

D. Direct and Indirect Economic Impact

Key words:

socio-economic well-being, economic vulnerability, financial risk, lifeline infrastructures

UNISDR
2017 - UNISDR

How national economic systems are organized plays a central role in determining disaster risk by shaping their exposures and vulnerabilities; economic systems are then, in turn, significantly affected when disasters strike. The well-being of people and communities is intimately linked with the economic health and functioning of the community and region where they live. Most importantly, well-being is a function of the capabilities to pursue meaningful lives, capabilities that are directly influenced by the access to gainful employment and meaningful livelihood, to the requisite incomes, health and education services, and to all other resources necessary to pursue satisfying lives. It is these capabilities that are potentially diminished by disasters.

Long-term losses

Not only direct losses matter in assessing risk to well-being. When disasters hit, damages are experienced in terms of mortality and morbidity, as well as of assets, infrastructure and the environment. Long-term access to employment and education opportunities and resources that determine well-being may also be diminished by disasters. This is particularly significant for poorer households, which do not have many, if any, assets to lose, but which as a result of disasters typically experience more health and education setbacks, employment challenges and consequently reduced income, and other hindrances.

Measuring disaster risk must therefore involve understanding the exposure and vulnerability of economic systems to shocks and their ability to rebound and recover from them (their resilience), as well as the longer-term losses associated with their occurrence.

The assessment of risks to socioeconomic well-being at the national level involves both a sectoral and geographical assessment of vulnerabilities, and an additional assessment of linkages, the availability of financial and non-financial resources for recovery, and the likely recovery trajectories and pitfalls.

Unique vulnerabilities

Unique sectoral vulnerabilities, and the interactions between the exposure of these sectors and their vulnerabilities to specific hazards, must be assessed. One needs to understand the extent to which the sectors operating in one region, for example, are exposed to a specific hazard, and how these exposed/vulnerable sectors in the affected region interact with other regions and their economic activities, thereby creating more systemic (interregional) risks.

Regional and local economies are often dominated by a few sectors, and some sectors are much more vulnerable to specific types of hazards than others. Agriculture can be directly very vulnerable to some hazards (e.g. extreme temperatures) but less, and only indirectly, to others, such as earthquakes (because of their impact on transportation and processing facilities).

Manufacturing is directly vulnerable to hazards that destroy production and storage facilities, and the required infrastructure such as electricity networks. And tourism is uniquely vulnerable to hazards that affect perceptions of safety (or lack thereof) as these are presented in the mass media. As such, any national risk assessment needs to identify the specific vulnerabilities of the main sectors and those risks facing large firms or employers in each region that is being assessed.

Of specific concern is the increased vulnerabilities faced by some populations. This is especially serious for groups that face obstacles even during the best of times, such as people with low income and assets, minority ethnic and religious groups, the disabled and other marginalized groups. Each of these demographics, further distinguished by gender, is vulnerable in unique ways, and accounting for these is important if one is to understand the likely impact of a disaster on their well-being.

Spillovers and ripple effects

An assessment of unique regional economic vulnerabilities should also examine the links between regions and how impacts in one region may spill over to other regions. Spillovers are especially likely if the sectors that are dominant involve longer supply chains, and these supply chains have blockages or lack sufficient redundancies to make them more robust to temporary cuts in some links in the chain.

For the economy to function well, lifeline infrastructure (water, electricity, transportation, communication), beyond the direct effect on well-being, is especially important. Without lifelines, even if there is no direct damage to the population, the economy – and therefore employment – will grind to a halt.

Vulnerabilities in lifelines are amplifiers for other vulnerabilities and their role should be emphasized in risk assessment. One should assess how long it would take to re-establish lifeline connections in the aftermath of a disaster, and how one can eliminate or reduce the period of disconnection.

Financial constraint to reconstruction

Beyond lifelines, the main constraint for recovery is generally financial. Risk assessment therefore also needs to consider a realistic assessment of the amount of resources that might be available during the prolonged recovery phase, and how one can plan for any necessary additional resources. Given the constraints around resources, pre-disaster planning for recovery should also assess the opportunities to use the available resources as effectively as possible.

Although financial resources are only some of the inputs needed for recovery, they have a significant impact on recovery trajectories as the inflow of timely financial resources to affected sectors, households and governments contributes to reducing the medium- and long-term consequences of disasters. Many financial resources – formal and informal – can be employed (e.g. savings, credit, assistance). Pre-event arrangements (risk financing) are, however, generally preferable, as they guarantee a timely inflow.

Many countries have set up national and regional catastrophe funds, and generally some sort of market-based insurance, at varying levels of coverage and public-sector involvement. Any comprehensive assessment of financial risk options should include an assessment of who bears and transfers which financial risks, and where these financial risks ultimately reside (domestically/offshore). Options for risk financing to consider should also include agreements with multilateral organizations to provide financial support should an event occur (e.g. contingent credit programmes) or an assessment of the amount of official development assistance that will likely be received.

Other constraints to the reconstruction

The ability to access international assets, resources and knowledge – other than financial – is equally important; especially for the emergency phase, which will involve an assessment of the kinds of assets that could be required (e.g. transportation modes for evacuations), where they are located, and how they can be made accessible. This should also include an assessment of early warning systems, as these can also be used to move economic assets out of harm's way. For very catastrophic events, resource constraints – other than financial – may also hinder a successful recovery (e.g. skilled labour for the construction sector).

It is crucial to assess the capacity of a government to mobilize and organize resources, from whatever source, in the aftermath of a disaster. Governance and institutional capacity play a significant part in the ability of the economy to recover. Where applicable, a government should also assess its own preparedness and ability to mobilize, even in cases when some of its own

assets get damaged and its employees get injured in a disaster event.

Authors:

Ilan Noy (Victoria University of Wellington)

Contributors and Peer Reviewers:

Stephane Hallegate (World Bank), Reinhard Mechler and Junko Mochizuki (International Institute for Applied Systems Analysis)

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