Bread for the World Institute Hackathon Meet-Up, Project Proposals

Project One: Exposing Gaps in Data on Women's Empowerment

Context: Over the past few decades, we have learned a lot about the marginalization of women around the world and its cost in human development. Data sources such as the World Bank and the United Nations have set out to develop standardized ways of measuring women's empowerment and gender equality across countries. Starting in 1995, the UN Development Programme (UNDP) launched the Gender-Related Development Index (GDI) and the Gender Equality Measure (GEM), which were later combined and expanded to create the more complete Gender Inequality Index. In 2000, the United Nations launched the Millennium Development Goals, which included a target to promote gender equality and empower women. Since then, other indexes have emerged, like the World Economic Forum's Global Gender Gap Index and the Economist Intelligence Unit's Women's Economic Opportunity Index. Each has had its strengths and shortcomings; all have relied on incomplete and inconsistent data.

The Problem: New research shows that even the most advanced current efforts to gauge women's empowerment still miss critical elements of what it takes for women to be empowered in the developing world. Far too many of the indicators used to measure women's empowerment, for far too many countries, are based on data that is largely unreliable, old, or inconsistent. This compromises the accuracy and integrity of the assessments and makes them less reliable for policy makers who base decisions on them. In its upcoming 2015 Hunger Report, Bread for the World Institute will identify key missing data and explain why better data are essential to continued progress. This is where we need your help.

The Data: The data for this visualization project will come from the following sources:
- The World Bank GenderStat Indicators
- The United Nations Millennium Development Goals Indicators and the MDG Gender Chart
- Current indexes (The Gender Inequality Index, Global Gender Gap Index, Women's Economic Opportunity Index)

The Visualization(s):
1. The United Nations' Expert Group on Gender Statistics, through its Advisory Group on Global Gender Statistics and Indicators Database, identified a minimum set of gender indicators. Some of those indicators have very little, scattered data, while others have abundant, reliable data and still others fall somewhere in between. We need a way to show in a visual way the quality of the data currently available data and what is missing. Is data for a given indicator mostly available, partly available, or not available at all? How reliable is it? A visualization that can rate or even rank various indicators of women's empowerment, based on the data quality and availability, could be an effective way of showing how much improvement in data integrity is needed. For example, it may be useful to illustrate the fact that xx% of all UN Gender Stat indicators lack recent data for more than half of developing countries.
    a. **Example:** Time-use surveys (an important metric of women's empowerment) have been conducted in the majority of developed countries and in about a third of developing countries. On average, the surveys are conducted at seven-year intervals in developed countries and nine-year intervals in developing countries. Time-use statistics

are produced less frequently than other statistics for both the world as a whole and for Africa.

