Spotlight 3: Resilience to shocks

Structural and rural transformation – effects on resilience
The forces underlying structural and rural transformation – especially commercialization and specialization – can catalyse new kinds of assets and capabilities that yield new livelihood options and institutional arrangements. Together, these can confer greater resilience to shocks and boost capacity to recover from them. But those same forces can breed new hazards, vulnerabilities and risks that in certain circumstances can combine to blunt the capacity to withstand and recover from shocks.

Incidence and types of shocks
Risk and vulnerability are chronic realities of social and economic life in rural areas (Barrett and Carter 2012), where the combination of weather, geography, ecology, population shifts, sociocultural factors and infrastructure development renders most rural populations vulnerable to various shocks, including:

- **Climate change**, leading to greater frequency of droughts, storms and floods, often wreaking havoc on the agricultural production systems underpinning most rural livelihood systems.
- **Sharp seasonal volatility** in prices of key goods, in particular staples, as a consequence of the interaction of the agricultural calendar with thin infrastructure.
- **Terms-of-trade shocks**, which often generate effects transmitted sharply to rural communities producing exportables (Broda and Tille 2003).
- **Access to public services**, which is especially challenging given the wide dispersion in human settlements and reduces the access of rural people to coping mechanisms.
- **Physical displacement and commercial disruption**, stemming from civil strife, often cutting sharply through rural communities.

Resilience-enhancing effects of rural and structural transformation
As structural transformation reduces the proportion of the population whose livelihoods are reliant on natural resources and agriculture, it is likely to reduce the impact of a weather event on overall well-being. More specifically, coupled with specialization, the commercial imperatives that propel structural and rural transformation generate demand for new assets and capabilities. Households, communities and countries able to acquire and exercise them are rewarded in the form of improved livelihood options (box S3.1).

New assets
Structural transformation entrains specialized commercial activity (Johnston and Kilby 1975). Assets required for application in commercial activity must be acquired and applied. These assets include storage and handling capacity,
Historically, Bangladesh has been hit by a major cyclone or widespread flooding once every three years (World Bank 2013). In 1970, a cyclone killed nearly half a million Bangladeshis. A cyclone of similar strength in 2007 killed 4,000 (DFID 2011). In 1998, a major flood – dubbed the "flood of the century" – which affected about 45 million people, led to 2,300 deaths (del Ninno et al. 2001). Thus, in the years since 1970, Bangladesh has become more resilient. Also over the period, it has experienced an extraordinary structural transformation, from an agricultural economy to a highly diversified one with industry and services.

A detailed analysis of the 1998 floods sheds light on how key pillars of the structural transformation contributed to the greater resilience of rural communities (del Ninno et al. 2001). Communities now had assets and capabilities that allowed pursuit of livelihoods that proved to be more resilient.

Most flood-exposed households were able to avoid severe declines in welfare through a combination of private actions made possible by changes in the structure and functioning of the rural economy.

For households, these actions included major food purchases on the market, asset sales, wage employment and borrowing. Overall employment fell during the floods, but most workers found new jobs. The market for rice, the major food staple, functioned well, with the number of marketing agents having expanded greatly since the 1970s. The size of the market, investments in critical commercial infrastructure and the easing of restrictions on private trade led to an integrated and well-functioning market.

Related research on factors influencing wealth dynamics identifies substantial diversification of income sources in rural areas, along with ready access to well-functioning markets for labour and capital, both of which enhance households’ capacities to cope with shocks.

Sources: del Ninno et al. 2001; DFID 2011; World Bank 2013.
transportation equipment and related facilities, processing machinery and financial capital (Reardon et al. 2009). Recent studies of agrifood value chains and market infrastructure in several countries reveal significant investment in all of these areas within rapidly transforming food systems (Reardon 2015; Tschirley et al. 2015a, 2015b). With successful structural transformation, important changes in rural asset holdings also take place at the household level, as diversified, low-productivity, subsistence-oriented agriculture gives way to agrifood systems in which production is marked by greater specialization on-farm, but greater market-oriented diversification in aggregate (Haggblade et al. 2007; Reardon and Timmer 2014).

**New capabilities**
Structural transformation transfers many functions from households to specialist individuals and firms (Tomich et al. 1995), such as those linked to creating and maintaining commercial capacity. Literacy and numeracy are essential (Haddad et al. 2015). Financial literacy is especially important, as even small enterprises in far-flung locales increasingly must be operated as businesses (ACDI/VOCA 2015).

**Improved resilience**
Where structural and rural transformation induces acquisition of new assets and capabilities – in turn, allowing for pursuit of new livelihoods, organizational forms and institutional arrangements – households and communities should be better able to mitigate and recover from shocks. The core drivers of enhanced resilience are diversified production systems, diversified income sources, improved education, increased borrowing and savings, greater remittances from urban areas, enhanced management of natural resources and more effective public institutions.

**New vulnerabilities and risks under structural and rural transformation**
The economic forces of structural and rural transformation may increase risk by rendering some rural dwellers more exposed to new kinds of hazards and thus more susceptible to shocks:

- As commercialization and specialization rise, markets for core production factors (land, labour and finance) develop, serving those most able to access them. First-order economic hazards are threefold – landlessness and land-tenure insecurity, joblessness and underemployment, and financial exclusion (Barrett et al. 2001; Haggblade et al. 2007).

- Risks increased by commercialization and specialization include:
  - Production risks linked to the adoption of new inputs in new production lines (Pender and Alemu 2007) or to the loss of diversity in production systems (Pingali and Rosegrant 1995).
  - Price risks linked to market structure including non-competitive elements (Kirsten et al. 2009).
  - Policy risks tied to unpredictable public action in markets (Dorward and Chirwa 2009).
  - Health risks associated with industrial inputs, like pesticides and herbicides (Watts 2013).

- Added production can induce natural resource depletion and environmental degradation where appropriate policies, institutions and investments are not in place (see Spotlight 7), exposing households and communities to new hazards.

**Policy and investment implications**
Research indicates that the forces underlying structural and rural transformation generate impacts that do more to increase rural residents’ capacity to cope with shocks than to decrease it. But to the extent that the overall aim is inclusive transformation, there is room for policy change based on improved risk management:

1. *Promoting disaster preparedness and response* reduces the effects of given shocks while promoting long-term resilience, which, in turn, reduces the need for future emergency operations (WMO 2009).
2. Enhancing risk transfer by supporting micro-level insurance instruments, expanding the use of public works and employment-guarantee schemes, and widening access to finance for high-risk groups.

3. Encouraging prudent risk-taking for livelihood diversification by promoting financial literacy and rural commercial organizations, incentives for financial institutions to operate in rural areas and conditional transfers linked to capacity strengthening.

References


