The ripple effect: economic impacts of internal displacement

This thematic series focuses on measuring the effects of internal displacement on the economic potential of IDPs, host communities and societies as a whole.
INTRODUCTION

Two thirds of the people internally displaced by conflict around the world live in low or lower middle income countries, and less than one per cent in high income countries. Similarly, disaster displacement risk is unevenly distributed, with low income countries bearing the greatest risk in relation to population size.

Understanding how socioeconomic development relates to internal displacement, as a driver or as an impact, can help governments assess displacement risk, improve crises prevention and response plans, track progress in reducing the severity of displacement situations, evaluate the effectiveness of policy decisions and support national accountability.

The link between internal displacement and development has been highlighted consistently by IDMC and others, but never studied systematically. This paper presents the key findings of a statistical analysis highlighting correlations between the number of new internal displacements recorded by IDMC in conflict or disaster settings and approximately 1,500 socioeconomic indicators published by the World Bank.

This analysis was conducted to inform IDMC’s research programme on the economic impacts of internal displacement.

METHODOLOGY

We used a correlation analysis to assess relationships between each socioeconomic indicator and the number of new displacements caused by conflict or disasters in a given country. The method shows “significant” correlation when the absolute value of the coefficient R is larger than 0.4.

In addition, we performed another test to highlight differences in the values of each socioeconomic indicator between countries with high and low numbers of new displacements.

Taken together, these two methods allowed us to identify and cross-check the existence of relationships between the value of the indicators and the number of new internal displacements.

Although it does not identify which indicators represent drivers or impacts of internal displacement, or relate to other potentially less visible variables, it demonstrates the need to consider not only the economic, but also the social and environmental dimensions of development and highlights areas of interest for future analysis.
It should be noted that the World Bank’s database of World Development Indicators largely focuses on economic data. Most of the indicators are categorised under “Economic policy and debt” or “Private sector and trade”. This explains the larger number of indicators showing significant correlation under these topics, illustrated in the bottom part of figure 1.

**DISPLACEMENT ASSOCIATED WITH CONFLICT**

IDMC has published estimates of internal displacement caused by conflict in 49 countries from 2010 to 2016. Figure 2 shows their average annual number of new internal displacements associated with conflict for this time period. Twenty-two countries with no such displacements were added to our analysis for comparison.

Figure 3 shows 30 indicators strongly correlated with displacement associated with conflict. Economic indicators classified by the World Bank under “Financial sector”, “Private sector & trade”, “Social protection & labor” or “Economic policy & debt” represent 27 per cent of them. But health alone represents nearly as many with 23 per cent, governance 20 per cent and education 17 per cent. Environment and infrastructure measures are also present.

The top-ranking economic indicators measure access to banking, entrepreneurship, consumption and trade. These are all signs of dynamic economies that are likely to both influence and be affected by internal displacement. Figure 4 illustrates a clear correlation between the average annual number of new internal displacements associated with conflict in 2010-2016 and the percentage of the population owning a bank account, one of the highest ranking economic indicators in our analysis. The higher the percentage of bank account owners in a country’s population, the lower its number of displacements associated with conflict. The histogram at the top also shows a clear difference between the group of countries with high numbers of
displacements, where the percentage of bank account owners is lower, and the group of countries with low numbers of displacements, where most of the population owns a bank account.

Social development is equally relevant. Displacements associated with conflict occur more in countries where public health expenditure is low, access to medicine is limited and mortality is high. Quality education is also associated with lower numbers of displacements. This is illustrated in figure 5 showing a clear correlation between the number of pupils per teacher in lower secondary schools and the average annual number of internal displacements associated with conflict for 2010-2016. The higher the number of pupils per teacher, a proxy for lower quality of education, the higher the number of displacements.

The number of new displacements caused by conflict is very strongly correlated with governance indicators assessing political participation, accountability, political stability, violence, government effectiveness, rule of law and corruption. Unsurprisingly, the strongest correlation was found with indicators of political stability, violence and terrorism (R = -0.88). But other indicators of governance were also highly related, including the level of corruption, the extent of the rule of law, the quality of political participation and the government’s degree of accountability.

