ABOUT THE HUNGER PROJECT
The Hunger Project has a 38-year track record of partnering with people living in poverty as they work to end their own chronic hunger. Our approach is based on three fundamental pillars: (1) Mobilize people at the grassroots level, (2) Empower women as key change agents of their own development, and (3) Forge partnerships with local government. Our work reaches more than 20 million people in 24,000 communities in Africa, South Asia and Latin America.

THE WOMEN'S EMPOWERMENT INDEX

Introduction
Overcoming gender inequality is absolutely critical to achieving the end of hunger. Women often bear the responsibility for meeting the needs of their family; yet they are frequently denied the resources, information and freedom of action to fulfill this responsibility. Studies show that when women are empowered, all of society benefits. As such, women’s empowerment is an essential component of all of The Hunger Project’s programs.

To assess impact and review performance in this area, The Hunger Project had sought to identify and adopt a standard, recognized approach. Yet, it became quickly clear that there was a gap in standard measurement approaches to such an important area of work. Though women’s empowerment is a mainstay feature for many international organizations’ programs and practices, a standard, collective approach for tracking progress is still missing.

Therefore, The Hunger Project decided to fill this measurement gap by building the custom Women’s Empowerment Index. The index builds on research and innovations by a variety of organizations, yet is unique to The Hunger Project, allowing for a special focus on measurements that we recognize as central to overcoming rural poverty and disempowerment.

What is WEI?
The Women’s Empowerment Index (WEI) is a composite index designed to measure progress in the multi-dimensional aspects of women’s empowerment. It considers empowerment to be a factor of both women’s achievements as well as of gender parity with men. WEI measures progress on women’s empowerment by aggregating results across five key areas (or “domains”). Each domain is comprised of a series of metrics (or “indicators”) which quantifies performance in this domain.

Agency
Women are able to make decisions and exercise control over resources and are free to exercise these decisions without fear of repercussion.

Income
Women have the ability to benefit from economic activities and enhanced access to markets and financial resources.

Leadership
Women have the ability to participate in community activities and are encouraged to speak in and for their communities.

Resources
Women and girls have access to the resources and skills they need to become equal participants in society.

Time
Women and girls are reducing domestic drudgery (time spent on hard, menial, or dull work) freeing up time to pursue productive endeavors, education, child care, and leisure activities.
The Hunger Project’s Monitoring and Evaluation (M&E) department developed WEI in-house, based on extensive external research and internal testing. Though WEI is grounded in decades of research and program practice in women’s empowerment, the theory and model are primarily based on the innovative Women’s Empowerment in Agriculture Index (WEAI), a survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector. WEAI provided an incredibly valuable theoretical framework and ample layers of rich research from which The Hunger Project could develop its own index (more background on WEAI can be found in the Appendix).

As an M&E tool, WEI allows for comprehensive benchmarking of program progress for empowering women and helps The Hunger Project to strategically design and implement programs for empowering women in its focus regions.

WEI has been tested in 8 countries with randomized surveys from nearly 5,000 households in communities where The Hunger Project works.

**The Composition of the Women’s Empowerment Index**

The Women’s Empowerment Index (WEI) is composed of two parts: the women’s achievement ratio (WAR) and the gender parity ratio (GPR). WAR measures women’s achievement to a pre-defined set of goals, while GPR measures women’s achievement in comparison to men’s achievement in the same community. WEI provides an aggregated community score, rather than the individual scores for each household provided using the WEIA.


<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicator</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
<td>Men and women jointly share responsibility for making community decisions</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Men and women jointly share responsibility for making household decisions</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Perceptions on violence against women</td>
<td>6</td>
</tr>
<tr>
<td>Income</td>
<td>Owning and operating businesses</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Access to financial services</td>
<td>10</td>
</tr>
<tr>
<td>Leadership</td>
<td>Membership in community organization(s)/group(s)</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Comfortable speaking in public</td>
<td>10</td>
</tr>
<tr>
<td>Resources</td>
<td>Literacy rate</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Minimum prenatal care visits</td>
<td>10</td>
</tr>
<tr>
<td>Time</td>
<td>Time spent gathering cooking fuel</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Household division of labor on domestic drudgery tasks</td>
<td>10</td>
</tr>
</tbody>
</table>

WEI tracks the progress of women’s achievements, as well as compares those to men’s achievements, over time. The index utilizes randomized household surveys to generate its data. A higher value of WEI indicates greater empowerment for women in that community.

