RESILIENCE: A PRIMER

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Recurrent humanitarian crises have led many development actors to begin thinking differently about development issues. Rather than placing humanitarian assistance, governance, food security and nutrition, economic development, and other topics in separate silos, many are using the concept of *resilience* to join up their myriad activities. Constas, Frankenberger, and Hoddinott wrote, "In a world where conventional approaches to dealing with humanitarian aid and development assistance have been questioned, resilience has captured the attention of many audiences because it provides a new perspective on how to effectively plan for and analyze the effects of shocks and stressors that threaten the well-being of vulnerable populations."[1] Despite the promise and hype of resilience, or perhaps because of it, a backlash has already begun. Does it really add new and useful understanding to development theory and practice, or is it merely more development jargon? This brief addresses this concern through an overview of what resilience means and how it is conceptualized before discussing implications for measurement and for policy.

RESILIENCE: DEFINITION AND CONCEPTUAL FRAMEWORKS

The word *resilience* comes from the Latin word *resilire,* which means "to rebound or recoil." Its earliest usage was in 19th-century shipbuilding, and it is used extensively in civil and mechanical engineering. Starting in the 1970s, researchers in the fields of ecology and psychology began to explore the notion of resilience. In ecology, resilience was described as the amount of disturbance a system can absorb before shifting into an alternative state.[2] Others focused on the speed of return to a preexisting equilibrium following a perturbation or shock. Around the same time, psychologists also began exploring the notion of resilience, developing scales of resilience that captured notions such as self-efficacy, attitudes toward change, realistic sense of control, patience, ability to engage the support of others, secure attachments, and optimism.

Several authors have documented the evolution of discourse on resilience in development.[3] The myriad definitions that now exist share common elements with work in other fields and with each other. All emphasize that resilience is an ability to respond to transitory adverse events (shocks) or more persistent adverse trends (stressors). Resilience can be applied at different levels of aggregation: individuals (as in the psychological literature), households, communities, organizations and systems (as in the ecology literature), or states. Finally, all have a temporal focus, putting greater emphasis on the potential long-term adverse consequences of shocks. Drawing on these commonalities, Constas, Frankenberger, and Hoddinott offered the following definition: "Resilience is the capacity that ensures adverse stressors and shocks do not have long-lasting adverse development consequences."[4]

The plethora of conceptual frameworks for resilience also share common components. These include highlighting the broader environment in which a household (or individual or some other unit of observation) resides; the resources available to that household; how that household uses those resources; how the economic returns on those uses are affected by shocks that household experiences; and how the outcomes of those uses lead to consumption of food and other goods and services, savings, health and nutrition status, and other such outcomes.

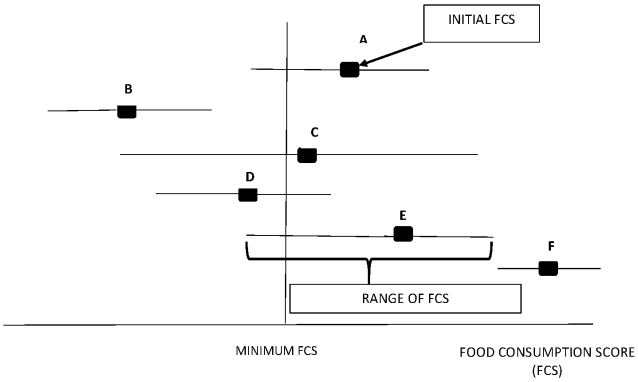
With these ideas in mind, consider Figure 1. It uses a measure of food security called the food consumption score (FCS), but we could easily substitute some other measure of food security or nutritional status. Figure 1 graphs two elements of the FCS for six households, its initial level shown by the dark rectangles, and its range or variability shown by the horizontal lines going outward from each rectangle. The initial value reflects the settings of and resources available to households as well as their livelihood strategies and any shocks that may have occurred. As shown in Figure 1, four households (A, C, E, and F) are food secure (their FCSs lie to the right of the minimum FCS vertical line) and two (B and D) are food insecure (their FCSs lie to the left of the minimum FCS vertical line). The range gives us an indication as to how shocks of different types and severity will affect food security, given these settings, resources, and activity choices. Given the range of possible FCS values observed for these households, five households (A, B, C, D, and E) are vulnerable to becoming food insecure.

Suppose that an adverse shock occurs, causing the FCS for all households to fall, or as shown by the arrows in Figure 2, to shift leftward along the black horizontal lines. Differences in the magnitude of these shifts reflect differences in how households are affected by this shock. The FCS for each household is given by the diamond shape. Five households are now food insecure.

