Is Food Insecurity Mostly Urban? Recommended Practices on Reading Global Statistics

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FSP Best Practices 12
March 2026

A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things. This document is one of a series of reports from the Food Security Portal on best practices for emerging topics in agriculture and food security policy.

Introduction

The High-Level Panel of Experts (HLPE) on Food Security and Nutrition recently published a report with the headline finding that of the 2.2 billion people experiencing moderate or severe food insecurity globally, 1.7 billion live in urban or peri-urban areas (HLPE, 2024). This means that over three out of every four people experiencing food insecurity live in an urban or peri-urban area. The statistic is striking, especially given the parallel observation that a higher share of rural populations experience food insecurity than urban populations.

The trouble comes from the presentation of these two observations, headlining the former while burying the latter. Indeed, the conclusions and recommendations of the report focus almost exclusively on the confluence of a rapidly urbanizing world and urban and peri-urban food systems, without discussing regional and national-level heterogeneity, divergence in prevalence measures of food insecurity vs. estimates of population counts, and the challenge of categorizing areas as either rural or urban across countries. It could be quite easy to read this report and mistakenly conclude that food insecurity is mostly an urban phenomenon.

Three Problems

There are at least three problems that generate the potential for misunderstanding the findings in this report. In this brief, I will present these problems and then discuss three associated best practices that can help prevent errors when reading global statistics.

First, the finding that most people experiencing food insecurity live in urban areas does not hold in low-income countries, where the prevalence of food insecurity is the highest. In high-income countries, upper-middle-income countries, and lower-middle income countries, urban areas are home to a larger total number of people experiencing food insecurity compared with rural areas. In low-income countries, however, rural areas are home to more people experiencing food insecurity (HLPE, 2024).

Ecological fallacy is a logical error that occurs when incorrect conclusions about specific observations are drawn from aggregated statistics (Robinson, 1950). It is wrong to conclude that most people experiencing food insecurity in low-income countries live in urban areas relative to rural areas based on the aggregate global statistic headlining the report. This case is made even

more pernicious because food insecurity is nearly 10 times more prevalent in low-income countries than in high-income countries. Thus, the headline finding does not hold in countries where food insecurity is most prevalent.

A more recent study uses harmonized micro-data from nationally representative household surveys collected in 30 sub-Saharan African countries from 2004 through 2023 (Bloem and Kyle, 2025). These data allow the authors to track an experienced-based indicator of food insecurity for over 20 years across 30 countries. Additionally, because the surveys are both nationally representative and representative of urban and rural populations within each country, the authors can estimate two statistics for each country for every year data is collected. First, the authors can estimate the share of the population in rural and urban areas, respectively, that report experiencing food insecurity. Second, the authors can estimate the total number of people experiencing food insecurity in rural and urban areas, respectively. The authors find that, with only one exception, the number of people experiencing food insecurity is at least as large—and often much larger—in rural areas than in urban areas across sub-Saharan African countries over the last 20 years where the survey data exist. The exception is South Africa, which is a unique country in many ways, not just the urban nature of its food insecure population.

These results illustrate how global statistics can be misleading. On the one hand, a statistic shows that most people who experience food insecurity globally live in urban areas; however, on the other hand, when focusing on income-based country groups or specific countries where food insecurity is most prevalent, most people who experience food insecurity live in rural areas. The reason for this discrepancy is because the global statistic is primarily driven by large and rapidly urbanizing populations in Asia and Latin America, where the prevalence of food insecurity is one-half to two-thirds what it is in Africa.

The second problem is that the prevalence of food insecurity is higher in rural areas than in urban areas in all major regions and, except for high-income countries, in all income-based classifications of countries (HLPE, 2024). The distinction between estimates of the prevalence of food insecurity and the total number of people experiencing food insecurity is important. The former reports the share of people within a given population that report experiencing food insecurity. The latter reports the total number of people experiencing food insecurity. In countries where the total population is roughly evenly distributed across rural and urban areas, these two statistics will tend to move in the same direction. In countries where the population is mostly urban, however, these statistics can move in opposite directions.

Consider, for example, Latin American countries. In Latin America, the prevalence of food insecurity is over eight percentage points higher in rural areas than in urban areas: 40 percent in rural areas and 32 percent in urban areas. The population in Latin America, however, is highly urbanized with only roughly 20 percent of the population living in rural areas (World Urbanization Prospects, 2026). Therefore, while 55 million people living in rural areas of Latin America report experiencing food insecurity, that figure rises to 115 million people in urban areas. While the prevalence of food insecurity is higher in rural areas of Latin America, there are over twice as many people experiencing food insecurity in urban areas.

Policymakers may choose to focus on prevalence measures, population counts, or both when crafting policies. Estimates of food insecurity prevalence are especially insightful in understanding where the national food system struggles most to provide access to a sufficient and affordable supply of food. Estimates of the number of people experiencing food insecurity, on the other hand,

identify places where specific programs or interventions to address food insecurity might generate the largest impact, if measured in terms of welfare per capita.

