FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

HONDURAS

Feed the Future Zone of Influence Interim Assessment Report

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FROM THE AMERICAN PEOPLE

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Contacts:
Maximo Torero, International Food Policy Research Institute
2033 K Street NW, Washington, DC
m.torero@cgiar.org

Miguel Almanzar, International Food Policy Research Institute
2033 K Street NW, Washington, DC
m.almanzar@cgiar.org

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List of Acronyms

5DE	Five Domains of Empowerment
ACS	Alianza para el Corredor Seco (Alliance for the Dry Corridor)
BFS	Bureau for Food Security
BMI	Body Mass Index
CAPI	Computer-Assisted Personal Interviews
CI	Confidence Interval
CPI	Consumer Price Index
DEFF	Design Effect
DHS	Demographic and Health Survey
EA	Enumeration Area
FANTA	Food and Nutrition Technical Assistance Project
FTF	Feed the Future
GOH	Government of Honduras
GPI	Gender Parity Index
HHS	Household Hunger Scale
IFPRI	International Food Policy Research Institute
LCU	Local Currency Unit
LSMS	Living Standards Measurement Survey
MAD	Minimum Acceptable Diet
MDD-W	Women's Minimum Dietary Diversity
MDG	Millennium Development Goals
NRVCC	Nutrient-Rich Value Chain Commodity
OPHI	Oxford Poverty and Human Development Initiative
PPP	Purchasing Power Parity
SD	Standard Deviation
SE	Standard Error
USAID	United States Agency for International Development
USD	United States Dollar
USG	United States Government
WDDS	Women's Dietary Diversity Score
WEAI	Women's Empowerment in Agriculture Index
ZOI	Zone of Influence

Executive Summary

Background

Feed the Future, led by the U.S. Agency for International Development (USAID), seeks to reduce poverty and under-nutrition in 19 developing countries through its focus on accelerating growth of the agriculture sector, addressing root causes of under-nutrition, and reducing gender inequality.

Feed the Future monitors its performance in part by periodic assessments of a number of standardized indicators. These indicators reflect data collected through population-based surveys in the geographic areas targeted by Feed the Future interventions, known as the Feed the Future Zones of Influence (ZOI). This document reports the results of the 2015 interim assessment of Feed the Future's population-based indicators for the ZOI in Honduras.

The Feed the Future ZOI in Honduras comprises six departments located in the western part of the country: Copán, Santa Bárbara, Intibucá, La Paz, Lempira, and Ocotepeque. Large parts of the ZOI fall within the "Dry Corridor", an area characterized by low rainfall and highly variable climatic conditions. The ZOI is vulnerable to climate change, making responsible community stewardship of natural resources critical in promoting long-term development in the region. Approximately 1,725,069 individuals reside in this region, the majority (77 percent) of whom are located in rural areas. The average household has five members; while most households (87 percent) have both male and female adults, of those that do not, 10 percent have only adult women. These departments are some of the poorest in the region; nearly half of all households in the ZOI are poor according to the $1.25 per person per day international extreme poverty line and 84 percent fall below the national rural extreme poverty line, or $2.35 per person per day in 2005 purchasing power parity (PPP) dollars[1].

In 2011, USAID/Honduras established a Feed the Future multi-year strategy that outlines its approach for generating the maximum possible impact on household poverty and undernutrition in the selected ZOI. Broadly, all activities under the Feed the Future umbrella follow a market-based approach to poverty reduction that leverage previous US Government investments in infrastructure and human capital and that aim to complement development efforts by local governments.

In order to sustainably generate new income opportunities for the extreme poor, the USG strategy in Honduras is based on a market-oriented approach to agricultural diversification. A focus on improving agriculture productivity while developing new business opportunities for farmers in the highest potential agricultural value chains - specifically, coffee and horticulture -

[1] The price per person per month of the food basket in rural areas is 1,222.00 Lempiras and 1,631.40 Lempiras for the basic bundle. Households are extremely poor if their expenses are below the amount needed to provide each member of the households with a food basket.

aims to aid the extreme poor with the fewest assets who have interest in pursuing these opportunities. As an underlying determinant for food insecurity, Honduras' strategy also places a key focus on chronic undernutrition. The cornerstone of the Honduras nutrition approach is improving access to an integrated set of maternal and child health services, from monitoring and behavior change activities at the community level, to referral to higher levels of care as appropriate in the departments and communities in the ZOI.

In implementing its multi-year strategy, USAID/Honduras initially invested in a four year activity, called ACCESO, which supported coffee, basic grain (corn and beans), and horticulture producers in the targeted ZOI to increase incomes through improved on-farm production and access to markets while also transferring relevant knowledge to improve nutritional outcomes.

To further the overall goal of decreasing poverty and under nutrition in the ZOI, USAID/Honduras continues to invest in its targeted ZOI through two follow-on Feed the Future activities called ACCESS to Markets and Alianza para el Corredor Seco (ACS).

1. ACCESS to Markets delivers household and farmer level extension and nutrition services in three of the six Feed the Future departments in the northern portion of the ZOI, i.e. Santa Bárbara, Copán, and Ocotepeque.

2. Alianza para el Corredor Seco (ACS), or the Alliance for the Dry Corridor, is implemented in collaboration with funding from the Government of Honduras. Similar to ACCESS to Markets, ACS delivers household and farmer level extension and nutrition services in the southern departments of the ZOI, i.e. La Paz, Intibucá, and Lempira.

This interim assessment is designed for use as a monitoring tool, and as such provides point estimates of the indicators with an acceptable level of statistical precision. However, Feed the Future ZOI sample calculations are not designed to support conclusions of causality or program attribution, nor is the interim assessment designed to measure change from the baseline.

Interim Assessment Indicators

Fourteen Feed the Future indicators are included in this assessment: (1) Daily per capita expenditures (as a proxy for income) in USG-assisted areas; (2) Prevalence of Poverty; (3) Depth of Poverty; (4) Prevalence of households with moderate or severe hunger; (5) Women's Dietary Diversity; (6) Prevalence of children 6-23 months receiving a minimum acceptable diet (MAD); (7) Prevalence of exclusive breastfeeding among children under 6 months of age; (8) Prevalence of underweight women; (9) Prevalence of stunted children under 5 years of age; (10) Prevalence of wasted children under 5 years of age; (11) Prevalence of underweight children under 5 years of age; (12) Prevalence of anemia in children under 5 years of age, and

(13) Prevalence of anemia in women; and (14) Women's Empowerment in Agriculture Index (WEAI) score.

In addition, we report the ten indicators that comprise the WEAI. These are presented in the Women's Empowerment in Agriculture Section of this report (Section 5) and provide a description of the agricultural production in the ZOI (Section 8 through 10)

Interim Assessment Data Sources

Data for the Feed the Future ZOI indicators presented in this assessment are drawn from a comprehensive survey of 5,743 households conducted by IFPRI between May and August 2015.

Summary of Key Findings

Household Economic Status

Daily per capita expenditures (as a proxy for income) in USG-assisted areas (R)

We find that the average household per capita expenditure is $2.11 per day and the median is $1.70. Households with either only adult male or adult female members have a higher daily per capita expenditure than households with both male and female adults.

The poorest 20 percent of individuals only represent 8 percent of the total expenditures in the ZOI, while the wealthiest 20 percent represent more than 40 percent of the region's expenditures.

Prevalence of Poverty: Percent of people living on less than $1.25 per day

The $1.25 threshold is in effect the extreme poverty threshold and represents the poverty line typical of the world's poorest countries. The poverty prevalence indicates how many individuals are impacted by poverty. Just under 46 percent of individuals in the ZOI live below the $1.25 poverty threshold.

Depth of Poverty: The mean percent shortfall relative to the $1.25 poverty line

Where the poverty prevalence indicates how many individuals are impacted by poverty, it does not speak to how much people are impacted by poverty. The depth of poverty, often called the poverty gap, is a useful poverty estimate because it captures the extremity of poverty. This measure indicates the average gap between consumption levels and the poverty line, with the non-poor counted as having a gap of zero. The depth of poverty in the ZOI is 13.5 percent, which indicates that the average gap between consumption levels of the population and the poverty line is $0.17 (2005 PPP).

The depth of poverty provides an indication of the amount of resource transfers that, if perfectly targeted to poor households, would be needed to bring everyone below the poverty line up to the poverty line. With a ZOI population of 1.72 million, a poverty threshold of $1.25 per day, and a poverty gap of 13.5 percent, $290,371 (2005 PPP) per day would need to be transferred to the poor to bring their income or expenditures up to the poverty threshold.

Women's Empowerment in Agriculture Index

The Women's Empowerment in Agriculture Index (WEAI) measures empowerment in five domains. The *Production* domain assesses the ability of individuals to provide input and autonomously make decisions about agricultural production. The *Resources* domain reflects individuals' control over and access to productive resources. The *Income* domain monitors individuals' ability to direct the financial resources derived from agricultural production or

other sources. The *Leadership* domain reflects individuals' social capital and comfort speaking in public within their community. The *Time* domain reflects individuals' workload and satisfaction with leisure time.

The index is composed of two sub-indices: the Five Domains of Empowerment sub-Index (5DE), which measures the empowerment of women in the five empowerment domains, and the Gender Parity sub-Index (GPI), which measures the relative empowerment of men and women within the household. The WEAI aggregates information collected for each of the five domains into a single empowerment indicator.

The WEAI for the ZOI in Honduras is 0.718. It is a weighted average of the 5DE sub-index value of 0.693 and the GPI sub-index value of 0.947. The 5DE for the ZOI of Honduras shows that 20.6 percent of women are empowered. The 79.4 percent of women who are not yet empowered, still have, on average, adequate achievements in 61.3 percent of dimensions. Thus the overall 5DE is [20.6% + (79.4% x 61.3%)] = [1 − (79.4% x 38.7%)] = 0.693. The results of the Five Domain sub-Index (5DE) suggest that women in the Honduras ZOI achieve empowerment in only 69.3 percent of the weighted indicators. The Gender Parity sub-Index is estimated at 94.7 percent and this is a measure of inequality between male and female decision makers in dual households. The GPI shows the percentage of women who have achieved parity with respect to their male counterparts. In cases of gender disparity, the GPI reflects the relative empowerment gap between the woman's 5DE score with respect to the man's. The GPI for the ZOI shows that 86.6 percent of women have gender parity with the primary male in their household. Of the13.4 percent of women who are less empowered, the empowerment gap between them and the male in their household is quite large at 39.6 percent. Thus the overall GPI is [1 − (13.4% x 39.6%)], or 0.947.

When taking into account the overall WEAI score in the ZOI implies that women achieve empowerment in only 71.8 percent of the indicators. This estimated level of empowerment is below the 80 percent recommended cut off, above which a woman would be classified as empowered.

The uncensored headcounts reflect the proportion of all surveyed women with adequacy in individual indicators regardless of their empowerment status. We find that the domains that may be driving women's disempowerment are access to and decisions on credit, the ability to purchase, sell, or transfer assets, and asset ownership. In addition, the censored headcounts, or the achievement in each particular category of women who do not meet the threshold for empowerment in the 5DE index, allows us to determine precisely which indicators represent the biggest impediment to women achieving empowerment. We find that disempowered women are most likely to achieve empowerment in their time spent in leisure, autonomy in production; with censored headcounts above 80 percent in 2015. The censored headcounts also indicate that access to and decisions on credit, the ability to purchase, sell, or transfer

assets, and asset ownership are the domains where women achieve the lowest adequacy scores.

Hunger and Dietary Intake

Prevalence of households with moderate or severe hunger

The Household Hunger Scale (HHS) is used to calculate the prevalence of households in the Honduras ZOI experiencing moderate or severe hunger. It has been cross-culturally validated to allow comparison across different food-insecure contexts. The HHS is used to assess, geographically target, monitor, and evaluate settings affected by substantial food insecurity.

The HHS is used to estimate the percentage of households affected by three different severities of household hunger: little to no household hunger; moderate household hunger; and severe household hunger. The lean season in Honduras occurs from April through August and the data for the HHS were collected during the lean season before the primera harvests of 2015.

We find that 95.9 percent of the households surveyed have little to no hunger, and 3.7 percent have moderate or severe hunger. A very small number of households (0.3 percent) are severely hungry.

Dietary Intake

- Dietary Diversity among Women Age 15-49 Years

Women of reproductive age (15-49 years) are at risk of multiple micronutrient deficiencies. The Feed the Future women's dietary diversity indicator is a proxy for the micronutrient adequacy of women's diets. The dietary diversity indicator reports the mean number of food groups consumed in the previous day by non-pregnant women of reproductive age.

The Women's Dietary Diversity Score (WDDS) among women in the ZOI is 3.68 and the median is 4 out of possible 9 groups. We see little variation among different age groups of women; women between the age of 15 and 19 have a nearly identical WDDS to women 45 to 49 years old.

Women's Minimum Dietary Diversity (MDD-W) is a new measure introduced in the interim assessments and uses 10 food groups. Fifty-one percent of women in in the ZOI achieve minimum dietary diversity. We again see little variation among age groups, and a positive correlation between education and achieving minimally diverse diet.

- Infant and Young Child Feeding

Exclusive breastfeeding provides children with significant health and nutrition benefits, including protection from gastrointestinal infections and reduced risk of mortality due to infectious disease. Exclusive breastfeeding means the infant received breast milk (including expressed

breast milk or breast milk from a wet nurse) and may have received oral rehydration salts, vitamins, minerals, and/or medicines, but did not receive any other food or liquid. Over sixty-five percent (65.5%) of children under the age of 6 months are exclusively breastfed; the proportion of girls and boys who are breastfed is similar, with the estimate for males being 67 percent. We find that children whose mothers have no education are more likely to be breastfed; however, the sample size for this estimate is small and given the low levels of education in the population, this estimate is likely reflecting access to resources.

For children 6-23 months of age, we measure the prevalence of receiving a Minimum Acceptable Diet (MAD) apart from breastfeeding. This composite indicator measures both the minimum feeding frequency and minimum dietary diversity based on the mother's reports of the frequency with which the child was fed in the past 24 hours, and what foods were consumed during the past 24 hours. Very few children between 6 and 23 months of age receive a minimum acceptable diet; only 16.9 percent of the 952 children in our sample do. We see scant differences between boys and girls, but we do see that children between 12 and 17 months are more likely to consume a sufficiently varied diet than their counterparts. Our results suggest that the low MAD in the ZOI is driven by breastfed children who are not being introduced to different food groups as they age and by non-breastfed children that, while having a more diverse diet, are not feeding frequently enough and including milk in their feedings.

Nutritional Status of Women

Anthropometric data are a useful, simple and practical way of describing the overall nutritional status of the population groups. Their usefulness stems from anthropometry's close correlation with the multiple dimensions of individual health and development and their socio-economic and environmental determinants.

Body Mass Index of Women Age 15-49 Years

We estimate that 58.2 percent of women in the ZOI are a normal weight (BMI<25); the mean BMI in our sample is 23.3, which falls in the normal range of 18.5 to 24. We observe that 10.7 percent of all women are underweight, and that younger women are more likely to be underweight. The proportion of underweight women (BMI < 18.5) decreases with age. In addition, 22.7 percent of women surveyed are overweight, and this proportion increases with age. Finally, 7.5 percent of women are classified as obese.

