The effect of sanctions on food security and nutrition & health security

Sanctions has harmful effect on food security and health outcomes, especially in conflict-affected regions.

Geographic region: Global, Sub Saharan Africa

Effect size: Harmful effect (g = -0.005)

Confidence in study findings: Low (2 studies with 13 effect sizes)

Short summary

Sanctions, particularly economic and trade measures, negatively impact food security, nutrition, and public health. They reduce access to food, clean water, and healthcare services while decreasing immunization rates and government health spending. In conflict-affected areas like the Democratic Republic of the Congo, sanctions significantly worsen infant mortality and aggravate resource scarcity, disproportionately harming vulnerable populations.

Long summary

The intervention

Sanctions are tools used to influence state behaviour, often imposed in response to human rights violations, political repression, or conflict. Sanctions can be comprehensive, affecting entire economies through trade restrictions and financial measures. They could also be targeted, focusing on specific sectors, individuals, or entities. Trade sanctions, such as those implemented through the Dodd-Frank Act (2010) in the Democratic Republic of the Congo (DRC), aim to disrupt funding sources for armed groups by restricting the mining and trade of conflict minerals, such as tin, tantalum, and tungsten. While these interventions are intended to promote stability and security, they can also have significant consequences for food security, nutrition, and health, particularly in regions dependent on resource extraction and already facing fragile governance systems.

How the intervention is expected to affect this outcome

Sanctions are intended to influence state or group behaviour by restricting access to economic resources. The logic behind these measures is that depriving regimes or armed groups of financial resources will weaken their capacity to sustain conflict or repression. In cases like the DRC, trade sanctions are designed to limit armed groups' access to revenue from conflict minerals, with the expectation that this will reduce violence and improve security outcomes. However, these measures can disrupt local economies and livelihoods, particularly in communities dependent on resource extraction. Reduced economic activity limits households' access to food, clean water, and healthcare services, which could result to higher levels of malnutrition and mortality, especially among vulnerable groups. Sanctions have also been shown to decrease government health spending, immunization rates, and overall life expectancy. In conflict zones, the combined effects of economic sanctions and ongoing instability can further exacerbate food and health insecurity.

The evidence base

This cell includes 2 impact evaluations. One of the studies is rated with medium confidence while the other is rated with low confidence.

All the studies utilized secondary data. One utilizes a global dataset while the other focuses on the implications of U.S. trade sanctions (under the 2010 Dodd-Frank Act) on the DRC.

Evidence findings

Sanctions negatively impact food security, nutrition, and health by reducing access to essential resources, weakening healthcare systems, and exacerbating vulnerabilities in conflict-affected areas. They contribute to decreased immunization rates, lower government health spending, and declining life expectancy, with particularly severe effects on infant mortality and health-adjusted life expectancy (HALE). When combined with military conflict or policies disrupting local economies, sanctions significantly worsen food insecurity and health outcomes, disproportionately harming vulnerable populations.

Included studies

Allen and Letzkian (2013) investigates the impact of economic sanctions on public health in targeted countries, comparing their effects to those of military conflicts. The study employs generalized estimating questions (GEE) and Heckman selection models to analyse cross-national data from 1990-2007, examining the public health impacts of economic sanctions and military conflicts. Key variables include public health indicators—food supply, immunization rates, government health expenditures, life expectancy, and health-adjusted life expectancy (HALE)—as dependent variables, with sanctions and conflict intensity as independent variables. Sanctions alone have minimal statistical effect on food availability, but the combination with military conflicts significantly exacerbates food insecurity. Regression results show that both sanctions and military conflicts significantly harm public health. Sanctions reduce immunization rates, government health spending, and life expectancy, with major sanctions having particularly severe impacts on health-adjusted life expectancy (HALE). These effects are amplified when sanctions coincide with ongoing military conflict. The study is rated medium confidence as it is non-experimental.

Parker(2016) explores the impact of the US policy on preventing certain companies from sourcing particular conflict minerals from the eastern Democratic Republic of the Congo (DRC), particularly on infant mortality. This intervention is known as the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act and the study compares the infant mortality rates in areas regulated by the policy to those in non-mining and non-regulated areas, before and after its implementation. The study applied a difference-in-difference approach on the ‘birth recode’ data set from five eastern Congo provinces. The treatment group has two conditions: the area (or village) must have within the Dodd-Frank policy zone and must be in close proximity to at least one 3T (tin, tantalum, and tungsten) mine operating prior to the Dodd-Frank. Meanwhile, the control group consists of villages in close proximity to a 3T mine, but outside the policy zone or villages within the policy zone but further from a 3T mine. The results indicate a significant increase in infant mortality in villages near conflict mineral zones after the Dodd-Frank effect took effect. Mortality rose by an estimated 143% from a baseline of 60 deaths per 1,000 births to 146 per 1,000. The study is rated low confidence due to a lack of reporting attrition.

Confidence assessment

Overall low: The cell has less than 4 impact evaluation studies. One of the studies is rated as low confidence while the other is rated as medium confidence.