Recovering after a Shock: A Unified Concept of Resilience for Measurement and Public Action

Jean-Luc Dubois¹, Jean-Marcel Koffi², Mama Ouattara³, and François-Régis Mahieu⁴

¹Unité mixte internationale Résilences (UMI RESILIENCES) – Université de Cocody (CIV), Centre ivoirien de recherches économiques et sociales (CIRES), Institut de recherche pour le développement [IRD] : UMI236 – IRD France-Nord 32 avenue Varagnat 93143 Bondy Cedex, France
²Université Alassane Ouattara – 27 BP 529 Abidjan 27, Côte d'Ivoire
³Centre Ivoirien de Recherches Economiques et Sociales (CIRES) – Abidjan, Côte d'Ivoire
⁴Université Versailles Saint-Quentin en Yvelines (UVSQ) – Université de Versailles-Saint Quentin en Yvelines, Université de Versailles Saint-Quentin-en-Yvelines – France

Abstract

When speaking of resilience, what are we talking about? How can we avoid ambiguities for a concept that covers a variety of situations, various ways of addressing the question, and refers to several scientific fields? This has consequences in terms of measurement and public policy design.

The concept of resilience is required to describe the ability of systems, human communities, and agents, to overcome the impact of exogenous or endogenous shocks, to recover on new grounds, and to reach a new sustainable living and developing path. It addresses ecological systems threatened by the process of production, the exploitation of resources, or natural disasters. But it also considers countries, regions, and communities that collectively treat the wounds of civil war, or people, especially children, whose failures have to be overcome.

Resilience of ecosystems, urban resilience, social resilience, individual resilience; all these are the many manifestations of resilience analyzed by ecology, engineering, geography, economics, and psychology. And the concept of resilience continues to spill over to many other scientific fields.

A unified definition of resilience could be formalized in quite a simple way by referring "the capability of a system, a community, or an agent, to restart, to bounce, to reborn, after a break or a traumatic shock, having destroyed all or part of its integrity”.

While referring to this definition, more precise distinctions can be introduced in order to avoid some ambiguities. For instance, we must distinguish resilience as the ‘capability’ of systems, institutions, and people to recover from shocks as defined above, and resilience as a ‘process’ composed of successive steps such as resistance and rebellion, adaptive capacity, quantitative reinforcement, qualitative innovation, rebirth … which aims at overcoming the negative consequences. This impact the production of relevant indicators based on the observation of capability, in the first case, and of the successive steps of the resilience process in the second.

*Speaker
Similarly, once recognized the distinction between capability and process, designing public intervention requires introducing, within the resilience process, a time distinction: ‘ex-ante’ (i.e. before the shock) and ‘ex-post’ (i.e. after the shock). Most public action is usually done in emergency after a disaster (i.e. ex-post) in order to preserve natural systems, or to help social groups overcoming the effects of shocks. However, one may prefer acting preventively, by preparing ex-ante people, and the environment, to respond to disasters, through the strengthening their capability to act accordingly, to overcome the negative consequences and to bounce to a new sustainable path. In the first case, i.e. ex-post, emphasis is mainly placed on public actions with local organizations and deductive indicators; in the second case, emphasis is more on public policy measures based on inductive indicators. This communication will initiate a discussion on this kind of distinctions that could help to clarify the concept of resilience in order to remove ambiguities and to facilitate the measurement of resilience and its determinants.

**Keywords:** Resilience, Capacities, Social Capital, Ethics, Sustainable Development