Anemia of Women Age 15-49 Years

Anemia is defined as a reduction in the normal number of red blood cells or a decrease in the concentration of hemoglobin in the blood. Symptoms of anemia range from pallor, fatigue and weakness, shortness of breath and heart problems.

We estimate the prevalence of anemia in non-pregnant women of reproductive age at 24.7 percent in the ZOI with an average measure of hemoglobin in the blood of 12.7 g/dl, just above the mild anemia cutoff. We note that most of the prevalence is comprised of cases of mild anemia (between 10-11.9 g/dl). For pregnant women, the prevalence rates are higher, with 29.4 percent of pregnant women having anemia at the time of the survey; however, the sample for these estimates is much smaller. Overall, 25 percent of women age 15 to 49 are anemic in the ZOI in 2015 compared to 12 percent in 2012.

Nutritional Status of Children

The standard indices of physical growth for children are height-for-age, weight-for-height, and weight-for-age. These indices are related to different aspects of nutritional status.

Stunting, Wasting, and Underweight among Children under 5 Years

A child that is considered too short for his/her age is stunted (height-for-age). Stunting reflects the cumulative effect of chronic malnutrition or long term insufficient nutrient intake. Stunting is prevalent in the ZOI. We estimate that 25.3 percent of children in the ZOI are stunted, and 8.1 percent are severely stunted. We find that the mean height-for-age z-score among children in the ZOI is negative, and continues to be negative even when disaggregating the data by different indicators such as sex, age group and educational attainment of the caregiver. This suggests that low height-for-age z-scores are not being driven by extreme values in one particular age group.

A child that is considered too thin for his/her height is wasted (weight-for-height). Wasting is a condition reflecting acute or recent nutritional deficit or severe food shortages. We find fewer wasted children than stunted children in the ZOI. We estimate that 8.6 percent of children under five years of age in the ZOI are wasted, and 2.2 percent are severely wasted.

Weight-for-age is a composite index of stunting and wasting and is a good indicator to monitor nutritional status over time. A child that is considered too thin for his/her age group is underweight. Thirteen percent of children in the ZOI are underweight, and 2.9 percent are severely underweight. Children under a year are least likely to be underweight and although other cohorts are more likely to be underweight, there are few differences between them.

The estimates of the SD for these measures serve as a measure of data quality, as they reflect how the distribution of the measures compare to the general population of children used in the growth tables. The estimates of the SD indicate that there is over dispersion when compared to the reference population for the height for age z-score and the weight for height z-scores[2].

[2] The SD tend to be larger for younger children suggesting that age misreporting is not likely to be driving the size of the SD, since recalling the age and date of birth of younger children would be easier. We also note that the age in months is not calculated manually by the enumerators but automatically by the electronic survey instrument after inquiring about the age and date of birth of the child.

Anemia among Children 6 to 59 Months

We find that over 48.7 percent of children age 6 to 59 months in the ZOI are anemic compared to 23.7 percent in 2012. Most of these cases of anemia are not severe and 17.2 percent are moderate.

Land Use

We observe that 75 percent of households have at least one plot of land under their control. On average, landowning households control 1.7 plots of land. Agricultural plots are three kilometers from the home on average and the number of crops per each plot is 1.6 crops in the previous 12 months before the survey. Multiple land tenancy arrangements exist in the ZOI. We find that 46 percent of plots are under a formal arrangement where the household has a title, 19 percent of plots are controlled by households who lack a formal title and 15 percent of plots are rented from another party (non-household members).

Average area of land under a household's control (total among all plots) is two hectares. On average irrigated land area is 0.07 hectares when we include any type of irrigation system. The area under drip irrigation is estimated at 0.02 hectares. The prevalence of each system at the household level show that most agricultural households do not have irrigation systems installed and 93.7 percent of agricultural households report at least one plot without irrigation. Irrigation by gravity/house and drip irrigation remains low, with 3.6 percent of households reporting (in at least one plot) irrigation by gravity/house and 2.7 percent reporting drip irrigation.

Agriculture

We characterize the agricultural situation in the ZOI by focusing on the main crops and crop groups that are produced in the ZOI. We collect data on agricultural activities within the past 12 months, which would include either the primera season (early to mid 2014), the postrera season (from late 2014 to early 2015), or both seasons.

We estimate that over the past 12 months (previous two agricultural seasons), the average farmer plants 0.6 hectare of corn and 0.3 hectares of beans; the average area of coffee planted is 1.1 hectare. For other cash crops, like vegetables, fruits and tubers the average area planted for farmers that cultivated these crops is 0.7, 0.5 and 0.3 hectares, respectively; though, the number of farmers that plant fruits, vegetables and/or tubers represent is less than 300 in the sample.

The average value of household production (median department price multiplied by the total household production) in this period was $370 for corn and $263 for beans; reflecting an average corn production of 604 kilograms and 185 kilograms of beans[3]. We estimate fruit,

[3]These are similar to the estimates of the 2012 baseline. The value of household production in 2012 was $306.84 for corn, $210.13 for beans with an average production of 846.36 kgs for corn and 226.8 kgs for beans.

vegetable and tuber production in the same period to be valued at $651, $2,601 and $1,726, respectively over the previous two agricultural seasons or 12 months prior to the survey. The crop that brings the most income in the area is coffee, as expected, with $3,792 in the 12 months previous to the survey. However, this valuation is lower than the estimate of $8,000 we found in 2012. This is most likely a reflection of lower production due to the outbreak of coffee rust and the decline in worldwide coffee prices since then.

We estimate that the average yield in the two agricultural seasons before the survey was 1,481 kg/ha for corn and 747 kg/ha for beans. These yields were lower in comparison to previous seasons. For coffee, the estimated yield is 2,146 kg/ha, which is about normal for the ZOI. However, the coffee area harvested in the past 12 months was lower than previous years. The decrease in coffee yields perhaps reflects the effects and recovery from the drought and coffee rust of previous seasons.

We estimate the value of total production of each crop and the area planted/harvested for each household and obtain the ratio or monetary yield. The monetary yield estimates the value in dollars that each household can obtain under one hectare of land; this reflects the productivity of land and the prices in the market for each crop. Across the different crops, vegetables and tubers have the highest monetary yield, or value generated per hectare, with $10,813/ha for vegetables and $8,903 /ha for tubers; however, the sample of households cultivating these crops is small. We estimate a monetary yield of $912/ha, $1,116/ha, and $5,489/ha for corn, beans, and coffee, respectively.

Livestock

Seventy percent of households in our sample own livestock (cattle, horses, swine, goat, poultry, etc.). Among the households that participate in animal rearing, 62 percent of livestock owners own poultry, 7 percent own swine, 14 percent own non-dairy cattle and 5 percent own dairy cows. In female-only households and in smaller households, poultry represents a higher proportion of animal rearing activities.

The average number of animals owned varies depending on the type of animal. The average number of chickens owned is 11.4 at the time of the survey and the average number of swine owned is 2.4. Households that own dairy cows own between 2.4 and 3.9 cows.

The average value of a household's livestock holdings vary widely, but in general, dairy cows and cattle are most valuable. Average sales from dairy cows generated $2,539 in income in the 12 months before the survey and average sales of cattle generated $2,543 in annual income. In contrast, sales of swine generated $192 in annual income, and sales of poultry yielded $66 in annual income.

Comparison of 2012 Baseline and 2015 Interim

Baseline (2012) and interim (2015) estimates of indicator values in the ZOI are shown in the Feed the Future Zone of Influence Indicator Estimates tables on the following pages, **Table ES 1.1** through **Table ES 1.6**. The estimates presented below for the baseline and interim use population weights[4] that expand the cross sectional sample in each year to the population of households in the ZOI for each year using the 2013 population census projections.

The Feed the Future ZOI sample calculations are not designed to support conclusions of causality or program attribution, nor to measure change from the baseline. We present the confidence intervals (CIs) and the value of a test of differences across the estimated means in each year. The confidence intervals demonstrate the reliability of estimated values. While the surveys were not designed to capture change over time, non-overlapping CIs indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates unless a test of differences is conducted. When this test is significant the row shows an asterisk (*) in superscript. The reader should also note that the samples sizes are larger in the interim survey (2015), as more precise estimates for children under five were required at the department level.

We note that upon reviewing the indicator for Children's MAD that was first reported in the baseline we discovered a programing error (the differences presented are not only due to sampling weights). The error consisted in assigning children one food group that they did not consume, thus giving children higher scores and overstating the MAD in 2012. These baseline figures are revised in this report and consistent across the years of the data.

In what follows, we briefly describe the changes in the main FTF PBS indicators between the 2012 baseline survey and the 2015 interim survey. To give some context, the 2012 sample consisted of 3,326 households in the ZOI and the 2015 interim survey followed these households and added new households (for a total of 5,743 households in 2015) to increase the precision of health and nutrition indicators of children[5].

Expenditures, Poverty and Hunger

A comparison of the expenditure and poverty measures in **Table ES 1.1** shows that between 2012 and 2015 these measures have not changed much in the ZOI. The average household per capita expenditure decreased from $2.12 in 2012 to $2.11 in 2015, with the prevalence of poverty (at the $1.25 poverty line) remaining unchanged. The depth of poverty indicates that

[4] In previous monitoring reports the indicators were calculated without using sampling weights. The unweighted indicators were reported, thus representing the estimated values for the sample and not necessarily for the ZOI population in general.

[5] "Appendix 3 Feed the Future ZOI Indicators Department Level Estimates" shows the estimates for each department in the ZOI.

the average gap between the level of consumption of the poor and the poverty line decreased, from 14.4 in 2012 to 13.5 in 2015, or by 0.9 percentage points. The statistical tests conducted confirm that these small differences are not statistically significant.

The food security in the ZOI, as measured by the proportion of households that suffer from moderate or severe hunger, remained unchanged at 4 percent; however, when disaggregating the estimate by gendered household type we see a statistically significant increase in households with only women (from 6 to 12 percent), and households with only men (from 1 to 8 percent).

Maternal Health and Nutrition

The estimates in **Table ES 1.2** show that the health and nutritional status for women of reproductive age in the ZOI has worsened. We see a statistically significant increase in the number of food groups consumed, from 3.17 in 2012 to 3.68 in 2015, and in the proportion of women that have minimum dietary diversity. While more women have a minimally adequate diet (51 percent in 2015), the more objective indicators of health and nutrition, such as anemia status and body mass index, show that this change in the number of food groups has had little effect in the health of these women. The prevalence of anemia increased from 12 percent in 2012 to 25 percent in 2015 and the proportion of underweight women increased from 7.4 percent to 10.7 percent.

Child Health and Nutrition

The changes in nutritional status for children under five are shown in **Table ES 1.3.** The table shows that exclusive breastfeeding in the ZOI decreased from 70.4 percent to 65.5 percent in 2015; however, this difference is not statistically significant. We note that the proportion of exclusive breastfeeding is very high in the ZOI compared to the estimates in the Demographic and Health Survey (DHS) of 2011-2012[6].

For children 6-23 months of age the table presents the proportion of children that receive a minimal acceptable diet. This indicator measures the adequacy of nursing and complementary feeding practices for children in this age group. The minimum acceptable diet estimate had a statistically significant increase from 6.7 percent in 2012 to 16.9 percent in 2015.

In 2015, among children under five, 25.3 percent suffer from chronic malnutrition, that is, they are short for their age. Chronic malnutrition has declined since 2012 when 36.2 percent of the children presented growth retardation. The proportion of children with low weight for height, or wasted, increased from 2.2 percent in 2012 to 8.6 percent in 2015, signaling increases in

[6] Secretaría de Salud - SS/Honduras, Instituto Nacional de Estadística - INE/Honduras, and ICF International. 2013. Honduras Encuesta Nacional de Salud y Demografía 2011-2012. Tegucigalpa, Honduras: SS, INE and ICF International. Available at http://dhsprogram.com/pubs/pdf/FR274/FR274.pdf.

acute or recent malnutrition in the ZOI. Both the decrease in stunting and the increase in wasting are statistically significant.

The estimated proportion of underweight children was 11.9 percent in 2012 and 13.1 percent in 2015. The estimates for the proportion of underweight children under five and under two show no statistically significant increases.

The prevalence of anemia in the 2012 survey shows that 23.7 percent of children age 6 to 59 months were anemic. In 2015, anemia increased significantly, with 48.7 percent of children found to be anemic, a 25 percentage point difference.

Women's Empowerment

While the analysis presented does not look to compare the evolution of WEAI and its components across time, before concluding this discussion, we highlight some of the observed differences between the estimates from the 2012 survey and the estimates presented in this report (2015 survey) in tables **Table ES 1.4** through **Table ES 1.6**. The WEAI estimate decreased from 0.749 to 0.718, a difference that implies a 3.1percentage point difference between the percentage of indicators in which a women is empowered in the ZOI. This small difference is driven mainly by differences in: (1) the GPI, which changed from 0.874 to 0.947; and, (2) the 5DE, which decreased from 0.735 to 0.693.

The change in the GPI is composed by an increase in the percentage of women with gender parity, from 41.9 percent in 2012 to 86.6 percent in 2015 and tamed by an increase in the empowerment gap between men and women in households where women are less empowered than men, 0.218 in 2012 to 0.396. This improvement in gender parity reflects more women being as empowered as the men in their household.

The difference in the 5DE index comes from differences in the overall empowerment headcount ratio. Examining the components of the 5DE in both years it is evident that the difference is driven by the percentage of women that are considered empowered overall (headcount), with empowered women changing from 31.5 percent in 2012 to 20.6 percent, or a 10.9 difference. This difference in the empowerment is mainly driven by differences in the empowerment headcount in the production and the resources domains. Specifically, input in productive decisions decreased from 88.5 percent in 2012 to 65.3 percent in 2015; and, ownership of assets changed from 88.4 percent in 2012 to 48.3 percent in 2015.

The large differences in input decisions and ownership could be due to non-response or data quality. In 2012, the WEAI instrument was in its early stages and had more sections that in the end were not included in the WEAI calculation. Noting this, it would seem less likely that the higher headcount in production and resources domains for 2012 would be driven by non-response or missing data since the 2015 instrument was simplified and shorter. Another aspect to note is that the samples size used to calculate the WEAI is much larger in 2015 than in 2012,

both because the 2015 sample of households is almost double that of 2012 and that the non-response to the empowerment section in 2015 was much lower than in 2012. Given this the 2015 estimates are more precise and reliable.

