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Nepal COVID-19 Economic Vulnerability Index

Overview and Technical Guidance

July 2020

NEPAL COVID-19

ECONOMIC VULNERABILITY INDEX

Technical Guidance, July 2020

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COVID-19 vulnerability in Nepal

COVID-19 effects

The COVID-19 pandemic is a multi-dimensional one, affecting different parts of countries around the world. As a medical crisis, it has stretched the capacity of national healthcare systems, leading to substantial loss of life; as an economic crisis, national travel bans, shelter-in-place orders and the subsequent widespread disruptions to normal economic activity have worsened an already precarious situation for the world's poor, while work stoppages have pushed millions of new people into poverty and vulnerability. The crisis also has an important food security dimension: food availability is at a higher risk if countries restrict food exports, while the loss of income and livelihood can affect individuals' ability to access food.¹ The crisis is also a societal one, as prolonged lockdowns have created fundamental changes in working arrangements, movement, and inter-household relations.

A UN report² emphasizes that International actors' responses to the COVID-19 crisis must, in addition to being cross-sectoral, also work to support and strengthen existing systems that contribute to putting populations at risk in the first place: social protection regimes and the labor sector, particularly exposed industries, but also social inequality and disfunctions, must all be addressed alongside the immediate needs of those most affected.

Low income countries are particularly concerned by the economic fallout, with their combination of large populations living in poverty and limits on their ability to engage in fiscal stimulus and social protection measures. Responses must also be fast, working to prevent a spiral of lower income leading to low consumption, further weakening producers

and retailers and devastating national industries.

Vulnerability in Nepal

Nepal is expected to be among the hardest hit countries economically, owing to its low-income status and combination of high dependency on imports of food and other essential commodities with high dependency on the export of labor and remittances.³ This multi-faceted vulnerability could mean that Nepal faces a "double or triple burden" from the economic impact of COVID-19.⁴

In Nepal's case, a nationwide lockdown, starting on the 24th of March and extended through July, has placed large restrictions on the movement of people and goods throughout the country. This has led to work stoppages and barriers to the transportation of essential items including food goods. Furthermore, nationwide lockdown in India has resulted in work stoppages and income losses for Nepal's labor migrants to India while also causing some disruptions in the import of food goods and raw materials used in other industries. Similar situations in other countries have affected the ability of Nepali foreign labor migrants to earn money and send remittances home and have also had a direct impact on the tourism sector in Nepal, as international travel has been greatly restricted.

Economic shocks from these above factors are touching a highly-exposed population. A majority of Nepal's labor force—62% or 4.4 million people—works in the informal sector and 59% of enterprise laborers are in micro-enterprises⁵, often with low or nonexistent social insurance coverage. The effects of the above factors may be worsened by large scale returns of migrants abroad. An estimated 1.5 million Nepalis are working in Gulf countries, a significant

¹ World Food Programme, Food and Agriculture Organization, International Fund for Agriculture Development. "Joint Statement on COVID-19 Impacts on Food Security and Nutrition," 21 April 2020.

² UNSDG. "A UN Framework for the Immediate Socio-Economic Response to COVID-19," April 2020.

³ World Food Programme. "Economic and food security implications of the COVID-19 outbreak. An update with insights from different regions," 14 April 2020.

⁴ World Food Programme. "COVID-19 Targeting and Prioritization Paper," 28 April 2020.

⁵ Nepal Labor Force Survey. 2018-2019.

portion of which have not yet returned to Nepal. Seasonal labor migrants to India are harder to count, but an estimated several hundred thousand migrants have already returned from India over since the start of the national lockdown⁶, with additional returns continuing through May as India's lockdown has eased. A large-scale repatriation of labor migrant returns may put an additional strain on the government's emergency response, which includes provisions for employment-based conditional cash/food transfers, for example through the Prime Minister's Employment Programme. Other demographic factors, including the entry of some 500,000 youth into the labor market each year, are expected to further stretch the need.

Given the high levels of expected needs to ensure an adequate economic response and recovery, as well as the expediency of taking action in the short term, there is a need to identify areas in the country that are most vulnerable to the economic effects of COVID-19. This will support actors (WFP, but also other development partners and government) in (1) directing resources and programmes in the response, taking as reference a metric that considers multiple often counter-balancing data, (2) estimating the potential scale of the issue, people and households most affected.