The figure below shows WEI Scores across a few Hunger Project program sites in Africa. Out of 100 possible points, the five program locations’ scores range from 47 to 79 points and indicate key areas for performance improvement under each domain.

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1. All data collected from randomized household evaluations in 2013 and 2014
Women Achievement Ratio

For the Women’s Achievement Ratio (WAR), every indicator is given a target threshold which considers “sufficient” achievement to indicate empowered women. Data from household surveys are aggregated and averaged. This average is compared to the target for each indicator. The final WAR score is a value between zero and one. For the sake of calculation, WAR is capped at a total possible score of one, meaning that if the average percentage point calculated from the survey is better off than the target, it is believed the epicenter has reached full adequacy of women’s empowerment for that particular indicator. WAR is 60 percent of the total WEI score.

Gender Parity Ratio

For the Gender Parity Ratio (GPR), women’s performance in each indicator is compared to men’s performance. As with WAR, the GPR value can range from zero to one and it is capped at a total possible value of one. GPR is 40 percent of the total WEI score.

Scoring WEI

For each indicator, WAR and GPR are calculated and multiplied by the weight of that indicator (see below). The individual indicators’ performance are summed to find the total WEI score. The WEI is scored out of a total of 100 possible points with each domain counting for up to 20 points. The Hunger Project has set a threshold score of 80 points as a mark of an adequate level of empowerment in each community.

The overall WEI is constructed by calculating the sum of 11 indicators’ weighted WAR and GPR as follows:

\[
WEI = \sum_{i=1}^{11} [(0.60 \times WAR_i + 0.40 \times GPR_i) \times weight_i]
\]

\(WAR=\) women’s score/ target

\(GPR=\) the smaller of men’s score or women’s score divided by the larger score

WEI Correlation with Other Performance Indicators

To test the validity of the WEI score, correlation analysis was conducted with other key performance metrics to see if the score was associated with other outcomes. Strong positive correlations were observed with children’s secondary school enrollment levels \((r=0.61)^2\) and women’s dietary diversity levels \((r=0.79)\). This signifies that communities with high WEI scores also have high rates of secondary school enrollment for children and women have more diverse diets. Strong negative correlations were observed between WEI and proportion of households below the poverty line \((r=-0.8)\). In other words, communities with lower poverty levels exhibit higher WEI scores. Weak correlations were noted for knowledge of exclusive breastfeeding practices \((r=-0.19)\) and prevalence of household hunger \((r=-0.2)\).

Though these are promising results, a relatively small data sample was available to perform the correlation analysis. Though thousands of household surveys are represented in the data, scores are averaged by community making the number of available WEI scores much smaller. The range in community performance for certain metrics is so small that correlation cannot be sufficiently tested at this stage. For instance, all but one study in the dataset have rates of 90 percent or more attended births, thus attempting to test correlations with this indicator is problematic. As more studies are conducted using WEI analysis, these correlations must be retested.

2. Pearson’s \(r\) measures linear correlation between two variables \((x \text{ and } y)\) between +1 and -1. In this case, the positive one would indicate perfect positive correlation (as \(x\) increases, so \(y\) increases by the same amount) and negative one perfect negative correlation (as \(x\) increases, \(y\) decreases by the same amount). As numbers move towards 0, correlation relationships cannot be observed.
GHANA CASE STUDY: WEI TESTING IN ACTION

Between July and December 2014, seven program sites in Ghana underwent rigorous internal outcome evaluations to test key performance indicators related to The Hunger Project’s Theory of Change, including the Women’s Empowerment Index. More than 1,300 household surveys were conducted in addition to dozens of focus groups and key informant interviews.

The surveys were conducted on mobile devices using custom-built iFormBuilder tools. Rigorously trained external enumerators interviewed households in 45 to 65 minute intervals. All households were randomly selected and all households within the community, irrespective of participation with The Hunger Project, were eligible for selection.