Table ES.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	2.12	2.02	2.21	3,326	2.11	2.04	2.17	5,743	0.801	
Male and female adults	1.98	1.89	2.07	2,877	1.97	1.91	2.03	5,000	0.844	
Female adult(s) only	2.57	2.32	2.82	326	2.74	2.53	2.95	546	0.252	
Male adult(s) only	3.79	3.22	4.36	123	3.58	3.16	3.99	197	0.527	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.458	0.426	0.490	3,326	0.458	0.434	0.482	5,743	0.984	
Male and female adults	0.471	0.438	0.505	2,877	0.471	0.446	0.496	5,000	0.997	
Female adult(s) only	0.355	0.268	0.441	326	0.330	0.270	0.389	546	0.627	
Male adult(s) only	0.172	0.079	0.266	123	0.181	0.088	0.273	197	0.896	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.365	0.335	0.395	3,326	0.364	0.342	0.386	5,743	0.947	
Male and female adults	0.389	0.357	0.421	2,877	0.390	0.366	0.413	5,000	0.980	
Female adult(s) only	0.271	0.204	0.339	326	0.231	0.184	0.278	546	0.306	
Male adult(s) only	0.100	0.045	0.155	123	0.112	0.055	0.169	197	0.752	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	14.4	13.0	15.8	3,326	13.5	12.4	14.5	5,743	0.186	
Male and female adults	14.9	13.4	16.3	2,877	13.8	12.7	14.9	5,000	0.131	
Female adult(s) only	10.5	7.1	13.9	326	10.5	7.8	13.2	546	0.988	
Male adult(s) only	3.9	1.1	6.7	123	5.5	2.3	8.8	197	0.437	
Prevalence of households with moderate or severe hunger										
All households	0.04	0.03	0.05	3,139	0.04	0.03	0.05	5,690	0.515	
Male and female adults	0.03	0.02	0.04	2,345	0.03	0.02	0.04	4,957	0.889	
Female adult(s) only	0.06	0.03	0.08	711	0.12	0.08	0.16	539	0.005	*
Male adult(s) only	0.01	0.00	0.01	83	0.08	0.03	0.12	194	0.003	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.074	0.062	0.087	2,576	0.107	0.095	0.120	4,474	0.000	*
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.120	0.101	0.139	2,675	0.250	0.229	0.270	4,337	0.000	*
Non-Pregnant women15-49	0.116	0.096	0.136	2,506	0.247	0.227	0.268	4,114	0.000	*
Pregnant women age 15-49	0.178	0.092	0.263	169	0.294	0.212	0.376	223	0.049	*
Women's Dietary Diversity: Women of reproductive age 15- 49										*
Mean number of food groups consumed (9 Food)	3.17	3.09	3.24	2,735	3.68	3.61	3.75	6,669	0.000	*
Minimum Dietary Diversity (10 Food>=5)	0.34	0.31	0.36	2,735	0.51	0.49	0.54	6,669	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.704	0.602	0.805	136	0.655	0.568	0.742	288	0.459	
Male children	0.759	0.635	0.884	65	0.670	0.562	0.778	142	0.298	
Female children	0.649	0.498	0.800	71	0.639	0.526	0.751	146	0.911	
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.067	0.034	0.100	566	0.169	0.137	0.202	952	0.000	*
Male children	0.058	0.026	0.090	288	0.164	0.120	0.207	473	0.000	*
Female children	0.077	0.020	0.135	278	0.175	0.129	0.220	479	0.008	*
by Household type										
Male and female adults	0.070	0.034	0.105	512	0.172	0.138	0.206	875	0.000	*
Female adult(s) only	0.057	-0.060	0.174	37	0.155	0.039	0.271	65	0.214	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.362	0.325	0.398	1,410	0.253	0.225	0.282	2,130	0.000	*
Male children	0.389	0.339	0.438	694	0.267	0.229	0.305	1,059	0.000	*
Female children	0.335	0.288	0.382	716	0.240	0.204	0.276	1,071	0.001	*
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.022	0.012	0.031	1,410	0.086	0.070	0.102	2,130	0.000	*
Male children	0.025	0.010	0.041	694	0.081	0.058	0.103	1,059	0.000	*
Female children	0.018	0.007	0.029	716	0.091	0.067	0.115	1,071	0.000	*
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.119	0.095	0.142	1,410	0.131	0.110	0.153	2,130	0.431	
Male children	0.128	0.091	0.165	694	0.131	0.102	0.159	1,059	0.914	
Female children	0.109	0.081	0.137	716	0.132	0.104	0.160	1,071	0.253	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.089	0.060	0.118	582	0.109	0.078	0.141	762	0.359	
Male children	0.105	0.063	0.148	289	0.118	0.074	0.162	371	0.686	
Female children	0.072	0.034	0.110	293	0.102	0.059	0.144	391	0.294	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.237	0.207	0.268	1,358	0.487	0.459	0.515	1,899	0.000	*
Male children	0.266	0.223	0.310	686	0.513	0.470	0.556	939	0.000	*
Female children	0.206	0.169	0.244	672	0.463	0.424	0.502	960	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES.1.4 . FTF ZOI Indicator Estimates, Honduras: WEAI domains, Uncensored Headcounts

Domain	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate-Uncensored	95% CI		n	Estimate-Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators[1,2]										
Input in productive decisions	0.864	0.844	0.885	1,937	0.587	0.564	0.611	4,389	0.000	*
Autonomy in production	0.911	0.895	0.926	1,982	0.861	0.846	0.875	4,732	0.000	*
Ownership of assets	0.854	0.834	0.874	2,662	0.401	0.366	0.436	4,778	0.000	*
Purchase, sale or transfer of assets	0.306	0.281	0.331	2,662	0.186	0.167	0.204	4,776	0.000	*
Access to and decisions on credit	0.064	0.052	0.076	2,633	0.113	0.100	0.126	5,118	0.000	*
Control over use of income	0.572	0.543	0.601	2,272	0.719	0.698	0.739	4,734	0.000	*
Group member	0.622	0.595	0.649	2,187	0.653	0.633	0.673	4,560	0.052	
Speaking in public	0.690	0.666	0.714	2,653	0.702	0.682	0.723	5,121	0.421	
Workload	0.612	0.585	0.639	3,187	0.797	0.781	0.813	5,123	0.000	*
Leisure	0.830	0.810	0.850	2,635	0.971	0.964	0.978	5,119	0.000	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Table ES.1.5 . FTF ZOI Indicator Estimates, Honduras: WEAI domains, Censored Headcounts

Domain	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators[1,2]										
Input in productive decisions	0.885	0.862	0.907	1,460	0.653	0.626	0.680	5,095	0.000	*
Autonomy in production	0.927	0.911	0.944	1,460	0.881	0.868	0.894	5,095	0.000	*
Ownership of assets	0.884	0.861	0.906	1,460	0.483	0.449	0.518	5,095	0.000	*
Purchase, sale or transfer of assets	0.475	0.439	0.511	1,460	0.320	0.290	0.349	5,095	0.000	*
Access to and decisions on credit	0.316	0.285	0.347	1,460	0.267	0.236	0.297	5,095	0.000	*
Control over use of income	0.637	0.599	0.676	1,460	0.738	0.709	0.766	5,095	0.000	*
Group member	0.673	0.642	0.705	1,460	0.725	0.710	0.740	5,095	0.000	*
Speaking in public	0.723	0.692	0.755	1,460	0.700	0.676	0.723	5,095	0.008	*
Workload	0.763	0.734	0.791	1,460	0.809	0.796	0.822	5,095	0.000	*
Leisure	0.890	0.869	0.912	1,460	0.970	0.962	0.977	5,095	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Table ES.1.6 FTF ZOI Indicator Estimates, Honduras: Women's Empowerment in Agriculture Index

	2012 Percent	2015 Percent
Women's Empowerment in Agriculture Index Indicators		
Female: DISEMPOWERED HEADCOUNT : H_{20p}	0.685	0.794
Female: AVERAGE INADEQUACY SHARE : A_{20p}	0.387	0.387
Female: 5 DOMAINS DISEMPOWERMENT INDEX : $M0_{20p}$	0.265	0.307
Female: 5 DOMAINS EMPOWERMENT INDEX : EA_{20p}	0.735	0.693
INADEQUACY HEAD COUNT (H_{GPI})	0.581	0.134
CENSORED INADEQUACY SCORES AVERAGE	0.218	0.396
GENDER DISPARITY INDEX (PI)	0.126	0.053
Gender Parity Index : GPI	0.874	0.947
Average Women's Empowerment in Agriculture Index	0.749	0.718
n	**1,460**	**5,095**

Source: ZOI interim survey, Honduras 2015

The disempowerment headcount present the percent of women who are disempowered and achieve inadequacy in a weighted average of the 10 indicators. The average inadequacy share is the proportion of domains in which a women is disempowered. The 5 domains indexes measure both the share of the domains and the quantity of women that are empowered (or disempowered). The gender parity index measure the proportion of women in dual households that are empowered in each domain or that if they are disempowered they are less so than their male counterpart.

1. Background

This section provides background information on Feed the Future in Honduras including a description of the program and the ZOI, demographic information on the ZOI population, and a summary of the agriculture situation in the ZOI.

1.1 Feed the Future Overview

USAID/Honduras' Feed the Future Multi-Year Strategy (MYS) focuses resources in the most food insecure departments in western Honduras where investments can have the greatest impact on poverty and undernutrition. Designated as the Feed the Future Zone of Influence (ZOI), these departments include La Paz, Intibucá, Lempira, Ocotepeque, Copán, and Santa Bárbara.

In order to sustainably generate new income opportunities for the extreme poor, the MYS strategy in Honduras is based on a market-oriented approach to agricultural diversification. A focus on improving agriculture productivity while developing new business opportunities for farmers in the highest potential agricultural value chains - specifically, coffee and horticulture - aims to aid the extreme poor with the fewest assets who have interest in pursuing these opportunities. As an underlying determinant for food insecurity, Honduras' strategy also places a key focus on chronic undernutrition. The cornerstone of the Honduras nutrition approach is improving access to an integrated set of maternal and child health services, from monitoring and behavior change activities at the community level, to referral to higher levels of care as appropriate in the departments and communities in the ZOI.

USAID/Honduras' Feed the Future activities to date align with the MYS and leverage prior USG investments in infrastructure and human capital in the region to ensure that the goals and objectives of the Initiative are met; for example, the first MCC compact in Honduras gave rise to a new national highway linking remote rural areas to markets in the capital and beyond. Additionally, the large levels of development aid given to Honduras in the past have created a capable network of non-governmental organizations whose capacity is being leveraged to effectively target rural households in remote areas.

USAID-ACCESO (heretofore referred to as 'ACCESO'), the mission's first Feed the Future activity, was a four-year project funded by the USAID Office of Economic Growth in Honduras, one of many development activities spearheaded by USAID in the country since 1961. The activity aimed to increase household incomes and directly lift 30,000 beneficiary households (modified to 10,000 in FY 2015) out of poverty and 18,000 (modified to 7,500) out of extreme poverty, as well as to decrease under-nutrition in these households. While ACCESO's activities concluded in June of 2015, USAID/Honduras continues to invest in the ZOI through the FTF

initiative with two new activities: ACCESS to Markets and Alianza para el Corredor Seco (ACS), or the Alliance for the Dry Corridor.

Together, ACCESS to Markets and the Alliance for the Dry Corridor aim to move at least 20,000 extremely poor rural households out of extreme poverty (defined as $1.25/person/day), and reduce stunting by 20 percent in targeted communities over the course of five years, beginning in 2014/2015 and ending in 2019/2020. As with ACCESO, the new FTF activities will provide farmers with agricultural and value-added technical assistance, facilitate market access, and improve the policy environment in which smallholder farmers operate. In addition, USAID will forge alliances with private companies so smallholder farmers take advantage of high quality irrigation and agricultural inputs. Health and nutrition interventions aim to improve nutritional behaviors among women and children.

1.2 Feed the Future ZOI Profile

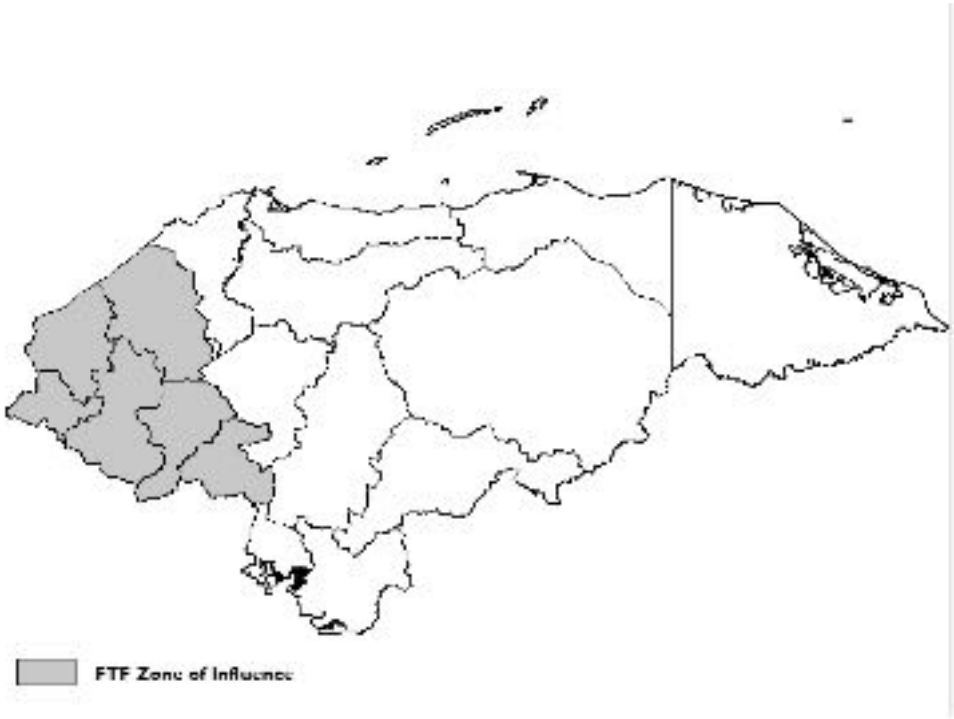
Honduras is the second poorest country in the Americas, with a national poverty rate of 66 percent. Some 45 percent of the population lives in extreme poverty, or less than $2.35 per person per day in 2005 PPP dollars inflated to 2010 US prices. Approximately 73 percent, or 2.6 million, of extremely poor Hondurans live in rural areas. Six departments in western Honduras (La Paz, Intibucá, Lempira, Ocotepeque, Copán, and Santa Bárbara) are home to nearly one million of these extreme poor. These six departments, which make up the ZOI, also have the highest stunting rates in the country, ranging from 27 percent in Santa Bárbara to 48 percent in Lempira and Intibucá, compared to a national rate of 23 percent (ENDESA 2011-2012)[7].

Large parts of the ZOI fall within the "Dry Corridor", an area characterized by low rainfall and highly variable climatic conditions. The ZOI is vulnerable to climate change, making responsible community stewardship of natural resources critical in promoting long-term development in the region. Poor households in the ZOI live in hilly areas which, while suited to cultivating a wide variety of horticultural crops, lack access to roads and basic infrastructure.

A map of the Feed the Future ZOI in Honduras is provided in Figure 1.1.

[7] Informe Resumen, Encuesta Nacional de Demografía y Salud de Honduras 2011-2012 https://dhsprogram.com/pubs/pdf/SR200/SR200.pdf

Figure 1.1 Map of Honduras: Feed the Future ZOI



1.2.1 Rationale for ZOI Selection

In addition to rates of poverty and under-nutrition, data on soils, land gradient, agricultural productivity, distance to markets, road quality, poverty, and other spatial indicators suggest that agriculture investments in the six departments of the ZOI will produce the highest marginal reduction in extreme poverty. The completion of an MCC-funded highway connecting the western region to the capital and major markets make the region suitable for Feed the Future's market-based agricultural diversification strategy. Residents of the ZOI are able to participate in agricultural value chains through Feed the Future activities, allowing their products to become part of larger markets, both domestically and internationally.