Third, the headline finding critically hinges on lumping peri-urban areas together with urban areas despite peri-urban being a notoriously difficult concept to consistently identify. Combining peri-urban areas with urban areas is problematic because peri-urban areas are clearly distinct from urban areas. These are areas adjacent to urban locales that share characteristics with rural areas but have greater access to urban areas. Given their shared characteristics, one could make the case that peri-urban areas should be lumped together with rural areas, although it is not clear this would be satisfactory either. The point is that peri-urban areas are geographies that are distinctly not urban and not rural and should be treated as such in empirical analysis.

Additionally, there is no standardized and empirically measurable definition of a peri-urban area that is consistent across both time and space (Follman, 2022). Even if we could consistently and credibly identify peri-urban areas across countries, it does not seem satisfactory to combine these areas with either rural or urban areas. However, as of now, we cannot consistently or credibly identify peri-urban areas across countries in the first place.

The HLPE report itself notes these challenges, specifically stating that “countries use a range of approaches to define urban, some basing it on administrative functions, others on population size or density, or combinations…” and that, “any standardized definition becomes less functional the more global the application is.” The report uses a rural-urban continuum measure compiled by the United Nations Statistics Commission called the degree of urbanization tool but ultimately concludes by advocating “for governments to use their national definitions and government structures in interpreting the report.” Given these measurement challenges, which only expand with globally aggregated statistics, it seems reasonable to question the veracity of globally aggregated statistics about characteristics of rural, urban, and peri-urban areas.

Three Recommended Practices

The following recommended practices can be kept in mind when reading global statistics. These suggested practices can help prevent misinterpretation of aggregated statistics and hopefully mitigate misunderstandings that can lead to mistaken policy choices.

1. Beware of ecological fallacies—always disaggregate to the level of policy relevance. Global statistics are useful in providing a single statistic characterizing the entire world. They simplify narratives about trends in important indicators of health, wealth, and welfare. Policy choices, however, rarely happen at the global level. Instead, policy decisions mostly take place within countries, and sometimes within regional groupings of countries.

   Policymakers, therefore, should disaggregate to the level of policy relevance when looking at statistics. Global statistics are invitations to dig deeper and to see what the corresponding national or regional statistic looks like. Likewise, researchers should conduct their analysis and write reports with this practice in mind. Global statistics are useful for simplifying a narrative or for providing a summary to motivate more detailed analysis but are generally not what policymakers need to be looking at when they are considering policy choices.

2. Understand how statistics relate to each other, and how they can differ. Different statistics measure different ideas and concepts, but some are mechanically related to each other. Understanding these relationships help illustrate a full and complete picture.

Consider measures of poverty. An often-cited stylized fact is that the share of the population living in poverty has declined since at least around 1820 (Hasell and Roser, 2019). Since the world's population has grown steadily since at least 1820, however, the total number of people living in poverty could rise or fall depending on differences in population growth across households, within countries, and across countries around the world. In fact, the total number of people living in poverty increased steadily from 1820 to around 1990. It is only in the years since 1990 that we observe both the share of the world's population living in poverty and the total number of people living in poverty declining at the same time.

Together, complementary statistics tell a story. Separately, that story is incomplete. On the one hand, focusing only on measures of population counts ignores the tremendous progress the world has made in reducing the share of the global population living in poverty around the world since 1820. On the other hand, focusing only on measures of the share of the global population living in poverty ignores that for most years in recorded history, the world was home to more people living in poverty than in previous years.

3. Consider measurement challenges. It is often said that "not everything that can be counted counts, and not everything that counts can be counted" (Cameron, 1963). This phrase is commonly used to articulate the value of qualitative data that is harder to measure, given the power and alure of quantitative data in modern-day decision making. This quote also illustrates the idea that just because something can be counted does not mean that that statistic means what it is purported to mean.

   In the present case, just because we can estimate the number of people who are living in peri-urban areas and are experiencing food insecurity, that does not mean that this represents an accurate or meaningful statistic. Challenges in consistently and accurately measuring socio-economic concepts abound, and thus the interpretation of statistics requires careful thinking about these measurement challenges. These measurement challenges might be innocuous, or they might invalidate the meaning of the statistic. While the concept of peri-urban (or rural vs. urban, more generally) might carry meaning within a given country at a given point in time, challenges in consistently defining these terms across countries and over time call into question the validity of globally aggregated statistics about socio-economic characteristics.

Conclusion

Ultimately, the question of whether food insecurity is a mostly urban problem is difficult to answer succinctly. The answer depends, among many other things, on (i) the geography being considered (i.e., which countries, global regions, or income-based groupings), (ii) the measure of food insecurity reported (i.e., population shares, population counts, or both), and (iii) the quality and accuracy of the underlying data. The recommended practices outlined in this brief should help mitigate possible misinterpretations of aggregated global statistics.

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