   i. **Time-use statistics** are quantitative summaries of how individuals allocate their time over a specified period. Two key issues arise as the statistics are generated: tradeoffs between labor and leisure, and how non-market activities are measured. Time-use data are collected through two main types of survey instruments, the stylized questionnaire and the 24-hour diary. Although diary-based surveys are more expensive and require more advanced survey techniques, they are an improved method of collecting data on time use. ([Source](#))
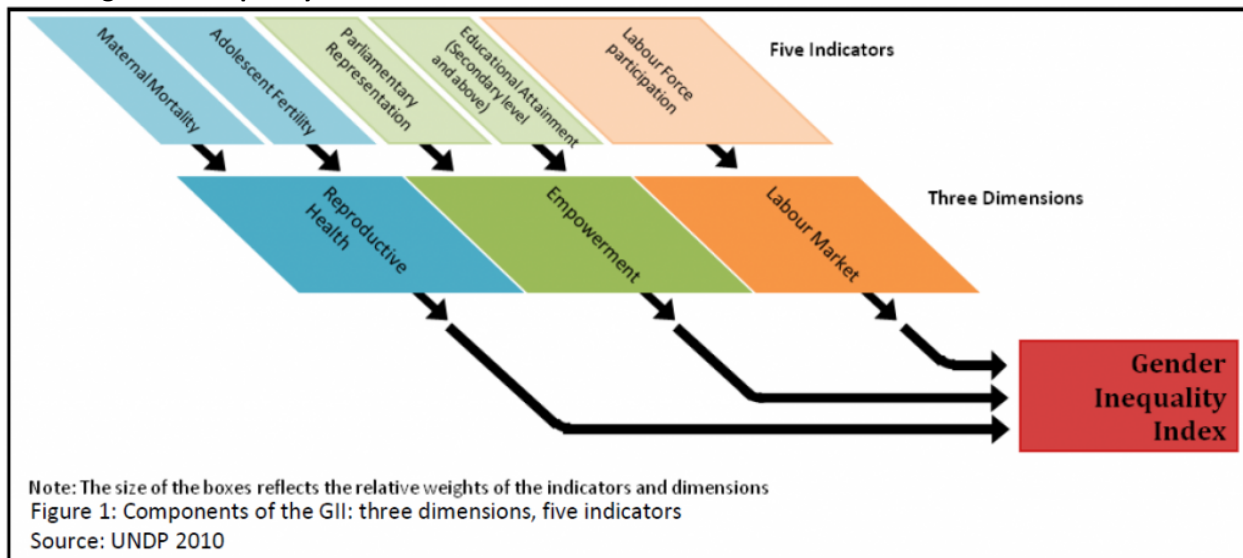
b. **Just One Idea:** A chart could list countries across the x-axis and indicators across the y-axis. Each box in the grid could then be filled in with a different shade or color to denote excellent, good, poor, or no data for each country and each indicator. One could learn a lot about what's missing by simply looking at the array of shades/colors on the grid.
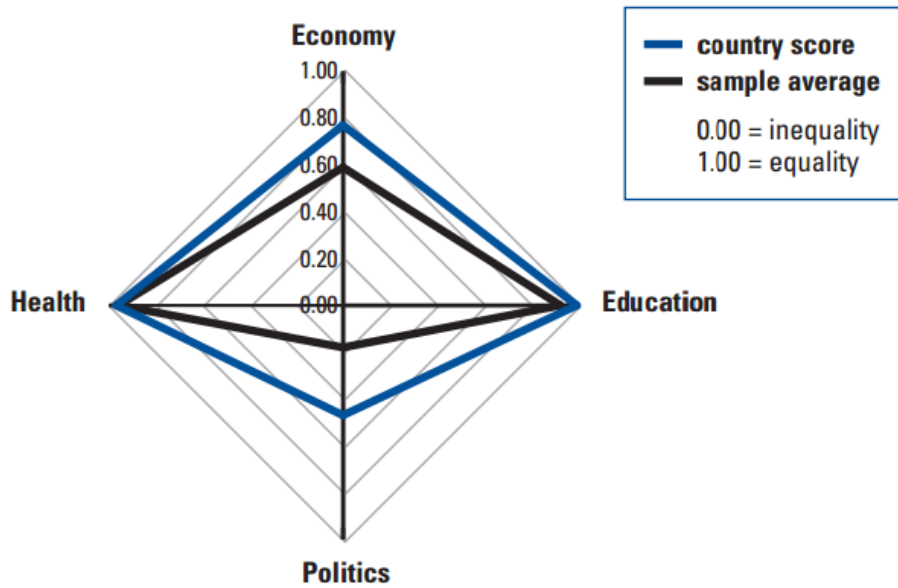
Visualizations will be very helpful as we propose better methods of collecting and synthesizing data on women's empowerment to help the World Bank, the UN, and others improve their measurements of how women around the world are really doing. The Institute will provide Excel and .csv data files the day of the event.

References: Visualization Examples of Current Women's Empowerment/Gender Equality Indexes