The mountainous topography of the ZOI enables a focus on a range of over 30 horticultural crops depending on the local micro-climate. As many households within the region already cultivate basic grains, coffee, and vegetables, they are ideal candidates to target. Feed the Future activities allow them to build upon existing investments and experience to maximize household income. Furthermore, as the region has seen significant migration, particularly by men, to urban areas and the US, a high proportion of poor households in western Honduras are headed by women. Feed the Future activities place an emphasis on finding economic opportunities for women, making the ZOI well suited to interventions.

1.2.2 Demography of the ZOI

Tables 1.1 and 1.2 present individual and household population estimates, respectively, for the ZOI for 2015. Estimates of the total population as well as sub-populations of the ZOI are presented. The sub-population categories correspond to the various sub-populations for the Feed the Future indicators and disaggregates (e.g., children age 6-23 months, number of households). The ZOI estimates for the total population of individuals as well as households are also disaggregated by gendered household type.[8]

Approximately 1,725,069 individuals currently live in the ZOI. The vast majority (1,332,934, or about 77 percent) live in rural areas. A typical household in the ZOI has five members; 86 percent of households have both male and female adult members, approximately 10 percent are headed solely by women, and the remainder are headed by men.

The Feed the Future ZOI is home to 411,350 women of reproductive age (15 to 49 years), of whom an estimated 3.5 percent (14,554) were pregnant at the time of the survey. There are 205,966 children under the age of five residing in the ZOI. Of these, 15,562 are under six months old, and 73,562 are under 24 months old. The female-to-male child sex ratio varies between cohorts; while there are almost an equal number of boys and girls when looking at all children under the age of 5, we see the sex ratio for children under 6 months is 0.9, whereas the sex ratio for children 6 to 23 months is 1.10.

The population composition suggests that there is a great deal of scope for Feed the Future to improve livelihoods and welfare in the targeted ZOI.

[8] See Section 2.2.1 Standard Disaggregates for the definition of gendered household type.

Table 1.1. Population of individuals, by category, in the ZOI, Honduras 2015

Category of individuals	Estimated population
Total population	**1,725,069**
Male	867,864
Female	857,205
Total population, by sub-population	
Women of reproductive age (15-49 years)	411,350
Children 0-59 months	205,966
Children 0-5 months	15,562
Children 6-23 months	58,000
Children 6-59 months	185,739
Youth 15-29 years	479,151
Total population, by area type	
Urban	392,135
Rural	1,332,934
Total population, by gendered household type	
Male and female adult(s)	1,590,218
Female adult(s) only	111,176
Male adult(s) only	23,676
Child(ren) only (no adults)	Excluded
Women of reproductive age, by pregnancy status	**411,350**
Pregnant	14,554
Non-pregnant	396,796
Children 0-59 months, by child sex	**205,967**
Male	100,218
Female	105,749
Children 0-5 months, by child sex	**15,562**
Male	8,205
Female	7,358
Children 6-23 months, by child sex	**58,000**
Male	27,575
Female	30,425
Children 6-59 months, by child sex	**185,739**
Male	90,031
Female	95,709
Youth 15-29 years, by sex	**479,151**
Male	250,751
Female	228,401

Source: Honduras ZOI survey 2015. Sample characteristics imputed to population using weights as described in Appendix A2

The last Honduran census was undertaken in 2013, after our initial survey of the ZOI, but prior to both our follow up surveys in 2013 and 2015. In order to extrapolate population characteristics from our survey data, we rely on population estimates from the 2013 census to derive inflation factors for both our 2012 and 2013 surveys. For our 2015 follow up survey, we use population projections calculated by the INE using the 2013 census. We decline to use similar population projections for 2012 calculated using the 2003 census as they differ significantly from actual population figures reported during the 2013 census. Note that the population numbers are estimated and the presented numbers are rounded. Households with only children in the home were excluded from the survey.

Table 1.2. Number of households, by category, in the ZOI, Honduras 2015

Category of households	Estimated population
Total number of households in ZOI	**343,627**
Number of households, by gendered household type	
Male and female adult(s)	297,365
Female adult(s) only	34,088
Male adult(s) only	12,175

Source: ZOI Survey Honduras 2015

1.2.3 Agriculture in the ZOI

In the Feed the Future ZOI, the majority of farm households cultivate traditional crops (corn, beans and coffee) on small plots, often on hillsides. Our data shows that few households in our sample cultivate high value crops such as vegetables, fruits, or tubers, even though the climate is suitable for horticultural production. Households' access to markets is hindered by poor roads and long distances. Current agricultural practices produce poor yields, deplete soil of nutrients, and lead to forest encroachment. Traditional agricultural practices leave households vulnerable to diseases such as coffee rust that require timely identification and treatment to avoid losses in production. Most plots lack irrigation and rely on rain fed agriculture, leaving farmers vulnerable to crop failures caused by drought. The majority of households that have access to agricultural land have a formal tenancy agreement.

1.3 Purpose of This Report

The purpose of this interim assessment is to provide the United States Government interagency partners, USAID/BFS, USAID missions, host country governments, and development partners with information about the current status of the ZOI indicators. The assessment is designed for use as a monitoring tool, and as such provides point estimates of the indicators with an acceptable level of statistical precision. However, Feed the Future ZOI sample calculations and this report are not designed to support conclusions of causality or program attribution, nor is the interim assessment designed to measure change from the baseline with statistical precision[9].

[9] We include confidence intervals for the main indicators and provide significant tests for the difference in these indicators between the 2012 baseline and this round of surveys in 2015 just as an indication of the size of the changes between these two surveys.

2. Methodologies for Obtaining Interim Values for Feed the Future Indicators

This section describes the methodology used to obtain the population-based Feed the Future indicator estimates. It provides information on the data sources and describes measures and reporting conventions used throughout the report.

2.1 Data Sources

Table 2.1 presents the data sources and dates of data collection for the baseline and interim Feed the Future indicators.

Table 2.1. Data sources and dates of the Baseline and Interim Feed the Future indicators

	Baseline		Interim	
Indicator	**Data source**	**Date collected**	**Data source**	**Date collected**
Daily per capita expenditures (as a proxy for income) in USG-assisted areas	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of Poverty: Percent of people living on less than $1.25 per day	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Women's Empowerment in Agriculture Index indicators	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of households with moderate or severe hunger	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of exclusive breastfeeding among children under 6 months of age	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of children 6-23 months receiving a minimum acceptable diet	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of underweight women	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of stunted children under 5 years of age	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of wasted children under 5 years of age	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015
Prevalence of underweight children under 5 years of age	[ZOI Survey]	May - August 2012	[ZOI Survey]	June - August 2015

2.1.1 Primary Data: The ZOI Interim Survey in Honduras

This section describes the ZOI interim survey, including discussion of the sample design (including targeted sample size), questionnaire customization, fieldwork, response rates, and limitations of the survey.

Survey Sample Design

The sample size of the survey is calculated to ensure that PBS indicators are calculated at an acceptable level of precision and that these estimates are representative of the population in each department in the ZOI.

For the sampling design implemented in each strata (department), the probabilities of selection for each primary sampling unit (PSU) were made proportional to their size, where all probabilities of selection are known and nonzero (so that all population-of-interest units are subject to sampling). This procedure produced a representative sample at the department level using the most complete sample frame available, the 2001 census for the households surveyed in the 2012 baseline and the 2013 census for the households added in 2015. The survey is representative of the ZOI and the sample size was selected to achieve the desired precision for the poverty prevalence and/or undernourishment incidence in rural areas for each department in the Feed the Future ZOI. The final sample size also accounts for attrition among surveyed households.

To arrive at a sample size that will comply with the above mentioned requirements we present the results of the sample size calculations below.

The formula to calculate a representative sample per stratum s is:

$$n_s = [1 + \rho(H - 1)] \left(\frac{Z_{\alpha/2} \ \sigma}{\mu * \epsilon)} \right)^2$$

where:

n is the sample size for stratum s

ρ is the intra-cluster correlation

H is the number of households in a cluster;

μ is the mean of interest for continuous variables and the percentage points of precision in the case of dichotomous variables (case of the poverty rate, the under-nutrition prevalence, etc.), in the department.

σ is the standard deviation

α is the type I error, which is set at 5% for confidence interval at the 95% level.

ϵ is the margin of error, which is set at 10%

$Z\alpha_{/2}$ is the z-score associated with the probability of a type I error in a double tailed test

The parameters used in the calculations are presented in Table 2.2. The results of the representative sample design are presented in Table 2.3; where the "households" column shows the number of households needed to achieve the desired precision for each variable.

As mentioned above, the sample was stratified by department, which provides results for each strata (department) when using the mean and standard deviation (SD) estimated from the 2013 follow-up impact evaluation survey of USAID/Honduras' ACCESO activity. Sample size calculations for proportions are set at a 10 percentage point precision level; in other words, for stunting, wasting, poverty, etc., μ is set to one[10].

We then adjust the sample to have at least 70 children between 0 and 5 months to make sure that enough households are visited, to enable statistically valid estimates of exclusive breastfeeding rates by sex, (USAID, 2014). We estimate this by using the population projections for 2010 for the 0-59 month age group (16 percent of population) and a customary projection for the 0 to 5 months (1.5 percent of the population). We present the results for the sample requirements using different indicators and focus on the three main indicators from the FTF guidance: Poverty using the $1.25 2005 PPP international poverty line, stunting and underweight prevalence among children age 0 to 59 months. Additional results for anemia, local poverty lines and for arbitrary binary indicators (set at 50 percent mean value) are also included in the table.

From the "households" column in the table we can see that the sample required to estimate the average per capita expenditure with a precision of 10 percent of the mean is the largest at 752. For estimating poverty (2005 PPP extreme poor) and stunting, the number of households necessary are much lower, 152 and 159 respectively. We note that for these indicators the calculated sample falls short of the number of households we need to expect to find 70 children between 0 and 5 months; thus we inflate the sample to comply with this requirement, (USAID, 2014)[11]. The results from this calculation imply that we need a sample of 933 in each department to precisely estimate these indicators in each department and have enough young children to estimate the exclusive breast feeding indicator for children age 0 to 5 months. Rounding up these calculations for the PBS indicators, we can conclude that for the six

[10] BFS recommends using a 10 percent margin of error because this provides an acceptable level of precision for performance monitoring purposes at reasonable cost. Note that the ϵ is set to this for the proportion mesures.

[11] The number of children in age group X, N_x, that are expected in a sample of N households is approximately : $N_x = N * (1 - e^{-HHSize*p_x})$ where p_x is the proportion age group X represents in the population. To calculate indicators for children age 0 to 5 months we need at least 70 in each strata, this is the reason why we inflate the sample.

departments in the FTF ZOI we can survey a total sample of at least 5,700 households or 950 households per department in order to estimate the indicators to the desired precision. Note rounding and adjusting the sample to ensure enough children are reached acts as attrition inflation for all the other indicators, given that to estimate any of the indicators at the desired precision, the sample size was well below 950 households. For example, for the per capita expenditures, we have a 26 percent attrition cushion in each department (950/752=1.26). For the exclusive breastfeeding indicator, we are increasing the sample required from 933 to 950 and not deflating the sample to adjust for probability that more than one child in the age group lives in the household, and using this as an attrition cushion for this indicator[12].

Table 2.2 Sample Design Parameters

Total Population of ZOI in 2010	1,641,442
Average HH Size	5.2
Total Households	315,662
Children 0-59 Months	16%
Children 0-5 months	1.5%
Observations per Cluster	15
Alpha	0.05
Power	0.8

[12] Details and the weights used and variation of these indicators across the departments in the ZOI is presented in "Appendix 2. Methodology"

Table 2.3 Representative Sample Results per Strata

	Mean (μ)	SD (σ)	Rho (ρ)	Households (n)	Children 0 -59 Months	Children 0 -5 Months	Inflated HH for 0-5 Month
Expenditure PC Day	1.460	1.111	0.17	752	425	56	933
Extreme Poor	0.794	0.405	0.05	108	61	8	933
Relative Poor	0.886	0.317	0.05	66	38	5	933
PPP Poor	0.363	0.481	0.05	152	86	11	933
50% Prev. HH	0.500	0.500	0.03	136	77	10	933
50% Prev. Kids 0-59 Months	0.500	0.500	0.03	241	136	18	933
Stunting	0.372	0.484	0.00	159	90	12	933
Underweight	0.164	0.370	0.03	131	74	10	933
Anemia	0.224	0.417	0.05	195	110	15	933

Questionnaire Design

IFPRI designed the survey instrument and software to administer the questionnaire through computer-assisted personal interviews (CAPI). This methodology minimizes errors in the data collection stage, maximizes the internal consistency of the questionnaire and provides more opportunities to identify and correct errors while in the field.

The content of the questionnaire revolves around 3 themes:

- **Economic Welfare**. Measuring expenditure, income and the prevalence and depth of poverty.
- **Nutrition**. Measuring the dietary diversity and health indicators of women of reproductive age and children under 5 years.
- **Agriculture**. Measuring the prevalence of agricultural practices, production, agricultural commercialization and women's empowerment in agriculture.

The questionnaire design benefited from IFPRI's experience in the Central American region and Honduras in particular; and from the population-based instrument provided by Feed the Future, which includes a depurated module to calculate the Women's Empowerment Index developed recently by IFPRI researchers in conjunction with USAID and the Oxford Poverty and Human Development Initiative (OPHI). The questionnaire adopted was a continuation of the questionnaire used to evaluate the impact of the previous Feed the Future interventions under ACCESO, which ended in 2015.

The paper questionnaire guide and the enumerator training manual used in the programming are presented in ANNEX 1. The questionnaire has the following structure:

Section	Themes
Cover	▪ General Information ▪ Geography and Identification
Consent	▪ Informed Consent ▪ Signatures
1	▪ Household Composition ▪ Education and Demography
2	Productive Activities and Occupations
3	Access to Land
4	Agricultural Production and Commercialization
5	Livestock Production and Commercialization
6	Household Assets
7	Participation in Training, Extension and Communal Activities
8	Access to Credit Markets
9	Opinions, Perceptions and Social Networks
10	Household Expenditures
11A	Empowerment in Agriculture
11B	Time Use
12	Health and Nutrition
13	Anthropometry
Back Cover	▪ Interview Results ▪ Supervision ▪ Observations

Cover

The objective of this section is to identify each interview with their sample frame identification, geographic location and directions to arrive to the household. GPS coordinates are collected for each household.

Given the longitudinal nature of the survey, this information will be important for future rounds of the survey to insure that the same households of the baseline survey are surveyed in these future rounds.

Consent

The objective of this section is to obtain the informed consent of the principal respondents/subjects of the survey. This includes as a minimum, the head of household and the spouse (if any). The consent is also obtained from the subjects that will be measured, weighted and from which bloods samples will be obtained. In the case that the subjects are not adults, the consent will be obtained from the adult in charge of the minor.

Section 1: Household Composition, Education and Demography

The general objective of this section is to obtain information on the structure of the household, determine the members of the household, and the education level of these members.

Section 2: Productive Activities and Occupations

The general objective of this section is to obtain information on the productive activities of each individual in the household over 10 years old. It serves to know the different sources of income of the household, be it on- or off-farm, salaried and self-employment, and transfers or donations.

Section 3: Access to Land

The general objective of this section is to obtain information on the land ownership and uses of land for each household at the plot level for tenancy; and at the land use/crop level for lots. It further provides general characteristics of these plots, like irrigation, soil texture, color, etc.

