 - enhance resilience
 - Improve climate change adaptive capacity
- **Program beneficiaries**
 - pastoralists, non-pastoralists, and other
- **Geographic location**
 - 2 areas in Ethiopia (Borena and Jijiga)
- **Data**
 - Baseline (2013)
 - Interim monitoring data (2014 – 2015, 6 months)



Studies: BRACED

- **Build the Resilience and Adaptation to Climate Extremes and Disasters Program**
 - Mercy Corps
- **Goals:**
 - enhance resilience
 - improve climate change adaptive capacity
 - public sector engagement & service delivery
- **Program beneficiaries**
 - vulnerable groups, esp. women and girls
- **Geographic location**
 - Karamoja, Uganda
 - Wajir county, Kenya
- **Data**
 - Baseline (quantitative)

Karamoja, Uganda

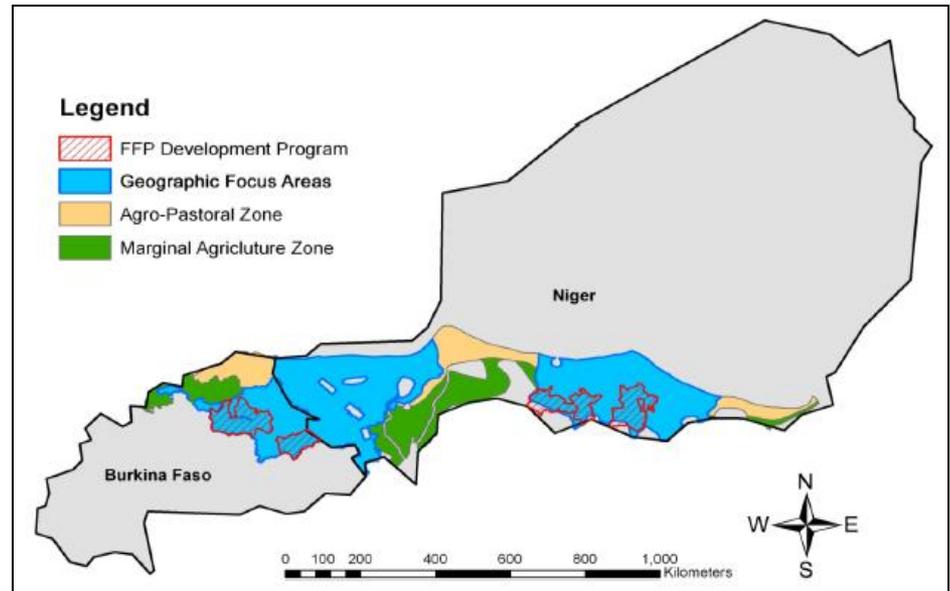


Wajir county, Kenya



Studies: RISE

- ***Resilience in the Sahel Enhanced (RISE) initiative***
- **Goal:** increase the resilience of chronically vulnerable populations in agro-pastoral and marginal agriculture livelihood zones of the Sahel.
- **Program beneficiaries**
 - Agriculturalist, pastoralist , other
- **Geographic location**
 - Burkina Faso (Eastern, Northern Central, and Sahel)
 - Niger (Zinder, Maradi and Tillabery)
- **Data**
 - Baseline (quantitative)



Samples from Project areas

	Project area	# of households	# of communities
PRIME	Jijiga	1398	32
	Borena	1744	41
BRACED	Karamoja	553	24
	Wajir	563	10
RISE	Burkina Faso and Niger	2492	100

Methodology

- In order to measure the impact social capital has on resilience, indices were created for bonding, bridging and linking social capital.
- The **bonding social capital** index is based on eight yes/no questions about whether the household would be able to give or receive help from relatives or non-relatives in their community.
- The **bridging social capital** index is based on eight similar yes/no questions, but about giving and receiving help from relatives or non-relatives living *outside* their community.

Methodology

- The **linking social capital** index measures the amount of information received from government agents (i.e., rural development agents and government/political officials).
- The index also measures households' access to services generally provided by the government and the quality of those services

Methodology

- The dependent variable **Household food security** is the inverse of an experiential indicator of food insecurity, the Household Food Insecurity Access Scale (HFIAS).
- The HFIAS is an index constructed from the responses to nine questions regarding people's experiences of food insecurity in the previous four weeks

Methodology

- The dependent variable, **recovery** takes into account households' ability to recover from climatic, conflict, and/or economic shocks using a 4-point likert scale.
- The dependent variable **HH shock impact** is an index which takes into account if a household experienced a shock within the last 12 months, how many times they experienced a shock with in the last 12 months, and how severe the impact of the shock was on income and food consumption.