UNDP's gender inequality Index:
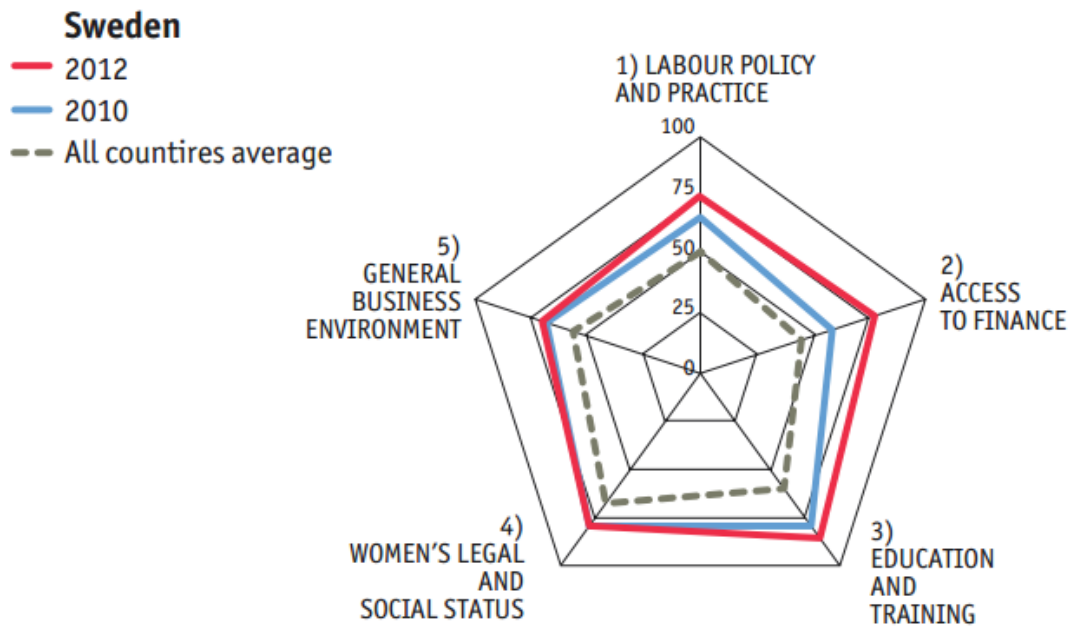

Note: The size of the boxes reflects the relative weights of the indicators and dimensions
Figure 1: Components of the GII: three dimensions, five indicators
Source: UNDP 2010

World Economic Forum's Global Gender Gap Index:

Economy

Health

Education

Politics

- country score
- sample average

0.00 = inequality
1.00 = equality

The Economist Intelligence Unit's Women's Economic Opportunity Index:

Sweden

- 2012
- 2010
- All countires average

1) LABOUR POLICY AND PRACTICE

2) ACCESS TO FINANCE

3) EDUCATION AND TRAINING

4) WOMEN'S LEGAL AND SOCIAL STATUS

5) GENERAL BUSINESS ENVIRONMENT

Project Two: Women's Empowerment and Stunting

The Context: As an anti-hunger organization, Bread for the World is especially interested in linkages between under-nutrition rates and the level of women's empowerment. Stunting (well below average height for one's age) is a malnutrition condition that currently affects one in four of the world's children. When a child is stunted, she is prevented from growing, learning, and earning to her full potential. The damage lasts for a lifetime, reducing her chances of freeing herself and her children from poverty (see our stunting infographic).

The Challenge:
As we begin to explore years of data on women's empowerment from the World Bank and United Nations, we want to ask the question: Do countries that significantly improve the status of women also see lower rates of stunting? Women are the primary caregivers in the family. Research from countries around the world has shown that when women are empowered to earn more and have a greater say in home finances, they are more likely than men to invest the additional money in promoting the welfare of their children -- through nutritious food, for example. In this project, Bread for the World Institute is interested in exploring whether and where women's empowerment is associated with improvements in stunting and, if so, over what period of time. The answer to the question of whether the two indicators coincide is most likely to be "sometimes yes, sometimes no."

The Data: There is a lot of data to work with here. As mentioned in the first project description, many methods of measuring women's empowerment are currently in use. The UNDP Gender Inequality Index is the most holistic of these. Rather than using a particular index, however, we will use the World Bank's GenderStat resource as a key data source for individual indicators such as male/female educational attainment, literacy rates, and labor force participation. GenderStat includes dozens of indicators that we could compare with stunting rates. The Institute will provide Excel and .csv data files the day of the event. There is also room for variation in the unit of analysis. For example, we could compare numbers for broader groupings of countries (such as developing or low-income) and/or look at the statistics on individual countries one by one. (The Institute can provide a short list of countries we are most interested in.)

The Visualization(s): Depending on what the data show, the possibilities for visualization are wide-ranging. We count on your creativity to help us come up with effective ways to visualize the findings. We hope to use the visualization(s) from this project in the 2015 Hunger Report to emphasize the critical role of women in nutrition outcomes.