Section 4: Agricultural Production and Commercialization

The general objective of this section is to obtain information on the agricultural production and the commercialization of this production. This section gathers information at the crop level, and has crop-specific questions to recognize the particularities of important crops in the area. Examples of these special crops are: Corn, Beans, Sorghum, and Coffee. Detailed information on labor use, input use, and sales for each crop are obtained in this section. Small plots ("garden variety") are also included.

In addition, investments in agricultural machinery and use of technologies are observed. The topics in this section are augmented to include specific important practices targeted by Feed the Future activities.

Section 5: Livestock Production and Commercialization

The general objective of this section is to obtain information on the animal husbandry activities, their costs, and related production and commercialization activities. This section gathers information at the animal or species level, and has animal-specific questions to recognize the particularities of important animals. Information on labor use, input use, and sales for each

species is obtained in this section. In addition, information on production and sales of animal derived products, such as milk, butter, honey, etc., is obtained in this section.

Section 6: Household Assets

The general objective of this section is to obtain information on the real estate assets, durable assets in the farm and the household, and on the living situation of the household. Information on the value of the house where they live and household-related expenses is first obtained; then characteristics of the house are gathered. These include: materials used on the floors, walls and ceiling, access to electricity, potable water and energy use. In addition, access to markets and public services are measured.

Section 7: Participation in Training, Extension and Communal Activities

The objective of this section is to obtain information on participation of household members in programs of extension (on the farm) and training (off farm). In particular, previous participation of household members in ACCESO and their participation in the new Feed the Future activities, ACCESS to Markets and ACS, is solicited. In addition, we look at other sources of agricultural information to which the household has access and its participation in community groups and communal activities.

Section 8: Access to Credit Markets

The objective of this section is to gather information on the sources of credit used by households, the degree of participation in the credit market, and household savings. In addition, information on credit constraints is elicited for household that have applied for credit and those that have not.

Access to credit is of paramount importance for agricultural production and the household economic welfare. Credit is not limited to formal credit; we include informal sources, input, services/machinery, and other assets that the members received against a promise to pay in the future, be it in product, cash, or labor.

Section 9: Opinions, Perceptions and Social Networks

In this section we look to elicit the opinion of the interviewee with respect to agricultural technologies, and the diffusion of new crops in the household's social network. In addition, we explore the participation of the household network in the commercialization of new crops in the local and export markets.

Section 10: Household Expenditures

The objective of this section is to gather information on the habitual consumption pattern of households. In particular, we gather information for food consumption/expense in the last 7

days. The information allows us to create a consumption measure, using information gathered in other parts of the questionnaire; in addition, habitual consumption allows us to measure diversity of dietary practices of at the household level, by identifying food groups that the households have the habit of consuming.

Expenditure information of other types of expenditures is gathered for different reference periods, i.e. 15 days, 1 month, 3, month, 12 months. Other expenditures include, but are not limited to, entertainment, food consumed out of the household, education expenses, health expenses, etc. This information is used to calculate household expenditures and poverty indicators.

Section 11A: Empowerment

The general objective of this section is to gather the information necessary to construct the Women's Empowerment in Agriculture Index (WEAI). It elicits information on individual decision making, access to productive assets, access to credit markets and participation in communal activities.

This section is separately administered to the head of household and the spouse (if any). In cases where there is no spouse, an adult decision maker in the household of the opposite sex is selected to be interviewed. In cases where there are no adult women in the household, the section is not administered.

Section 11B: Time Use

The objective of this section is to gather information on time use by the head of household, the spouse or woman that was interviewed in the previous section, and a school age child. This information allows the identification of changes in time use patterns for the principal individuals in the household and those that depend on them. In addition, this information is used to construct the WEAI, in households where adult women are present.

Section 12: Health and Nutrition

The objective of this section is to learn about sanitary practices in the households, food insecurity/hunger episodes in the last 30 days and to distinguish food insecurity in household with children.

The section concludes with an individual child-level and individual woman-level set of questions. In the child level question, information is gathered on exclusive breastfeeding for children 0 – 6 months, and minimum acceptable diet and dietary diversity for children 6 -23 months. In addition, information of health care use for all children less than 60 months is obtained.

The woman-level section gathers information on use of health services and reproductive health for women of reproductive age (15-49 years) that have been pregnant in the last 12 months. For all women 15-49 years old, information on dietary diversity is also obtained.

Section 13: Anthropometry

The objective of this section is to gather anthropometric information necessary to calculate the prevalence of wasting, stunting, underweight and anemia for children under 60 months and women of reproductive age, age 15-49.

Back Cover

The objective of this section is to record the final results of the survey, the personnel that participated, and any commentaries from the enumerators and the supervisors.

Computer Assisted Personal Interviews (CAPI)

The tablets were programmed by IFPRI to include all necessary crosschecks and directions of how to ask questions for the enumerators, i.e. help screens and error messages are coded so that information can be corrected in the field. This electronic platform supports complex skip patterns and has simple questionnaire navigation capabilities. Beyond this, this platform automates error-prone aspects of data collection, such as the filling in of ID codes or selecting which subject should answer each section. Finally, this platform allows the seamless capture and integration of non-traditional data, such as audio-visual media and geographical coordinates. Thus, the finalized surveys are validated in extenuating detail by the time they arrive to the supervisors and the server.

Fieldwork

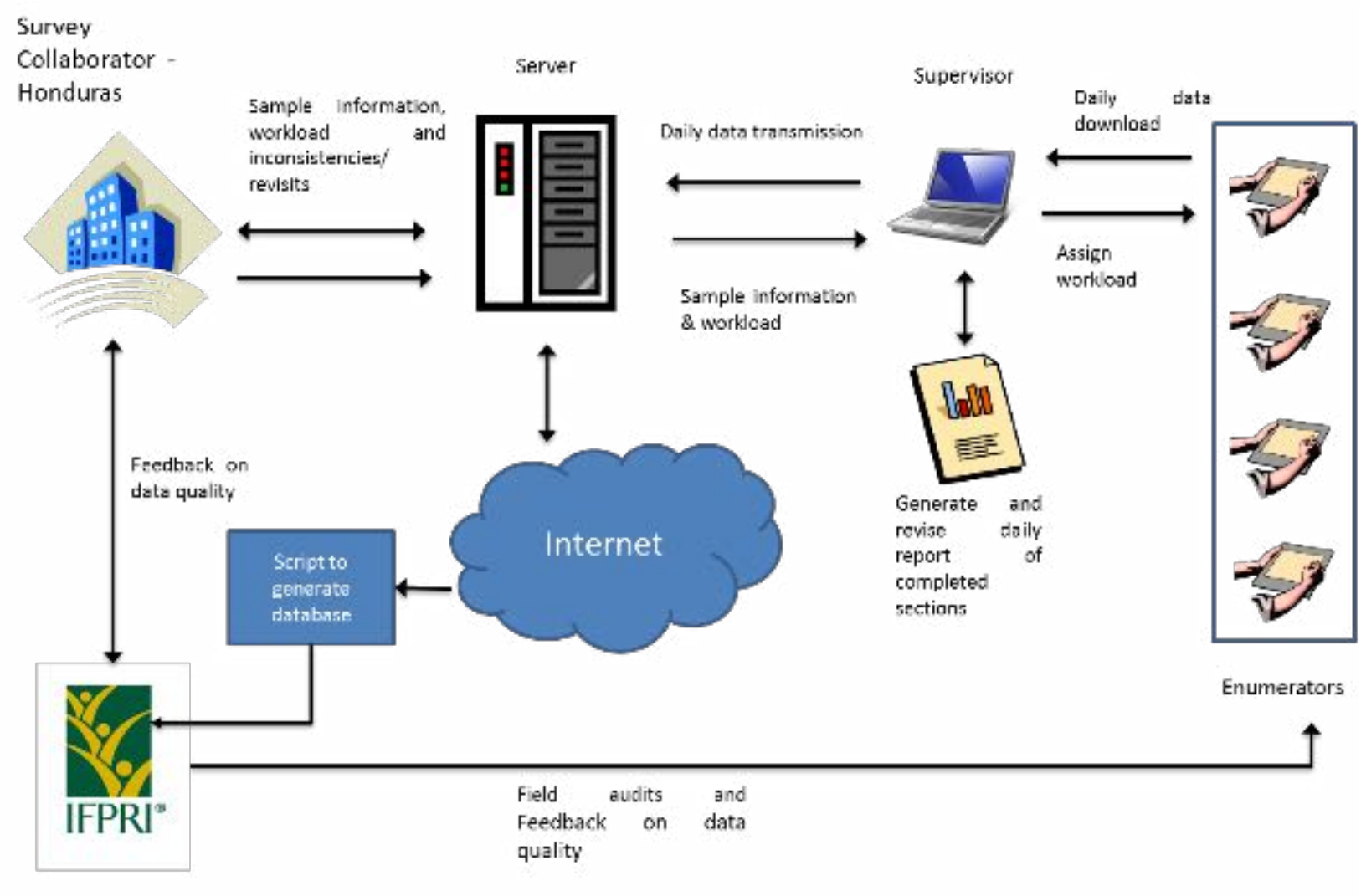
IFPRI is responsible for implementation of the survey described above. A local firm, Asesores Nacionales Especializados para el Desarrollo (ANED Consultores), provided a team of enumerators and field supervisors from which IFPRI staff selected a subset to participate in the survey activities, based on a competitive and rigorous evaluation process during the training of the field team. IFPRI researchers conducted a seven-day training and evaluation session in May 2015 with all the participants, followed by a pilot of the survey where the enumerators were further evaluated on their interviewing skills.

The fieldwork consisted of eight teams (mixed female and males), each one comprised of a supervisor, a trained anthropometric enumerator and five demographic enumerators. In addition, ANED Consultores provided a general coordinator to facilitate the diffusion of information and homogenization across the teams. The field work was completed from June to August of 2015.

A team of three IFPRI researchers reviewed the live data and followed up with the supervisors on the field. They reviewed the live data and communicated with the supervisors to troubleshoot any difficulties in the field or inconsistencies detected in the data. In addition, they conducted rotating visits to each team; with each team visited at least two times depending on the needs identified in the field.

The data handling and transmission protocol is described in **Figure 2.1**. Data was uploaded daily from the tablets used by enumerators after the supervisor had verified the sections completed and resolved any inconsistencies or errors found or noted in the survey. The supervisor uploaded the completed surveys to the server, where IFPRI viewed the raw data daily. IFPRI staff parsed the raw data and provided feedback on possible improvements to the team supervisors, so that any needed corrections could be done while in the field, thus minimizing revisits.

Figure 2.1 Protocol for Data Transmission



Limitations of the Survey

The survey is representative at the department level. The timing of the survey corresponds to the start of the rainy season in May and the middle of the lean season (April-August). The survey is retrospective and the responses reflect the 12 months or the two previous agricultural seasons before of the month of the survey. The main agricultural seasons to which the data refers are Postrera (December 2014 – January 2015 harvest) and Primera 2014 (August-September 2014 harvest).

We mark it as a limitation as to what can be done or estimated with the data. The survey is well powered to calculate household level variables at the department level. Any lower geographic calculation will not have the same level of accuracy. When the household level is not the unit of analysis care should be taken in the interpretation of the representativity of the results. For example, the results for average corn production of the households in the sample should not be taken as representative of the corn production in the ZOI, given that the sample frame used in the sample design was now a list of all corn producers in the ZOI.

ZOI Interim Survey Response Rates

Table 2.4 presents the response rates for the ZOI interim survey for Honduras. The components and the response rates for the sampled households, including women of reproductive age (15-49), primary adult female decision-makers (for the Women's Empowerment in Agriculture module), as well as children under 5 are presented. Response rates are presented by rural/urban residence as well as for the total sample.

Table 2.4. Household and individual response rates for the ZOI interim survey

Response rates and components	Total
Households	
Households selected	6,056
Households occupied	6,041
Households interviewed	5,743
Household response rate[1]	0.951
Women of reproductive age (15-49 years)	
Number of eligible women	7,090
Number of eligible women interviewed	6,996
Eligible women response rate[2]	0.987
Primary adult female decision-makers (age 18+ years)	
Number of eligible women	8,087
Number of eligible women interviewed	7,582
Primary adult female response rate[2]	0.938
Children under 5 years of age	
Number of eligible children	3,405
Number of caregivers of eligible children interviewed	2,552
Eligible children response rate[2]	0.995

[1] Household response rates are calculated based on the result codes of the back-cover section and the household roster, and are defined as the number of households interviewed divided by the number of households occupied. Unoccupied households were excluded from the response rate calculations. The unoccupied households were those that were found to be vacant, not a dwelling unit, dwelling unit destroyed, or with an extended absence, or other result code.

[2] Individual response rates are calculated based on the result codes in the relevant individual modules, i.e., Modules 11, 12, and 13. These rates are defined as the number of eligible individuals interviewed divided by the number of eligible individuals. Eligibility is determined in modules 12, and 13, respectively. (Note that for children under 5 years of age, the primary caregivers of the children served as the respondents, not the children directly.)

Source: ZOI interim survey, Honduras 2015

2.2 Measures and Reporting Conventions Used Throughout this Report

2.2.1 Standard Disaggregates

A standard set of disaggregate variables are used in tables throughout this report. This section lists each of the standard disaggregate variables and defines how the variable is calculated.

Age in Months

The age and date of birth of children under 5 years is collected in the household roster and the age of children in months is verified in the child nutrition-focused module of the questionnaire, so that the child's parent or primary caregiver can be prompted to provide the most accurate age possible. The enumerators were instructed to collect documents (such as a birth certificate or vaccination card) to verify the date of birth for children under 5 years of age and the age in month was automatically calculated by the survey software[13]. Children's age in months is presented by monthly age groups as appropriate for the children's dietary intake and anthropometry tables. For example, for the MAD table (Table 6.6), which presents the MAD indicator for children age 6-23 months, children's age in months is disaggregated into six-month age groups as follows: 6-11 months, 12-17 months, and 18- 23 months. For the children's anthropometry tables, which present the prevalence of stunting, wasting, and underweight for all children under 5 years of age, children's age in months is disaggregated into 12-month age groups as follows: 0-11 months, 12-23 months, 24-35 months, 36-47 months, and 48-59 months.

Age in Years

Data on respondent's age in years is collected in the household roster. For women ages15-49 and children under age 5, age data are verified in subsequent questionnaire modules to confirm eligibility to respond to the module questions; these more detailed age data are used where available. Age is generally presented in the tables in 5- or 10-year age groups.

Child Sex

The sex of the child – male or female – is a standard disaggregate for the tables presenting children's indicators, e.g., children's anthropometry.

[13] We are not relying on the parent or the enumerator to calculate the age in months; indeed, this would have a lot of problems. What remains is that people don't know the exact birthday, which happens in rural parts, especially when the informant is not the parent. Before doing the anthropometric the age in months was displayed in the tablet to prompt the informant and the enumerator to verify.

Educational Attainment (Household)

Household educational attainment reflects the highest level of education attained by any member of the household, as reported in the household roster of the corresponding questionnaire. This variable is used in tables that present household-level data, and is comprised of four categories: no education (households where no member has received any formal education); less than primary (households with at least one member who has entered the formal schooling system, but with no member who has completed primary); primary (households with at least one member whose highest educational attainment is having completed primary, but with no member who has completed secondary); and secondary or more (households with at least one member whose highest educational attainment is having completed secondary education or more). Households are categorized in only one of the four categories.