Multivariate regression analysis

- The results explore the relationship between the three types of social capital and the dependent variables: household food security, households' ability to recover from shocks and shock exposure. The three models used are:

- $$H \text{ Food Security} = f \left(\begin{array}{l} \textit{Social capital (bonding, bridging, linking),} \\ \textit{HH assets, HH human capital, HH individual power,} \\ \textit{HH access to safety nets, HH livelihood profiles,} \\ \textit{community characteristics, HH exposure to shocks} \end{array} \right)$$

Multivariate regression analysis

- $HH\ Recovery = f\left(\begin{array}{l} \text{Social capital (bonding, bridging, linking),} \\ HH\ assets, HH\ human\ capital, HH\ individual\ power, \\ HH\ access\ to\ safety\ nets, HH\ livelihood\ profiles, \\ community\ characteristics, HH\ exposure\ to\ shocks \end{array}\right)$
- $HH\ Shock\ Impact = f\left(\begin{array}{l} \text{Social capital (bonding, bridging, linking),} \\ HH\ assets, HH\ exposure\ to\ shocks \end{array}\right)$

Food Security Results for PRIME

Table 1. Relationship between social capital and household food security for PRIME baseline

Indicators	Jijiga				Borena			
	Coefficient	Elasticity	n		Coefficient	Elasticity	n	
Social capital								
Bonding social capital	0.005	0.030	1236		0.072 ***	0.732	1566	
Bridging social capital	0.015	0.057	1253		0.054 ***	0.402	1624	
Linking social capital	0.025	0.105	1253		-0.005	-0.029	1624	

NOTES: Stars represent statistical significance at the 0.01 (***) , 0.05 (**) and 0.1 (*) levels.

Food Security Results for BRACED

Table 1. Relationship between social capital and household food security for BRACED

Indicators	Karamoja				Wajir			
	Coefficient		Elasticity	n	Coefficient		Elasticity	n
Social capital								
Bonding social capital	0.378	***	0.518	531	-0.046		-0.017	545
Bridging social capital	0.387	***	0.513	531	-0.033		-0.010	545
Linking social capital	0.446		0.573	531	-1.674	***	-0.807	544

NOTES: Stars represent statistical significance at the 0.01 (***) , 0.05 (**) and 0.1 (*) levels.

Food Security Summary

- Bonding and bridging social capital are significantly associated with increased food security in Borena and Karamoja but not in Jijiga and Wajir
- Linking social capital has the greatest influence on food security in Wajir when controlling for all aspects of resilience capacity

Recovery Results for PRIME

Table 2. Relationship between social capital and recovery for PRIME baseline

Indicators	Jijiga				Borena			
	Coefficient		Elasticity	n	Coefficient		Elasticity	n
Social capital								
Bonding social capital	0.009	***	0.212	1127	0.005	***	0.152	1430
Bridging social capital	0.007	***	0.110	1146	-0.002	*	-0.041	1476
Linking social capital	0.043	***	0.757	1146	0.004		0.073	1476

NOTES: Stars represent statistical significance at the 0.01 (*) , 0.05 (**) and 0.1 (*) levels.**

Recovery Results for BRACED

Table 1. Relationship between social capital and recovery for BRACED

Indicators	Karamoja				Wajir			
	Coefficient		Elasticity	n	Coefficient		Elasticity	n
Social capital								
Bonding social capital	0.378	***	0.518	531	-0.046		-0.017	545
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NOTES: Stars represent statistical significance at the 0.01 (***), 0.05 (**), and 0.1 (*) levels.

Community (kebele) fixed-effects regression. t-statistics are robust to heteroskedasticity.

Recovery Summary

- In both Jijiga and Borena bonding and bridging social capital enabled households to recover
- Linking social capital was important for recovery in Jijiga but not Borena
- Bonding and bridging social capital were important for recovery in Karamoja but not Wajir
- Linking social capital was important to recovery in Wajir

Shock Impact Results for PRIME

Table 3. Relationship between social capital, asset index, and number of shocks on shock exposure for PRIME baseline

	Jijiga						Borena					
	Only bonding social capital		Only bridging social capital		Only linking social capital		Only bonding social capital		Only bridging social capital		Only linking social capital	
Indicators	(A)		(B)		(C)		(A)		(B)		(C)	
Social capital												
Bonding social capital	-0.011	***					-0.008	***				
Bridging social capital			-0.011	***					0.012	***		
Linking social capital					0.000						0.004	
Asset index	0.002		-0.002		-0.006		-0.015	*	-0.032	***	-0.020	***
Number of shocks	3.564	***	3.558	***	3.563	* * *	3.611	***	3.599	***	3.592	***
Number of observations	1324		1351		1352		1618		1618		1618	

NOTES: Stars represent statistical significance at the 0.01 (***) , 0.05 (**) and 0.1 (*) levels.