Figure 3 describes the food security status of each household after the shock has passed. FCSs are now denoted by circles with a wavy fill pattern, with the direction of change in FCS from that shown in Figure 2 denoted by the open-filled arrows. In three households (A, D, and F), the FCS returns to the level observed in Figure 1; in fact, in the case of household

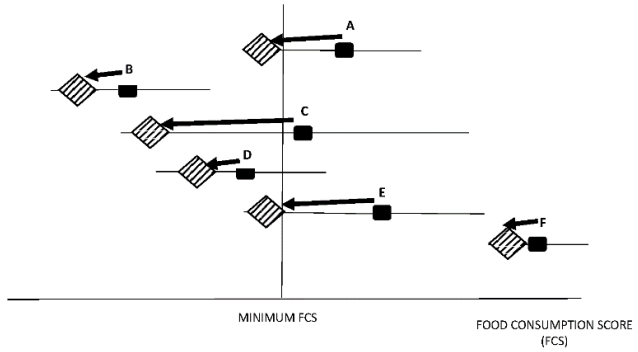
F, the FCS now exceeds its initial level. In two households, B and D, there is partial recovery from the shock, but in Figure 3 the level of FCS is still less than that observed in Figure 1. Finally, the food security situation for household E has continued to deteriorate, with its FCS now lower than it was in Figures 1 and 2.

Figure 1 Initial food security outcomes for six households



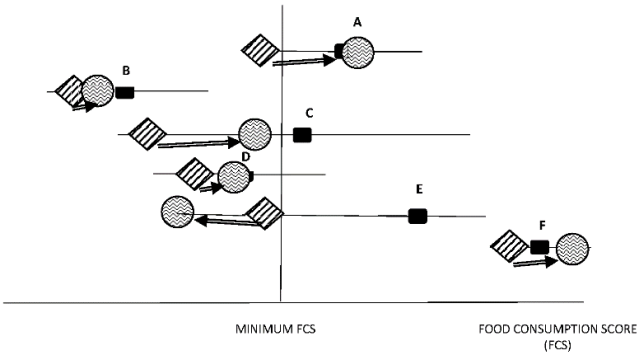
Source: Author.

Figure 2 Food security outcomes for six households following an adverse shock



Source: Author.

Figure 3 Food security outcomes for six households during recovery



Source: Author.

Taking this sequence of figures together, households A, D, and F would appear to be resilient—they were able to recover and return to their preshock level of FCS. Households B and C exhibit some resilience inasmuch as their FCS partially recovers. Household E exhibits no resilience.

Note that resilience is not merely the converse of vulnerability. Vulnerability is the "likelihood that at a given time in the future, an individual will have a level of welfare below some norm or benchmark."[5] Work on vulnerability and work on resilience do share common features. Both emphasize that households and individuals are strongly affected by the settings they find themselves in. Both give prominence to the asset holdings of households. Both resilience and vulnerability emphasize that the conjunction of settings and assets determines livelihood strategies and that these strategies are both affected by and respond to shocks and stressors. However, vulnerability research focuses on the question, "Will shocks push people into poverty?" Work on resilience asks, "Do shocks or stressors have *long-term* adverse consequences?"

IMPLICATIONS FOR MEASUREMENT

Measures of resilience must distinguish between the ex ante (preshock) capacity of resilience and the ex post time path of the outcome (food security, nutrition, and so on) after the shock has occurred. Collection and analysis of the ex post time path can draw heavily on existing metrics. For example, in the case of undernutrition, we could track weight for height and height for age, assessing the timing and severity of their fall and the length of time it takes to recover from the shock.

Most attention has focused on measuring ex ante capacity to be resilient. Much of this work aims to construct a resilience index, which typically takes the form of a scale aggregating across a set of diverse assets, livelihood activities, and outcomes. Alternatively, some indexes could be based on responses to questions regarding households' perceptions of their resilience. Measures of resilience capacity are still in their infancy. Work on them must grapple with several difficult problems.

Resilience capacities are setting and shock/stressor specific. If a household is resilient to one type of shock, it does not follow that the household is resilient to all shocks. As an example, consider two rural households. In one, livelihoods are derived from farming activities; in the second, the household receives wage income from a member's employment as a government schoolteacher. The schoolteacher's household may be more resilient to a climatic shock, say a flood, than the farming household. But if there is an economic or governance shock that causes governments to stop paying teachers, the farming household is less likely to be affected.