Educational Attainment (Individual)

Educational attainment at the individual level reflects the highest level of education attained by individual household members, as reported in the household roster of the corresponding questionnaire. This variable is comprised of four categories: no education (those who have not received any formal education), less than primary (those who have entered the formal schooling system but whose educational attainment is less than completing primary or 6 years of education); primary (those who have completed primary but have not completed secondary, between 6 and 13 years of education); and secondary or more (those who have completed secondary education or more).

Gendered Household Type

Feed the Future Monitoring and Evaluation Guidance Series Volume 6: *Measuring the Gender Impact of FTF* notes that household-level indicators should be disaggregated by *gendered household types* – that is: (1) households where members include both male and female adults[14]; (2) households where members include male adult(s), but no female adults; (3) households where members include female adult(s), but no male adults; and (4) households with only members under age 18 (children), i.e., households with children only and no adult members. This approach to conceptualizing household type is distinct from the standard *head of household* approach, which is embedded with presumptions about household gender dynamics and may perpetuate existing social inequalities and prioritization of household responsibilities that may be detrimental to women (USAID 2014:1).[15]

[14] Adult is defined as age 18 or older.

[15] United States Agency for International Development (USAID). (2014). Feed the Future M&E Guidance Series. Volume 6: Measuring the Gender Impact of FTF, March. Accessed 27 March 2015 at http://www.feedthefuture.gov/resource/volume-6-feed-future-measuring-gender-impact-guidance.

This variable is calculated using data on age and sex collected in the household roster of the survey questionnaire.

Household Hunger

As described in greater detail in Section 6.1 of this report, the household hunger scale (HHS) characterizes households according to three categories of hunger severity: little to no household hunger, moderate household hunger, and severe household hunger. For the purposes of serving as a disaggregate in selected tables, the HHS is converted to a dichotomous measure reflecting households that report little to no household hunger, and households that report moderate or severe household hunger.

Household Size

For the ZOI surveys, household size is defined as the total number of people who: (1) are reported to be usual members of the household; and (2) who have lived in the household for at least six of the past 12 months; and (3) who share food and/or expenses in the household. This household size variable is recoded into a categorical variable as follows: small households (1-5 members), medium households (6-10 members), and large households (11 or more members). Note that other household survey programs may use a slightly different definition of household member from that used in this survey.

2.2.2 Reporting Conventions

This report is primarily descriptive in nature. This section provides an overview of the conventions used in reporting these descriptive results.

- In the tables throughout this report, weighted point estimates and unweighted sample sizes (denoted by *n*) are presented.
- Most estimates are shown to one decimal place, with the specific exceptions of per capita expenditures and the women's dietary diversity indicators, which are shown to two decimal places. Unweighted sample sizes in all tables and the population estimates in Tables 1.1 and 1.2 are shown as whole numbers.
- Values in the tables are suppressed when the unweighted sample size is insufficient to calculate a reliable point estimate (n<30); this is denoted by the use of the symbol ^ in the designated row and an explanatory footnote.

Bivariate relationships are described using cross tabulation, and the strength and direction of the relationships are assessed through the use of statistical tests. Analyses are performed in Stata using *svy* commands to handle features of data collected through the use of complex survey designs, including sampling weights, cluster sampling, and stratification.

Statistical significance ($p<0.05$) is denoted with matched superscripted letters attached to the row (usually the disaggregate variable) and column (usually the outcome variable) headings. Explanatory footnotes following each table clarify the meaning of the significance test annotation, and statistically significant relationships are highlighted in the narrative throughout the report.

3. ZOI Interim Survey Population

This section describes the background characteristics of the ZOI population using data from the ZOI interim 2015 survey.

3.1 Demographics

Table 3.1 presents demographic characteristics of the households in the ZOI. Values are shown for all households, as well as by categories of gendered household type. This table presents the average household size, as well as the average number of female adults and children within the household. Household education, defined as the highest level of education of any member of the household, is also presented in this table.

Of the 5,743 households successfully surveyed in our sample, 87 percent have both male and female adult members, 10 percent only have female adults, and the remaining 3 percent have male adults only. The average household in our sample has five members, approximately half of whom are adults. In households with both male and female adult members, nearly half of all adults are female. Households have between two and three children on average; households headed by male and female adults tend to have more children than their counterparts.

Approximately one quarter of the households in our sample have at least one member with some education, and two thirds have at least one member who completed primary school. Education rates are slightly higher for households with adults of both genders.

Table 3.1. Household demographic characteristics

Characteristic	Total (All households)	By gendered household type[a]		
		Male and female adult	Female adult(s) only	Male adult(s) only
Mean household size[a]	5.0	5.3	3.3	1.9
Mean number of adult female household members[1,2, a]	1.4	1.4	1.4	0.0
Mean number of children (<2 years)[1, a]	0.2	0.2	0.1	0.1
Mean number of children (0-4 years)[1, a]	0.5	0.5	0.3	0.1
Mean number of children (5-17 years)[1, a]	1.7	1.8	1.4	0.5
Mean percentage of adults who are female[1,2]	0.5	0.5	0.9	0.0
Highest education level attained				
No education	0.043	0.027	0.102	0.269
Less than primary	0.213	0.208	0.249	0.225
Primary	0.669	0.689	0.569	0.447
Secondary or more	0.075	0.076	0.079	0.060
n[3]	**5,743**	**5,000**	**546**	**197**

[1] The count is based on household members with known age.

[2] Feed the Future defines adult as an individual age 18 or older. Females age 15-17 are of reproductive age, but are not considered adults by this definition.

[3] Sample n is the unweighted count of all households that responded to the survey.

[a] Significance tests were performed for associations between household characteristics and gendered household type. For example, a test was done between mean household size and gendered household type. When an association is found to be significant ($p<0.05$), a superscript is a noted next to the household characteristic.

Source: ZOI interim survey, Honduras 2015

Table 3.2 shows characteristics of the primary male and female adult decision-makers in the sampled households in the ZOI. The primary male and primary female adult decision-makers are household members age 18 or over who self-identify as the primary adult male and/or primary adult female responsible for both social and economic decision-making within the household. When they exist within a single household, primary male and female adult decision-makers are typically, but not necessarily, husband and wife. Table 3.2 shows the age group, literacy status, and educational attainment for these household members. These characteristics are shown for all primary adult decision-makers and for primary adult decision-makers according to sex.

Approximately 44 percent of the primary decision-makers in our sample are between the ages of 30 and 49. Seventy-five percent are literate, and approximately 70 percent have at least a partial primary education, while almost 30 percent have no education. We see that female

primary decision-makers are slightly younger than their male counterparts and this difference between the age of males and females is statistically significant.

Table 3.2. Characteristics of the primary male and female adult decision-makers

Characteristic	Total (All primary adult decision-makers)		By primary adult decision-maker sex[a]			
			Male		Female	
	Percent	n	Percent	n	Percent	n
Age[a]						
18-24	0.075	11,354	0.035	4,673	0.104	6,681
25-29	0.088	11,354	0.080	4,673	0.094	6,681
30-39	0.238	11,354	0.251	4,673	0.228	6,681
40-49	0.204	11,354	0.227	4,673	0.188	6,681
50-59	0.161	11,354	0.188	4,673	0.141	6,681
60+	0.179	11,354	0.218	4,673	0.151	6,681
Literacy						
Percent literate[1]	0.746	11,067	0.748	4,661	0.744	6,406
Educational attainment						
No education	0.286	11,355	0.271	4,673	0.297	6,682
Less than primary	0.399	11,355	0.413	4,673	0.389	6,682
Primary	0.302	11,355	0.302	4,673	0.302	6,682
Secondary or more	0.014	11,355	0.013	4,673	0.014	6,682

[1] The percent who are literate comprises those who report that they can both read and write.

[a] Significance tests were performed for associations between the sex and background characteristics of the decision-maker. For example, a test was done between sex and age of the decision-maker. When an association is found to be significant ($p<0.05$), a superscript is noted next to the characteristic.

Source: ZOI interim survey, Honduras 2015

3.2 Living Conditions

Table 3.3 shows dwelling characteristics of the households in the ZOI. Many of these measures align with the 2015 Millennium Development Goals (MDG) definitions (UNDP 2003). The table presents the percentage of households who have access to an improved water source, improved sanitation, electricity, and solid cooking fuel. The average number of people per sleeping room, as well as roof, exterior wall, and floor materials are also presented. Values are shown for all households.

Of the households surveyed, we find that over 96.9 percent have access to an improved water source. Improved water sources include piped water into the dwelling, piped water into the yard, a public tap/standpipe, a tube well/borehole, a protected dug well, a protected spring, and rainwater (WHO and UNICEF 2006). However, only 84.3 percent of households surveyed have access to improved sanitation facilities. Improved sanitation facilities are those that separate human excreta from human contact and include the categories flush to piped sewer system, flush to septic tank, flush/pour flush to pit, composting toilet, ventilated improved pit latrine,

and a pit latrine with a slab. Because shared and public facilities are often less hygienic than private facilities, shared or public sanitation facilities are not counted as improved (WHO and UNICEF 2006). A large part of the sample has access to electricity, though access may be informal and/or unreliable, 70.7 percent of the sample has access through connection to the grid or through a neighbors connection. Most households surveyed cook with solid fuel (97 percent). Of the rooms in the household used for sleeping, we see slightly over three people occupy each room.

Houses are constructed out of a variety of materials. Roofs and floors are predominantly constructed of "finished" materials, whereas exterior walls use "rudimentary" materials such as metal or wood.

Table 3.3. Household dwelling characteristics

Characteristic	Total (All households) Estimate	n
Percent with improved water source[1]	0.969	5,743
Percent with improved sanitation[2]	0.843	5,743
Mean persons per sleeping room[3]	3.257	5,695
Percent using solid fuel for cooking[4]	0.970	5,743
Percent with access to electricity	0.707	5,743
Household roof materials (%)[5]		
Natural	0.003	5,743
Rudimentary	0.000	5,743
Finished	0.969	5,743
Household exterior wall materials (%)[6]		
Natural	0.0002	5,743
Rudimentary	0.806	5,743
Finished	0.192	5,743
Household floor materials (%)[7]		
Natural	0.350	5,743
Rudimentary	0.000	5,743
Finished	0.649	5,743

[1] Improved water sources include *piped water into the dwelling, piped water into the yard, a public tap/standpipe, a tube well/borehole, a protected dug well, a protected spring,* and *rainwater* (WHO and UNICEF 2006). The proportion of the population with sustainable access to an improved water source is the 2015 MDG indicator #30 (UNDP 2003); however, as in most major international survey programs, the measure reported here reflects only access to an improved water source, and not the sustainability of that access.

[2] Improved sanitation facilities are those that separate human excreta from human contact and include the categories *flush to piped sewer system, flush to septic tank, flush/pour flush to pit, composting toilet, ventilated improved pit latrine,* and a *pit latrine with a slab*. Because shared and public facilities are often less hygienic than private facilities, shared or public sanitation facilities are not counted as improved (WHO and UNICEF 2006). The proportion of the population with access to improved sanitation is the 2015 MDG indicator #31 (UNDP 2003).

[3] The average number of persons per sleeping room is a common indicator of crowding (UNDP 2003). Difference in sample size is due to non-response.

[4] Solid fuel is defined as *charcoal, wood, animal dung,* and *agriculture crop residue.* The proportion of the population using solid fuels is MDG indicator #29 (UNDP 2003). The *other* and *no food cooked in household* categories are removed from percentages.

[5] Natural roofs include *no roof, thatch/palm leaf,* and *sod.* Rudimentary roof includes *rustic mat, palm/bamboo, wood planks,* and *cardboard.* Finished roofs include *metal, wood, calamine/cement fiber, ceramic tiles, cement,* and *roofing shingles.* The *other* category is removed from percentages.

[6] Natural walls include *no walls, cane/palm/trunks,* and *dirt.* Rudimentary walls include *bamboo with mud, stone with mud, uncovered adobe, plywood, cardboard, reused wood,* and *metal sheeting.* Finished walls include *cement, stone with lime/cement, bricks, cement blocks, covered adobe,* and *wood planks/shingles.* The *other* category is removed from percentages.

[7] Natural floors include *earth/sand* and *dung.* Rudimentary floors include *wood planks* and *palm/bamboo.* Finished floors include *parquet/polished wood, vinyl or asphalt strips, ceramic tiles, cement* and *carpet.* The *other* category is removed from percentages.

Source: ZOI interim survey, Honduras 2015

3.3 Education

Table 3.4 presents school attendance, educational attainment, and literacy in the ZOI. The table presents the percent of male, female, and all household members under age 25 who are currently attending school. It also presents the percent of household members over age nine who have attained a primary level of education, as well as the percent of household members who are reported as literate. Sex ratios in school attendance, attainment of primary education, and literacy are also presented. These measures align with MDG education indicators.

In Honduras, primary education consists of 6 years of formal schooling, normally between the ages of 6 and 11. Secondary school is divided into two *cycles*, and in total consists of an additional 7 years of schooling. Students may choose to pursue higher education after completing secondary school, or may instead pursue a trade. Adults who did not enter the formal school system as children may attend adult literacy classes to improve reading and writing skills.

In Table 3.4, we see that school attendance rates among children in our sample are relatively high; 96 percent of children ages 5-9 years old currently attend school, and over 80 percent of 10 to 14 year olds attend school as well. Literacy rates among children are high, reaching over 95 percent.

Adult educational achievement is predictably lower within our sample. While three quarters of 15 to 19 year olds have achieved a primary level of education, less than half of 25 to 29 year olds have achieved the same. Sex disparities also surface among older cohorts. We see that females are as or slightly more likely to attend school, be literate, or have completed a primary level of education for individuals between the ages of 5 and 24. However, when looking at older cohorts (individuals over the age of 35), we see female attainment of primary education drop significantly when compared to their male counterparts.