Compared to other program sites, epicenters in Ghana scored fairly high across all domains under WEI. Though many of The Hunger Project’s program sites score high in leadership and agency domains, most struggle in the domain of ‘time.’ This means that even if women’s choices and leadership are acknowledged and respected, the greatest burden of domestic drudgery continues to fall on women. In Ghana, however, households were much more likely to have reduced domestic drudgery (e.g. modernizing choice of cooking fuel) or to be sharing domestic tasks between the genders.

Since this trend was observed across seven program sites with fairly different contexts, The Hunger Project wants to look more closely at the success of empowering women in the time domain in Ghana. By studying THP-Ghana’s program tactics and implementation, The Hunger Project can learn important lessons on how to overcome disempowerment of women through time constraints and replicate this success in other areas.

Using WEI

WEI scores allow The Hunger Project to critically analyze performance of programs to empower women. Though there are many ways to explore the data, two key explorations are featured below.

**Analysis by Sub-index**

Since WEI is calculated through a composite of women’s achievement ratios (WARs) and gender parity ratios (GPRs) it is possible to assess whether constraints placed on women’s empowerment result from not having sufficient (1) ability to achieve it, (2) equality with men, or (3) both. Depending on what the analysis indicates, very different program responses may be required. For instance, a community showing low levels of gender parity compared to women’s achievements should work on fostering more equitable division of labor, resources, and decision-making between both genders.

The figure below shows a range of observed scenarios. In Avlamé in Benin, for instance, both WAR and GPR scores are performing at fairly equal levels, indicating that analysis of the five domains could provide clearer insights for empowering women. Whereas, the baseline study of Majete 3 in Malawi shows much higher performance on gender parity indicating more serious constraints on women’s achievements in the five domains.

![Performance by Sub-Index](image-url)
Analysis by Domain Achievements

By analyzing performance of programs within each domain, specific limitations to women’s empowerment can be identified. For instance, an area with low performance in the leadership domain needs to focus on building the capacity and confidence of women to lead their communities.

The figure below provides a few examples utilizing comparative domain analysis. Boulkon, Burkina Faso for instance, is performing exceptionally well in the area of leadership, while exhibiting extremely poor performance in the time and income domains. Matsekope, Ghana, on the other hand, shows fairly equal and high performance across all domains.

Limitations of WEI and Next Steps

In summary, though WEI’s structure and content rely heavily on WEAI, which was designed to measure women’s empowerment and inclusion in the agriculture sector, the WEI allows The Hunger Project to focus on those concepts that are central to overcoming the challenges of rural poverty and disempowerment. Moreover, as the organization continues to implement WEI studies, the addition of longitudinal data (surveys of the same location over time) will also help demonstrate program learning and responses to the index. Though initial correlation analysis of WEI suggests a rigorous and well-designed tool, more research and data points are required to validate its design. In 2015, The Hunger Project plans to expand WEI analysis to its work in both Mexico and Bangladesh, as well as to 15 new program sites across Africa.

The Hunger Project looks forward to implementing the program learnings that this important M&E tool makes evident, so that the organization can continue to improve practices for empowering women in rural communities. Through the use of WEI The Hunger Project will be able to identify which practices and interventions offer the highest return on investment for women and their futures.
Appendix: Women’s Empowerment in Agriculture Index (WEAI)³

Launched by International Food Policy Research Institute (IFPRI), Oxford Poverty and Human Development Initiative (OPHI), and USAID’s Feed the Future in February 2012, WEAI is the first comprehensive and standard measure to directly capture women’s empowerment and inclusion levels in the agricultural sector. Recognizing the importance of women in growing and producing the world’s food⁴, the creation of this index was an important step in quantitatively demonstrating how to capture and track over time a concept as complex as women’s empowerment.

The WEAI is comprised of two sub-indices: one measuring the empowerment of women along five domains (5DE), and the second measuring the gender parity of empowerment within the household (GPI). From the two sub-indices, individual households are scored based on exhibited levels of “empowerment.” Programs seeking to demonstrate impact should show more households demonstrating empowered women over time through their score.

Sub-index: The Five Domains of Empowerment (5DE)
The Five Domains of Empowerment (5DE) index theorizes that to be “empowered” one must have autonomy in many areas of her life. Thus, 5DE posits that women’s empowerment, in agriculture, can be exhibited through five key areas in a woman’s life: decisions about agricultural production, access to and decision-making power over productive resources, control over use of income, leadership in the community, and time allocation (see figure on page 9). The 5DE is 90 percent of the WEAI’s score.