Much of the work done on resilience indexes focuses on levels of assets. These are important, but so too are the returns on assets. A single drought does not necessarily destroy land as an asset, but it does dramatically diminish the income generated from land; further, the relationship between assets and resilience may be nonlinear and therefore difficult to capture in a single index. An earlier literature on the economics of famines offers an additional caveat. A focus on assets risks ignoring nonmarket entitlements—which include not just aid and welfare transfers but also the complex social relationships that exist between households and that may be important components of resilience.

There is a difficult question of whether welfare weights should be attached to these indexes. Suppose we wish to assess the success of an intervention designed to increase resilience capacity. Do we ascribe equal weight to increasing

the resilience of any household or do we put more weight on improving the resilience of less advantaged households? How do we make these weights gender sensitive? Determining these weights and how they are applied is not straightforward.

Two further points are worth noting. Much of the focus on measurement has been on the resilience capacity of individuals or households. But resilience can also be thought of in terms of institutions, governments, informal social protection mechanisms, or more generally, systems, and there has been much less work on measuring resilience at these levels. Last, any proposed measure should be subjected to tests of validity and reliability; in the case of measures of resilience capacity, we are also interested in understanding their predictive power. As yet, there is little work in these areas.

IMPLICATIONS FOR POLICY

In a number of development agencies, resilience has emerged not so much as a new conceptual construct but rather as an organizing framework that integrates humanitarian and development efforts. As an organizing framework, there is scope for taking it further. Efforts to mitigate and adapt to climate change are one example. While current development discourse treats them as a distinct activity, using resilience as an organizing framework is a means of mainstreaming them in broader development efforts. Work on strengthening informal and formal collective action, including work on governance, also becomes integrated into a broader development effort. Shifting from a focus on vulnerability to one on resilience emphasizes the positive over the negative or maladaptive. But if the contribution of resilience to development policy and practice is merely rhetorical, it is not clear that it is worth all the attention it currently receives. There are, however, other implications of looking at food security and nutrition or indeed broader development objectives through a resilience lens.

In psychology and ecology, people and species do not live in isolation. Rather, they are part of a broader social or ecological system. Indeed, in the child psychology literature, the ability of children to access a supportive network is often seen as a core element of their resilience. With some exceptions, many current development efforts bypass systems and instead focus on individuals. Given how difficult it can be to work within existing systems such as government structures, bypassing them means that when called upon in time of need, such systems themselves are not resilient. Rather than assisting affected households and individuals in bouncing back more quickly, they crumble. So one implication of an approach to development grounded in the notion of resilience is increased attention to systems, especially governance. That said, systems do not and should not work in isolation, either. Rather, increased attention to resilience implies thinking holistically about development interventions. Ethiopia's Productive Safety Net Programme provides a good example.

Resilience focuses attention on the idea that short-term shocks are malign not just because of their immediate effects but also because of their adverse long-term consequences. This idea is especially important in the context of addressing chronic undernutrition, given the compelling body of evidence showing that not only do shocks and stressors such as civil war and drought have immediate effects on preschool children's nutritional status but that these effects persist into adulthood. In turn, this idea takes us to a final implication of a resilience lens on development. Children in households with greater resilience are likely to be better nourished and better schooled; in turn, as adults, these children will likely be more resilient to the shocks and stressors they face. A resilience lens gives especial importance to human capital formation (health, schooling, nutrition) as a means of building sustainable resilience; it creates a virtuous circle of development.

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NOTES

[1] M. Constas, T. Frankenberger, and J. Hoddinott. 2014. *Resilience Measurement Principles*. Food Security Information Network Technical Series 1. Rome: Food and Agriculture Organization and World Food Programme, 4.

[2] See C. S. Holling. 1973. "Resilience and Stability of Ecological Systems." *Annual Review of Ecology and Systematics* 4:1–23.

[3] Examples include C. Béné, R. Wood, A. Newsham, and M. Davies. 2012. *Resilience: New Utopia or New Tyranny? Reflection about the Potentials and Limits of the Concept of Resilience in Relation to Vulnerability Reduction Programmes*. Centre for Social Protection Working Paper 6. Brighton, UK: Institute of Development Studies; and International Food Policy Research Institute. 2013. *Definitions of Resilience: 1996–Present*. Washington, DC. http://www.2020resilience.ifpri.info/files/2013/08/resiliencedefinitions.pdf.

[4] Constas, Frankenberger, and Hoddinott 2014, 6.

[5] J. Hoddinott and A. Quisumbing. 2010. "Methods for Microeconometric Risk and Vulnerability Assessment." In *Risk, Shocks and Human Development: On the Brink,* edited by R. Fuentes-Nieva and P. A. Seck, 72. London: Palgrave Macmillan for United Nations Development Programme.

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