Table 3.4. School attendance, educational attainment, and literacy

Characteristic	Percent			Female to male ratio			
	Attending school[1,a]	Attained a primary level of education[2,b]	Literate[3,c]	Attending school[1]	Attained a primary level of education[2]	Literate[3]	n
Age group[a,c]							
5-9	0.960	n/a[1]	0.836	1.015	n/a[1]	n/a[1]	3,507
10-14	0.811	0.248	0.959	1.026	1.200	1.028	3,086
15-19	0.261	0.740	0.946	1.312	1.098	1.027	3,874
20-24	0.069	0.653	0.913	1.253	0.988	1.044	2,623
25-29	n/a[2]	0.534	0.888	n/a[2]	1.109	1.050	1,861
30-34	n/a[2]	0.421	0.844	n/a[2]	1.011	1.029	1,697
35-54	n/a[2]	0.304	0.747	n/a[2]	0.845	0.967	5,285
55+	n/a[2]	0.120	0.553	n/a[2]	0.735	0.769	3,156
Sex							
Female							
Age group							
5-9	0.967	n/a[2]	0.849	n/a[3]	n/a[3]	n/a[3]	1,746
10-14	0.822	0.271	0.973	n/a[3]	n/a[3]	n/a[3]	1,521
15-19	0.299	0.777	0.960	n/a[3]	n/a[3]	n/a[3]	1,797
20-24	0.078	0.648	0.934	n/a[3]	n/a[3]	n/a[3]	1,263
25-29	n/a[2]	0.561	0.909	n/a[3]	n/a[3]	n/a[3]	952
30-34	n/a[2]	0.423	0.856	n/a[3]	n/a[3]	n/a[3]	883
35-54	n/a[2]	0.280	0.735	n/a[3]	n/a[3]	n/a[3]	2,761
55+	n/a[2]	0.102	0.481	n/a[3]	n/a[3]	n/a[3]	1,618
Male							
Age group							
5-9	0.953	n/a[3]	0.823	n/a[3]	n/a[3]	n/a[3]	1,761
10-14	0.801	0.226	0.946	n/a[3]	n/a[3]	n/a[3]	1,565
15-19	0.228	0.708	0.934	n/a[3]	n/a[3]	n/a[3]	2,077
20-24	0.062	0.656	0.895	n/a[3]	n/a[3]	n/a[3]	1,360
25-29	n/a[2]	0.506	0.866	n/a[3]	n/a[3]	n/a[3]	909
30-34	n/a[2]	0.419	0.832	n/a[3]	n/a[3]	n/a[3]	814
35-54	n/a[2]	0.331	0.760	n/a[3]	n/a[3]	n/a[3]	2,524
55+	n/a[2]	0.139	0.626	n/a[3]	n/a[3]	n/a[3]	1,538

n/a[1] Not applicable – Children in the age group 5-9 years are not yet old enough to have attained a primary level of education.
n/a[2] Not applicable – Current school attendance applies to school-age children and youth only, ages 5-24.
n/a[3] Not applicable – Female to male ratios cannot be calculated for male-only and female-only disaggregates.

[1] The survey was administered during the school year (February-November 2015).

[2] The goals of achieving universal primary education and achieving gender equity with respect to education are assessed by multiple MDG indicators, typically using administrative school data. This table presents respondent-reported school attendance, primary educational attainment, and literacy, as well as the ratio of females to males on these measures (UNDP 2003).

[3] The MDG indicators for universal primary education and gender equity within education are assessed through the literacy rate (MDG indicator #8) and the ratio of literate women to men (MDG indicator #10) among young adults, age 15-24 years (UNDP 2003).

[a-c] Significance tests were performed for associations between the indicator in the column heading, and age and sex. For example, a test was done for school attendance by sex, and a test was done for school attendance by age. When an association is found to be significant ($p<0.05$), the superscript of the column heading will appear next to the sex row heading and/or next to the age group row heading.

Source: ZOI interim survey, Honduras 2015

4. Household Economic Status

This section includes a background discussion of monetary poverty in Honduras, including the logic of the Living Standard Measurement Survey (LSMS)[16] and consumption expenditure methodology.

The *Household Roster* and *Household Consumption Expenditure* sections of the questionnaire are used to calculate the per capita expenditures and prevalence of poverty indicators. The household consumption expenditure module captures consumption of various food and non-food items for different periods of time. This is measured to infer household income and well-being. Individuals' per capita expenditures are then derived by dividing total household expenditures by the number of household members. From these data, household expenditure totals are calculated and used as a proxy for household incomes, based on the assumption that a household's consumption is closely related to its income. Household consumption and expenditures are often preferred to income when measuring poverty due to the difficulty in accurately measuring income. According to Deaton, expenditure data are less prone to error, easier to recall, and more stable over time than income data.[17]

As mentioned before, Honduras is the second poorest country in the Americas. The national rural poverty rate was 70 percent in 2014 with 57 percent of the population falling below the national extreme poverty line of $2.35 per person per day (in 2005 PPP dollars) [18].

A large part of the USAID/Honduras' Feed the Future ZOI falls within the "Dry Corridor", an area characterized by low rainfall and highly variable climatic conditions, including El Niño. The most recent El Niño episode caused one of the worst droughts in recent decades in Central America during the primary 2015 agricultural seasons (May – August), leading to extensive losses in production of staple crops for many small-scale producers across the region. In Honduras, the 2015 drought, which followed successive years of poor rainfall in some areas, left many poor households reliant on limited labor opportunities to fulfill food needs, particularly in the Dry Corridor areas. In addition, aggregate coffee production in Honduras has not fully recovered from the impact of the coffee rust outbreak in 2012-2013. These shocks are likely to affect agricultural production, income sources and thus poverty and food insecurity of the households in the ZOI.

[16] Grosh, Margaret and Paul Glewwe. 1995. "A Guide to Living Standards Measurement Study Surveys and Their Data Sets." Living Standards Measurement Study Group. Working paper No. 120. The World Bank, Washington, DC.

[17] Deaton, A. 2008. The Analysis of Household Surveys: A microeconomic approach to development policy. Baltimore: The Johns Hopkins University Press.

[18] The price per person per month of the food basket in rural areas is 1,222.00 Lempiras and 1,631.40 Lempiras for the basic bundle. Households are extremely poor if their expenses are below the amount needed to provide each member of the household with a food basket.

4.1 Daily Per Capita Expenditures

Table 4.1 presents results for daily per capita expenditures[19], the Feed the Future indicator that measures average daily expenditures within the ZOI per person in 2010 U.S. dollars (USD) after adjusting for 2005 purchasing power parity (PPP). Daily per capita expenditures serves as a proxy for income. This table includes the mean per capita expenditure, distributional information, and the share of consumption by quintile. The percentiles in Table 4.1 and **Figure 4.1** are shown to provide information on the distribution of expenditures. As is typical of expenditure and income data, the right tail of the distribution is not dense, with the majority of the population consuming/spending less than $5, and a small portion consuming more.

Estimates in Table 4.1 are shown for all households as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment. We transform household expenditure data reported in 2015 lempiras to 2010 PPP US dollars[20] in order to make meaningful comparisons between survey years, as well as to reflect changes in the cost of living over time.

We find that the average household per capita expenditure is $2.10 per day and the median is $1.70, smaller than the mean, which suggests that the sample average is driven upwards by the households on the right tail of the distribution. Though we find that households with either only adult male or adult female members have a higher daily per capita expenditure than households with both male and female adults, this is likely because such households have fewer members, not necessarily because they are financially better off.

As expected, we find that smaller households have a higher per capita expenditure than medium sized or large households across all percentiles of the distribution. Daily per capita expenditure does not monotonically increase with education. On average, households where the person with the highest education has completed a secondary education or more, have higher per capita expenditure than those with primary or less. We note that households with no formal education have higher expenditures than those with primary or less but highlight the smaller sample size for this group.

[19] Note that expenditure data are not collected at the individual level but rather at the level of the household; individuals' per capita expenditures are then derived by dividing total household expenditures by the number of household members. The sample size in the tables reflect the number of households and use population weights to obtain the population estimates.

[20] This is deflating the 2015 Lempiras to 2005 lempiras using local prices, then converting this to 2005 PPP dollars and inflating these to 2010 PPP dollars using US prices.

Table 4.1. Daily per capita expenditures by household characteristic (in 2010 USD[1])

Characteristic	Mean[a]	Estimated (Weighted) Percentile					n[2]
		10th	25th	50th	75th	90th	
Total (All households)	2.10	0.86	1.18	1.70	2.53	3.76	5,743
Gendered household type[a]							
Male and female adults	1.97	0.85	1.16	1.64	2.38	3.45	5,000
Female adult(s) only	2.74	0.94	1.44	2.21	3.55	5.09	546
Male adult(s) only	3.58	1.37	1.85	2.93	4.83	6.36	197
Household size[a]							
Small (1-5 members)	2.50	1.09	1.46	2.02	3.03	4.43	3,599
Medium (6-10 members)	1.44	0.69	0.93	1.25	1.70	2.36	1,997
Large (11+ members)	1.06	0.56	0.73	1.02	1.36	1.63	147
Household educational attainment							
No education	2.62	1.08	1.32	2.14	3.40	4.77	224
Less than primary	1.92	0.79	1.09	1.55	2.29	3.48	1,136
Primary	2.07	0.87	1.21	1.71	2.49	3.59	3,860
Secondary or more	2.69	0.92	1.20	1.93	3.53	5.40	524

^ Results not statistically reliable, n<30.

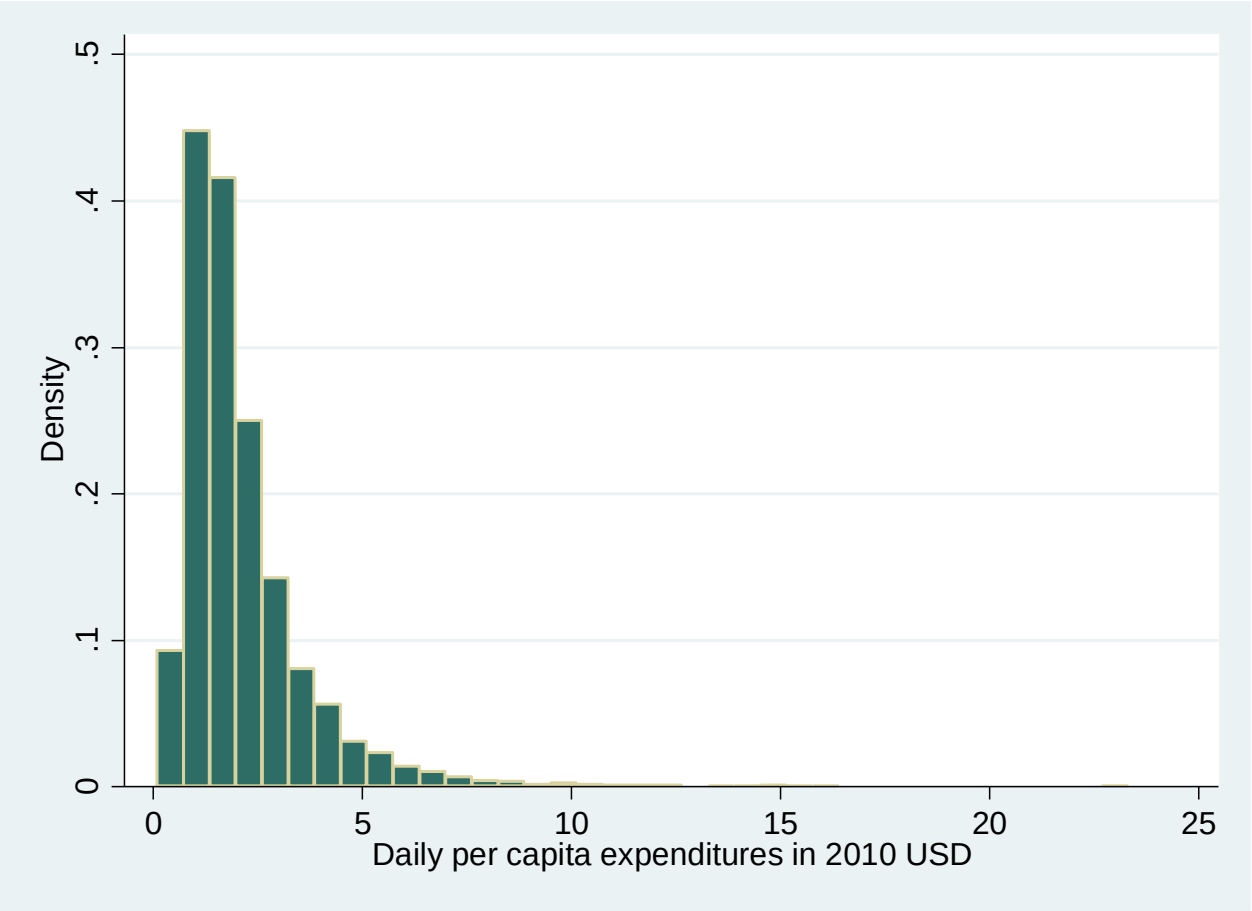
[1] Per capita expenditures measured in [lempiras] local currency units (LCU) were converted to 2010 USD using the Consumer Price Index (CPI) and the PPP Index estimated by the World Bank. We used the formula (2005 CPI LCU/ 2015 CPI LCU)*1/(PPP 2005)* (2010 USD CPI /2005 USD CPI) where LCU PPP 2005 = 9.66 , 2015 CPI LCU = 179.5 , 2005 CPI LCU = 100, 2010 USD CPI =111.65, and 2005 USD CPI = 100. The conversion factor was= 0.0644.

[2] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between per capita expenditures and household characteristics. For example, a test was done between per capita expenditures and gendered household type. When an association is found to be significant ($p<0.05$), the superscript a is noted next to the household characteristic.

Source: ZOI interim survey, Honduras 2015

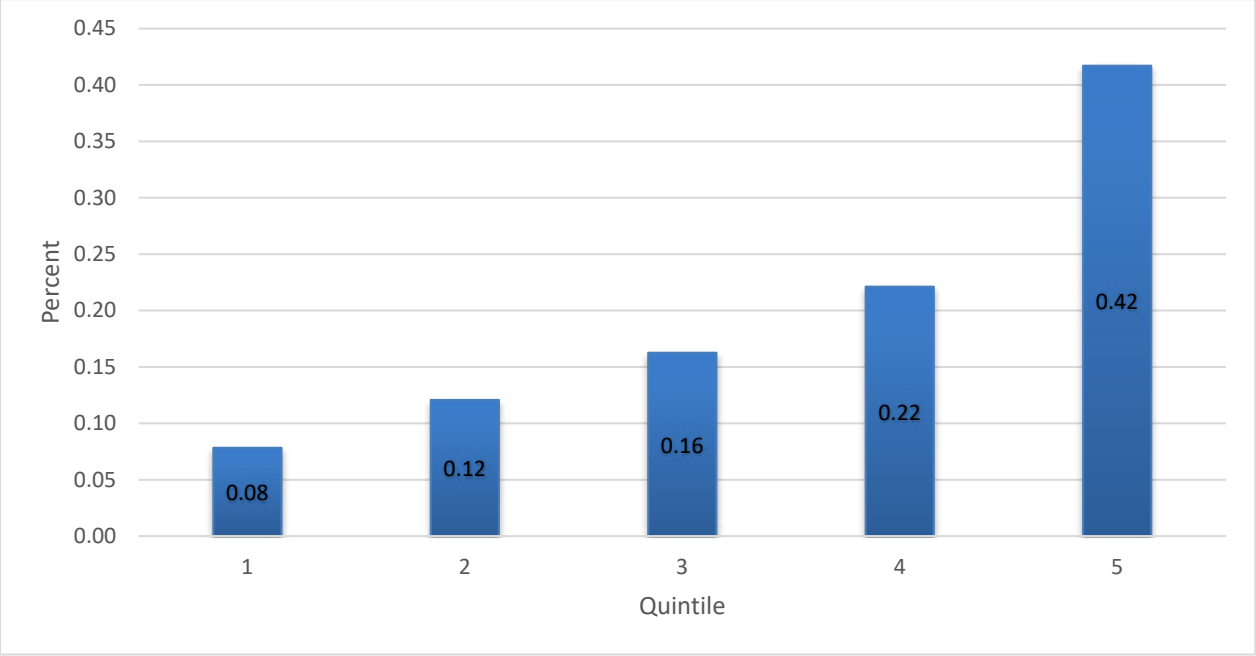
Figure 4.1 Distribution of Daily per capita expenditures



Source: ZOI interim survey, Honduras 2015

Figure 4.2 shows the share of total consumption per quintile in the ZOI. The share of consumption attributed to the lowest quintile (the bottom 20 percent) is a measure of inequality, and an MDG. We see significant inequality when comparing the share of wealth held by lower quintiles to the share of wealth held by the highest quintile. The poorest 20 percent of individuals only represent 8 percent of the total expenditure of the ZOI, while the top 20 percent represent more than 42 percent of the region's expenditures.