⁶ World Food Programme Nepal. Informal consultations with government, April 2020.

Economic Vulnerability Index

Rationale

Measures of poverty, deprivation, food insecurity do exist in Nepal, measuring undernutrition, poverty, household wealth and food consumption to name a few. Despite the presence of related indicators within the existing data toolbox, a new measure which identifies and prioritizes the economically vulnerable areas to COVID-19 in the country is needed for the following reasons:

- The COVID-19 crisis is revealing vulnerabilities which are not always captured in existing measures: fragility within the tourism industry, or within certain groups of salaried employment, are not generally considered in existing measures of deprivation.
- There are several dimensions to economic vulnerability COVID-19 (mentioned above), which may weigh against one another. It is important to emphasize a consolidated approach that considers and simultaneously accounts for different dimensions to vulnerability, beyond the for example the identification of particular groups (ex. all migrants) as being vulnerable, which may not simultaneously consider other factors such as poverty, or access to relief and support.
- Constrained resource availability both within the international community and Government of Nepal underscores the importance of efficiently allocating resources across the country, using a single consistent measure to compare across local governments. An index—with the caveats that come with the use of such tools—can provide such a measure.

- Updated measures of vulnerability (for example from household surveys obtained in the first weeks/months of Nepal's nationwide lockdown), while relevant, are often only available at national or provincial levels, and not suitable to allocate resources across the country.
- Geographic targeting can help to understand larger trends in how communities are vulnerable, including in terms of ecological belt, trade routes and physical access and connectivity, and can inform thinking around longer-term responses and recovery.

This note proposes an index that ranks the vulnerability of municipalities to the economic effects tied to the COVID-19 crisis, as described above. While ultimately we are interested in the welfare of people, for practical purposes the municipality is considered as the unit of analysis. It is also important to note that this index advances a relative ranking enabling hierarchies across municipalities, for example for prioritizing a response, but does not try to measure vulnerability in absolute terms.

As with all composite indices, condensing multiple sources of data into a single number necessarily results in the loss of information. As such the results of any such work need to be considered not in isolation but together with other information: qualitative data, data that is updated as time passes and the situation changes, data that accounts for the response of government and development partners, and also information that is not as amenable to objective measurement, such as political-economy analysis.

Framework

The framework for this vulnerability index is rooted in the conceptualization of vulnerability as a function of three elements: exposure, sensitivity and adaptive capacity, commonly adopted in the climate change and emergency preparedness literature.^{7,8}

Here, we consider exposure to be the degree to which people in a given municipality are exposed to the mechanisms which can cause poverty and food insecurity, namely: job loss, loss of income, and the prevalence of socially marginalized groups. Sensitivity is the extent to which a municipality's people experience those adverse economic effects to which they are exposed. It is assumed that high rates of social deprivation mean that a municipality's people are more likely to experience additional poverty and food insecurity, that the extent of that poverty and food insecurity is likely to be higher than for municipalities that have low baseline levels of social deprivation. Adaptive capacity, finally, is the ability of the municipality and those within it to take steps to mitigate these negative economic effects—by supporting its out-of-work population through social protection schemes, by stabilizing market prices, or other means. There are several ways of defining the vulnerability function from these three elements. Here we use the formula:

corresponding Adaptive Capacity score.⁹ Exposure and Sensitivity combined are often referred to as the 'potential impact'.

For this index, an initial review of over 50 potentially relevant data sources was conducted, and an initial framework put together. This draft framework was then validated through initial consultations with experts in the WFP Regional Bureau Bangkok, followed by external consultations with UNICEF and UNDP. The framework was subsequently restructured to incorporate feedback received, its variables revised down to 16. While multiple data sources exist which could potentially fit in the framework, there are very few which are both updated and at a low-enough level of aggregation to be used. Where possible, we make use of these. Older data is also used where relevant, providing they are relevant and can be reasonably considered to still accurately rank municipalities on a measure.

The framework, with data sources incorporated, is in the table below. It is comprised of 4 layers: the index, three sub-indices, 9 dimensions and 16 indicators. The makeup of each grouping (index, sub-index and dimensions), is informed by two criteria: the relevance of each indicator, individually to the dimension (and of each dimension to the sub-index), and the sufficiency of the indicators together to the definition of the dimension (likewise with the

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