For each of the five equally weighted domains, a threshold (or targeted level) is defined. If the woman meets or exceeds the threshold in the household, she experiences “sufficiency” (or adequate achievement) in this domain. A woman is defined as “empowered” in 5DE if she has adequate achievements in four of the five domains or is empowered in some combination of the weighted indicators that reflect 80 percent total adequacy.

Sub-Index: Gender Parity Index (GPI)
Though empowerment is multidimensional and absolute, it is strongly influenced and can be limited by social and environmental factors. WEAI characterizes empowerment both in terms of what women have in absolute terms (SDE) and what they have relative to men (GPI). It explores the relationship between empowerment in men and women through the Gender Parity Sub-index (GPI). GPI compares the empowerment achievements of men and women in the same household using the same five domains⁵. This sub-index accounts for 10 percent of the total WEAI score.

3. Most of the content in this section is taken from publications in the “WEAI Resource Center,” which can be accessed here: http://www.ifpri.org/book-9075/ourwork/program/weai-resource-center
4. Alkire, Sabina et al. The Women’s Empowerment in Agriculture Index; IFPRI Discussion Paper 01240; Dec 2012
5. While the 5DE score is calculated using all women in the sample, the GPI score is not calculated for women living in a household where no adult male is present.

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The Five Domains of Empowerment in the WEAI

<table>
<thead>
<tr>
<th>Domain</th>
<th>Indicator</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Decision-making</td>
<td>Input in productive decisions</td>
<td>1/10</td>
</tr>
<tr>
<td></td>
<td>Autonomy in production</td>
<td>1/10</td>
</tr>
<tr>
<td>Access to Productive Resources</td>
<td>Ownership of assets</td>
<td>1/15</td>
</tr>
<tr>
<td></td>
<td>Purchase, sale, or transfer of assets</td>
<td>1/15</td>
</tr>
<tr>
<td></td>
<td>Access to and decisions on credit</td>
<td>1/15</td>
</tr>
<tr>
<td>Control over Use of Income</td>
<td>Control over use of income</td>
<td>1/5</td>
</tr>
<tr>
<td>Community Leadership</td>
<td>Group member</td>
<td>1/10</td>
</tr>
<tr>
<td></td>
<td>Speaking in public</td>
<td>1/10</td>
</tr>
<tr>
<td>Time Allocation</td>
<td>Workload</td>
<td>1/10</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>1/10</td>
</tr>
</tbody>
</table>

**Scoring through WEAI**

In the WEAI model, a woman is seen as enjoying empowerment if she scores 80 percent or higher in the five domains or has gender parity with the primary male in her household. For those households that have not achieved women’s empowerment in agriculture, the sub-indices can point to gaps in the five domains and gender parity that need to be closed for women to reach adequate empowerment.

The WEAI is particularly useful in analyzing areas where programs or activities have been successful in moving the needle on empowerment and areas where women’s autonomy still lags behind.

The overall WEAI is constructed by calculating the weighted average of the 5DE and GPI as follows:

\[
\text{WEAI} = (0.90 \times 5DE) + (0.10 \times GPI),
\]

Where:
- \(5DE = He + Hd \times Ae\) (\(He\) is the percentage of empowered women; \(Hd\) is the percentage of disempowered women; \(Ae\) is the average absolute empowerment score among the disempowered; and
- \(GPI = 1 – HGPI \times IGPI\) (\(HGPI\) is the percentage of gender parity-inadequate households; \(IGPI\) is the average empowerment gap between women and men living in households that lack gender parity).

**WEAI Correlation with Other Measures**

Further research has demonstrated that WEAI’s score is positively correlated with several key indicators including wealth, decisions about family planning, completing secondary education, minimum acceptable diets for children, and breastfeeding for infants. A higher WEAI score is therefore associated with better performance in these indicators. These types of correlation analyses demonstrate the validity of the index.

5. Alkire, Sabina et al. The Women’s Empowerment in Agriculture Index; IFPRI Discussion Paper 01240; Dec 2012