Figure 3: Indicators strongly correlated with displacement associated with conflict
**DISPLACEMENT ASSOCIATED WITH DISASTERS**

Displacement caused by disasters is much more widespread around the globe than displacement associated with conflict. Between 2010 and 2016, IDMC reported numbers of displacements associated with disasters in 164 countries (see figure 6). IDMC’s figures include preventive evacuations that can be a sign of effective disaster-risk management strategy and are recorded in countries with high or low levels of socioeconomic development alike. Although natural hazards can strike anywhere, different factors will influence the extent to which they force people out of their homes, and how long for. Exposure and vulnerability have been known to determine the scale of a disaster.9

Figure 7 (p.6) presents 30 socioeconomic indicators strongly correlated with displacement associated with disasters. Economic measures including public sector revenue, private sector & trade, social protection & labor, poverty, economic policy & debt and financial sector indicators represent nearly half of them. Environmental indicators include electric power consumption, agriculture value added, access to clean fuels...
and technologies, CO2 emissions and number of threatened animal species. Health appears to be the second most relevant sector with 20 per cent of the correlated indicators, followed by environment and education.

The measures of economic development most highly correlated with displacement associated with disasters concern public revenue and expenses, imports, international migration, debt, income, employment and entrepreneurship. They all indicate how dynamic and open economies are, which can point to a country’s economic ability to cope with natural hazards and limit related internal displacement. They are, in turn, likely affected by the cost of high levels of displacement.

Figure 8 (p.7) shows an example of correlation between the average annual number of new internal displacements caused by disasters and the proportion of public revenue excluding grants in the GDP. The two groups of countries with high or low levels of displacement are clearly distinct. Countries with a higher proportion of revenue in GDP recorded less displacements, while countries with a lower proportion of revenue in GDP recorded more.
A PLEA FOR MULTIDIMENSIONAL ANALYSES

Environmental indicators related to displacement associated with disasters measure threats to animal life, agricultural productivity, access to clean fuels and CO2 emissions per capita. The extent to which sustainable environmental practices influence displacement associated with disasters, are influenced by it or are linked with external factors such as economic development, must be investigated further.

The health indicators at the top of the list mostly relate to the quality and capacity of the national health system. They include the number of physicians and hospital beds, health expenditure per capita and completeness of birth registration. The same can be said of education-related indicators that include government expenditure and the number of pupils per teacher. They may be signs of a government’s capacity to respond to its population’s needs, be they in health, education or disaster risk reduction.

Figure 9 illustrates how displacement associated with disasters is lower in countries where electricity consumption is higher. Low electricity consumption could be the result of the disruption caused by high numbers of displacements, or an indicator of a driver of displacement such as poverty or insufficient infrastructure.

Moreover, detecting correlations between two variables does not tell us much about the causal relationship between them. Future research, including further statistical analyses but also more in-depth qualitative studies, are needed to identify which aspects represent drivers or impacts of internal displacement.

The general picture that emerges is that only a multidimensional analysis can provide a comprehensive view of impacts as well as root causes of internal displacement. This analysis pointed to some of the dimensions that should be considered: the economy, health, education, the environment and governance at the top of the list.
between two variables. Correlation coefficients are between -1 and +1, corresponding to a perfect monotonically increasing or decreasing relationship respectively. On the other hand, coefficient values close to zero indicate a negligible rank correlation between two variables. In our analysis, we assumed that a significant correlation between indicators and displacement is present when the absolute value of R is larger than 0.4. We have verified that below this threshold indicator-displacement correlations are typically very weak.

In addition to the correlation analysis, we used an alternative approach to highlight links between indicators and displacement. We first separated countries in two groups, with high and low numbers of new displacements. This is quite straightforward for conflict-related displacement: the 49 countries with reported displacement are supposed to belong to the “high-displacement” group; the 22 countries with zero displacements to the “low-displacement” group. For disaster-related displacement, we choose the following criterion (that divides countries almost in half): a country belongs to the high-displacement group if the number of displacements is > 10,000 or the relative number is > 1‰.

Then, for each indicator, we compared the distribution of values of that indicator in the two groups: we expect that, when indicator and displacement are related, the two distributions are significantly different. To assess the similarity of two distributions we use the two-sample Kolmogorov-Smirnov test (KS test). This test checks whether two independent samples are drawn from the same distribution, providing the probability that the null hypothesis (i.e., the same parent distribution) is true. We used as reference the probability threshold of 0.1‰. Below this value we assume the indicator to be related to displacement. This approach has the advantage to be independent of using the absolute or the relative number of displacements. It can be used therefore as a cross check for cases in which correlation is found only with the absolute value but not with the relative one (or vice versa).