Shock Impact Results for BRACED

Table 3. Relationship between social capital, asset index, and number of shocks on shock exposure for BRACED

	Karamoja						Wajir					
Indicators	Only bonding social capital		Only bridging social capital		Only linking social capital		Only bonding social capital		Only bridging social capital		Only linking social capital	
	(A)		(B)		(C)		(A)		(B)		(C)	
Social capital												
Bonding social capital	-0.033	***					0.000					
Bridging social capital			-0.031	***					0.003			
Linking social capital					-0.021	*					-0.008	***
Asset index	-0.062	***	-0.063	***	-0.064	***	-0.036	***	-0.036	***	-0.033	***
Number of shocks	0.621	***	0.622	***	0.621	***	0.278	***	0.277	***	0.275	***
Number of observations	545		545		546		547		547		546	

NOTES: Stars represent statistical significance at the 0.01 (***) , 0.05 (**) and 0.1 (*) levels.

Shock Impact Summary

- Bonding and bridging social capital help mitigate the effect of shocks in Borena and Jijiga
- Linking social capital does not have an effect in either Jijiga or Borena
- All three types of social capital have a mitigating effect on shocks in Karamonja but only linking social capital in Wajir

RISE Baseline Results

RISE Baseline: Links between social capital, ability to recover and food security

	Ability to recover index		Probability of recovering from any shock		Household food security	
Bonding social capital	0.0025		0.004		0.039	
	(2.44)	**	(2.67)	***	(5.91)	***
Bridging social capital	0.002		0.004		0.317	
	(2.50)	**	(3.05)	***	(4.73)	***
Linking social capital	0.013		0.023			
	(1.41)		(1.62)		(2.51)	**

Notes: t-statistics in parentheses. Stars indicate statistical significance at the (***) 1%, (**) 5%, and (*)10% levels.

Summary Findings of RISE Baseline

- Bonding and bridging social capital are critical to recovery
- All three types of social capital have a positive impact on food security

Social capital and wealth status

- The highest wealth tercile in both Jijiga and Borena areas have greater bonding, bridging, and linking social capital when receiving assistance
- However in terms of giving assistance, the wealthier give more in Borena but not in Jijiga

Figure 4. Social capital indices (mean values) for households receiving/giving assistance by wealth tercile, Borena

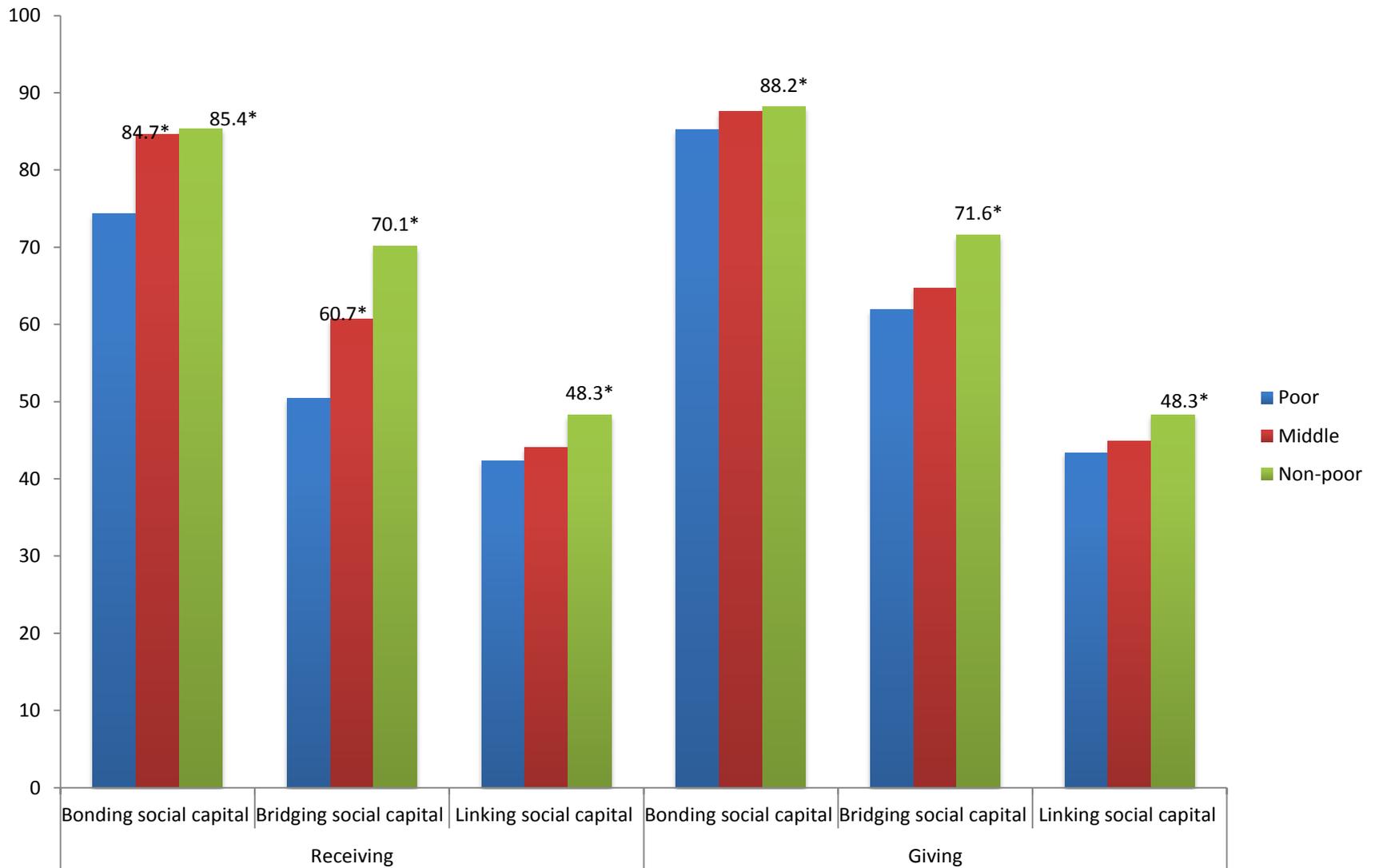
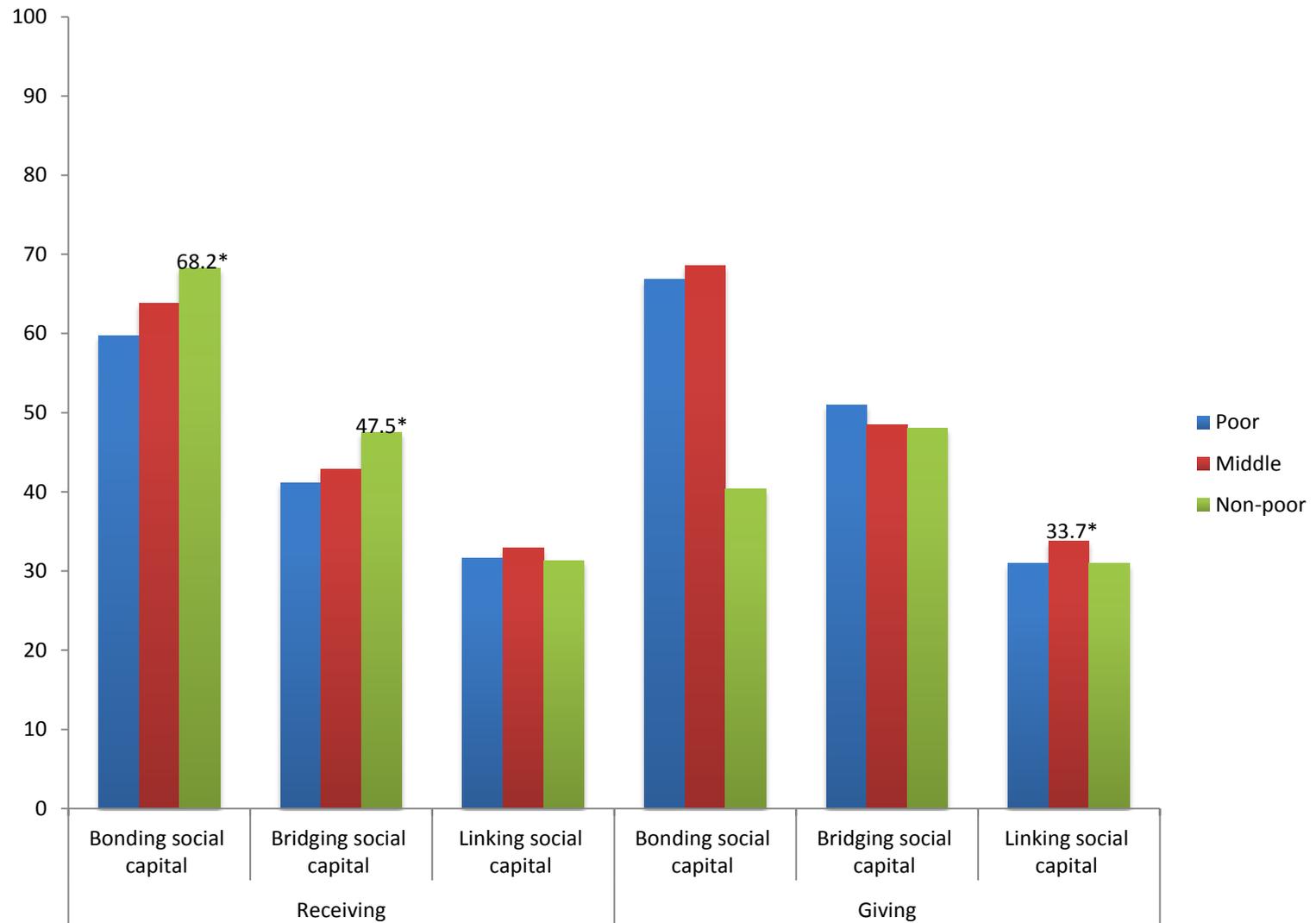


Figure 3. Social capital indices (mean values) for households receiving/giving assistance by wealth tercile, Jijiga



Interim Monitoring in Prime

- The 2014 drought in PRIME project areas led to major pasture and water shortages and livestock and crop diseases, resulting in the deterioration of livestock health, livestock deaths, and crop failures.
- Soaring cereal prices and plummeting livestock prices led to the decline of the livestock-to-cereal terms of trade.
- Farmers struggled to obtain food through market channels rather than relying on their own crop production.
- Further, there were extensive abnormal migration patterns as pastoralists and agro-pastoralists searched for water and pasture for their animals.
- One of the most important coping strategies to deal with the drought used in both Jijiga and Borena is reliance on social capital.

Table 1. Effect of resilience capacity and selected index sub-components on changes in food security over the drought

Shock measure:	Change in rainfall deficit from baseline to R1			12-month rainfall deviation from norm at R1			Cumulative (net) rainfall deficit from baseline to R1			Change in soil moisture deficit from baseline to R1			Cumulative soil moisture deficit from baseline to R1			Perceptions-based drought exposure index (Kebele fixed-effects), R1		
	All	Borena	Jijiga	All	Borena	Jijiga	All	Borena	Jijiga	All	Borena	Jijiga	All	Borena	Jijiga	All	Borena	Jijiga
Absorptive capacity		5%			1%			1%			5%			1%			10%	
Bonding social capital		10%			5%			5%			5%			5%			10%	
Access to informal safety nets		5%	5%		10%			10%	10%		5%	5%		5%	5%			
Holdings of savings																		10%
Asset index	10%	5%		5%	5%		10%	5%		10%	5%		10%	5%		5%	5%	
Adaptive capacity																	10%	
Bridging social capital	10%			10%			10%			10%			10%			10%		
Linking social capital																		
Human capital		5%			5%			5%			5%			5%			1%	10%
Aspirations/confidence to adapt																		
Exposure to information																		
Livelihood diversity																		
Access to financial resources					5%						10%							
Transformative capacity																		
Bridging social capital	10%			10%			10%			10%			10%			10%		
Linking social capital																		
Access toformal safety nets																10%		
....markets		5%						10%						5%			5%	1%
....infrastructure																	10%	
....basic services	5%			5%			5%			10%			5%			5%		
....communal natural resources					10%			10%	5%	10%				5%	5%			
....livestock resources																		

Note: Percentages in boxes are significance levels associated with each measure in the first column. Red-shaded cells indicate a positive, statistically significant coefficient at least at the 10% level. Purple-shaded cells indicate a negative coefficient at least at the 10% level.

Interim Monitoring in Prime

- In Borena, the initial round of IMS data shows that households' absorptive capacity had a positive impact on their ability to recover from the drought, despite having a higher shock exposure than Jijiga.
- Bonding social capital is thought to contribute to these households' absorptive capacity.
- However, over the six rounds of the IMS data collection this social capital started to erode

Interim Monitoring Survey

- In the face of such a large covariate shock, better-off households were not able to support the poorer households with redistribution of food and animals as they do in normal times.
- Community leaders, particularly clan leaders, were forced to migrate with their animals in search of water and fodder, making it more difficult for governance structures to function to enable the redistribution of food and resources.

Conclusions

- Social capital appears to have a positive effect on food security, helps households recover and mitigates the effect of shocks across the different data sets
- Thus social capital appears to be critical to resilience
- Wealthier households appear to receive the benefits of social capital more than poorer households
- Social capital can be used up in the early phases of a prolonged covariate shock and its downstream effects

Thank You!



Any Questions?