Figure 4.2 Share of consumption per quintile: Feed the Future ZOI



[1] Share of the poorest quintile in national consumption is an MDG indicator that provides information on income inequality (UNDP 2003). The poorest quintile is determined as the poorest fifth of the population. The poorest quintile's share of total consumption is calculated by dividing the consumption of the poorest quintile by total consumption within the ZOI.

Source: ZOI interim survey, Honduras 2015

4.2 Prevalence and Depth of Poverty in the ZOI

The prevalence of poverty, sometimes called the poverty headcount ratio, is measured by determining the percent of individuals living below a poverty threshold. Estimates of poverty prevalence are sensitive to the poverty thresholds used to identify the poor. A standardized poverty threshold of $1.25 per person per day in adjusted[21] 2005 USD is used to track global changes in poverty across countries and over time, including for the purpose of monitoring progress toward international goals such as the MDG to eradicate extreme poverty and hunger. The $1.25 threshold is in effect the international extreme poverty threshold and represents the poverty line typical of the world's poorest countries.[22] The prevalence of poverty is the percentage of individuals living below the $1.25 (2005 PPP) per person per day threshold. Poverty estimates are also presented for Honduras' poverty and extreme poverty thresholds in the next section.

Where the poverty prevalence indicates how *many* individuals are impacted by poverty, it does not speak to how *much* people are impacted by poverty. The depth of poverty, often called the poverty gap, is a useful poverty estimate because it captures the extremity of poverty. This measure indicates the average gap between consumption levels and the poverty line, with the non-poor counted as having a gap of zero. The measure is expressed as a proportion of the poverty line. The depth of poverty or poverty gap represents the entire ZOI population. The average consumption shortfall of the poor, in contrast, is estimated for only those individuals living below the poverty line.

4.2.1 The $1.25 Poverty Threshold[23]

Table 4.2 presents poverty estimates at the $1.25 per day (2005 PPP) threshold. The prevalence of poverty and depth of poverty at the $1.25 per day poverty line are Feed the Future indicators. Similar to the per capita expenditures table, this table presents poverty estimates for all households in the ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

Poverty Prevalence

Over forty-five percent of individuals (45.8 percent) in the ZOI live below the $1.25 poverty threshold. The poverty across groups is as expected. Households with only adult males have a

[21] Adjustments are made according to PPP conversions. These conversions are established by the World Bank to allow currencies to be compared across countries in terms of how much an individual can buy in a specific country. The $1.25 in 2005 PPP means that $1.25 could buy the same amount of goods in another country as $1.25 could in the United States in 2005.

[22] World Bank. 2011. Poverty & Equality Data FAQs. http://go.worldbank.org/PYLADRLUN0. Accessed 15 April 2015.

[23] The information using the revised poverty line 1.90 in 2011 PPP dollars is presented in Appendix 1.
See: A1.2. *Poverty at the $1.90 (2011 PPP) per person per day threshold*, page 127

lower poverty prevalence and larger households have a higher poverty prevalence, with 77.7 percent of households with 11 members or more classified as poor. Poverty is lower among more educated households. The geographic distribution of the poverty prevalence is shown in **Figure 4.3**.

Depth of Poverty

The depth of poverty is calculated by multiplying the average consumption shortfall by the prevalence of poverty. The depth of poverty in the ZOI is 13.5 percent, which indicates that the average gap between consumption levels of the population and the poverty line is $0.17 (2005 PPP).

The depth of poverty provides an indication of the amount of resource transfers that, if *perfectly* targeted to poor households, would be needed to bring everyone below the poverty line up to the poverty line. With a ZOI population of 1.72 million, a poverty threshold of $1.25 per day, and a poverty gap of 13.5 percent, $ 290,371 (2005 PPP) per day would need to be transferred to the poor to bring their income or expenditures up to the poverty threshold. The poverty gap increases with the household size, implying that more resources would be needed to bring larger households to the poverty line. The effect of education is similar to what we found in the consumption estimates. Households with no education seem to have the lowest poverty gap, while estimates for households with less than primary education have the highest poverty gap.

Average Consumption Shortfall of the Poor

The average poor person within the ZOI lives at 70.6 percent of the poverty line, or 29.4 percent below the poverty line. The average value of consumption of a poor person is $0.88 (2005 PPP) per day.

Table 4.2. Poverty at the $1.25 (2005 PPP)[1] per person per day threshold

Characteristic	Prevalence of Poverty[2,5]		Depth of Poverty[3,5]		Average consumption shortfall of the poor[4,5]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[6]
Total (All households)	0.458	5,743	13.5	5,743	0.37	29.4	2,064
Gendered household type[a, b]							
Male and female adults	0.471	5,000	13.8	5,000	0.37	29.3	1,910
Female adult(s) only	0.331	546	10.6	546	0.40	31.9	130
Male adult(s) only	0.174	197	5.3	197	n/a	n/a	n/a
Household size[a, b,c]							
Small (1-5 members)	0.259	3,599	5.8	3,599	0.28	22.3	798
Medium (6-10 members)	0.612	1,997	19.0	1,997	0.39	31.1	1,154
Large (11+ members)	0.777	147	29.4	147	0.47	37.8	112
Household educational attainment[a,b]							
No education	0.405	224	8.1	224	0.25	19.9	57
Less than primary	0.536	1,136	16.8	1,136	0.39	31.3	472
Primary	0.443	3,860	13.0	3,860	0.37	29.3	1,362
Secondary or more	0.423	524	11.7	524	0.35	27.7	174

[1] The Feed the Future poverty indicators are based on the poverty threshold of $1.25 (2005 PPP) per person per day.

[2] The prevalence of poverty is the percentage of individuals living below the $1.25 (2005 PPP) per person per day threshold. Poverty prevalence is sometimes referred to as the poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

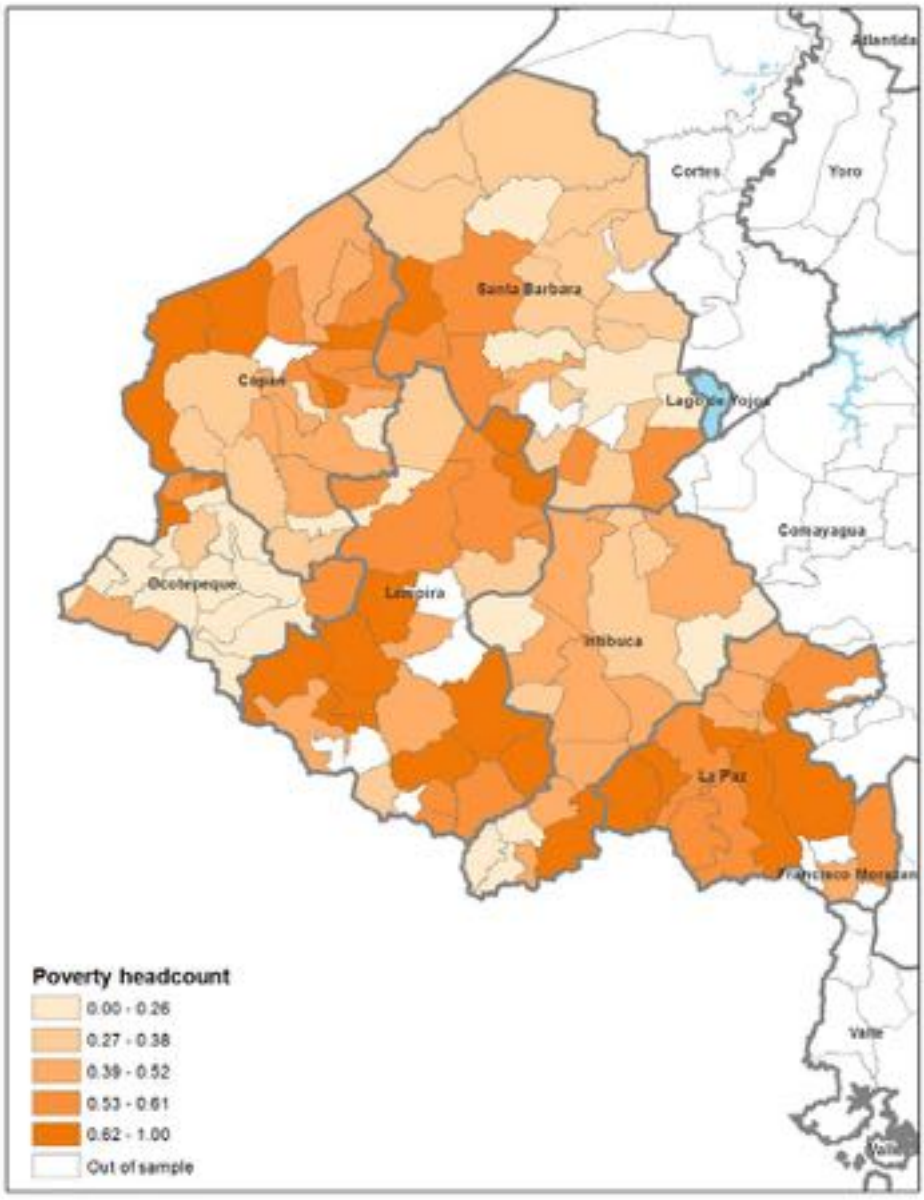
[5] A significance test was performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

[6] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size. The sample sizes reflect the number of households in the sample.

[a-c] Superscripts in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable

Source: ZOI interim survey, Honduras 2015

Figure 4.3. Geographic distribution of Poverty (<$1.25 2005 PPP)



Source: ZOI interim survey, Honduras 2015

4.2.2 The National Relative Poverty Threshold

Table 4.3 presents poverty estimates at the national relative poverty threshold set by the Government of Honduras. Similar to the $1.25 (2005 PPP) per day poverty table in the previous section, this table presents national relative poverty threshold estimates for all households in the ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

Honduras calculates two different relative poverty thresholds: one for people living in rural areas, and another for people in urban areas. The national relative poverty line is defined as the value of a typical basket of goods and services that would satisfy an individual's basic needs. In May 2015, the national rural relative poverty line was 1,631.40 lempiras per month per person, and the national urban relative poverty line was 3,140.10 lempiras per month. This is equivalent to a rural relative poverty threshold of $3.14/day per person, and an urban relative poverty threshold of $6.05/day per person in 2005 PPP dollars. In what follows, we apply the rural relative poverty line for the complete sample, this reflects better the costs of living in the ZOI.

Relative Poverty Prevalence

According to the national relative poverty threshold, 92.6 percent of the households in our sample are poor, which is consistent with the rationale behind selecting the area to benefit from Feed the Future's programming. This increase is expected, as the national relative poverty line is more than twice the international extreme poverty line. As with the $1.25/day threshold, households with both male and female adult members seem to be poorer than households with only male or female adults, but as before, this is likely due to differential household size rather than actual differences in wealth. Household size directly influences poverty; larger households correspond to poorer households according to our data. More educated households appear to fare better than their peers.

Depth of Relative Poverty

The depth of poverty in the ZOI using the national rural relative poverty line is 51.9 percent, which indicates that the average gap between consumption levels of the population and the poverty line is $1.63 (2005 PPP). The depth of poverty is calculated by multiplying the average consumption shortfall by the prevalence of relative poverty.

The depth of poverty provides an indication of the amount of resource transfers that, if *perfectly* targeted to poor households, would be needed to bring everyone below the relative poverty line up to the relative poverty line. With a ZOI population of 1.72 million, a relative poverty threshold of $3.14 per day, and a poverty gap of 51.9 percent, $ 2.8 million (2005 PPP) per day would need to be transferred to the poor to bring their income or expenditures up to the poverty threshold. The poverty gap increases with the household size, implying that more

resources would be needed to bring larger households to the poverty line. The effect of education is, again, similar to what we found in the consumption estimates. Households with no education seem to have the lowest poverty gap, while estimates for households with some primary education have the highest poverty gap.

Average Consumption Shortfall of the Relative Poor

The average consumption shortfall of the poor is the average amount below the national relative poverty threshold of a person in relative poverty. This value is estimated only among individuals living in households that fall below the national relative poverty threshold. The average *relative poor* person within the ZOI lives at 43.9 percent of the relative poverty line, or 56.1 percent below the national rural relative poverty line. The average value of consumption of a *relative poor* person is $1.38 (2005 PPP) per day using the national relative poverty threshold to measure poverty.

Table 4.3. Relative Poverty at the national threshold of Honduras[1]

Characteristic	Prevalence of Poverty[2]		Depth of Poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	0.926	5,743	51.9	5,743	1.76	56.1	5,006
Gendered household type[a,b,c]							
Male and female adults	0.936	5,000	52.8	5,000	1.77	56.5	4,469
Female adult(s) only	0.828	546	43.0	546	1.63	51.9	410
Male adult(s) only	0.722	197	30.6	197	1.33	42.4	127
Household size[a,b,c]							
Small (1-5 members)	0.866	3,599	40.9	3,599	1.48	47.2	2,927
Medium (6-10 members)	0.976	1,997	60.5	1,997	1.94	62.0	1,934
Large (11+ members)	0.998	147	70.0	147	2.20	70.1	145
Household educational attainment[a,b,c]							
No education	0.858	224	44.9	224	1.64	52.4	169
Less than primary	0.951	1,136	56.4	1,136	1.86	59.3	1,006
Primary	0.934	3,860	51.7	3,860	1.74	55.4	3,420
Secondary or more	0.823	524	45.7	524	1.74	55.5	412

^ Results not statistically reliable, n<30.

[1] The national poverty indicators are based on the poverty threshold of $3.14 (2005 PPP) per person per day. The poverty line takes into account the value of a typical basket of goods and services that would satisfy an individual's basic needs; in May 2015, the national rural poverty line was 1,631.40 lempiras per month per person

[2] The prevalence of poverty is the percentage of individuals living below the national poverty line. Poverty prevalence is sometimes referred to as poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size. The sample sizes reflect the number of households in the sample.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

4.2.3 The National Extreme Poverty Threshold

Table 4.4 presents poverty estimates at the extreme poverty threshold set by the Government of Honduras. Similar to prior expenditures and poverty tables, this table presents extreme poverty estimates for all households in the ZOI, as well as disaggregated by household characteristics, including gendered household type, household size, and household educational attainment.

Like the national relative poverty threshold, the extreme poverty threshold in Honduras is calculated separately for urban and rural areas using the price of a basic food basket. For 2015, the extreme poverty threshold for rural areas was set at 1,222.00 lempiras/month per person, or $2.35/day per person in 2005 PPP dollars, and at 1,570.10 lempiras/month per person, or $3.02/day per person for urban areas. As before we apply the rural extreme poverty line to the complete sample to better reflect the costs of living in the ZOI.

Extreme Poverty Prevalence

According to the national rural extreme poverty threshold, 84.3 percent of the households in the ZOI live in extreme poverty. Households with male and female adults appear to be worst off, while households with only male or only female adults fare slightly better. Again, this may be because such households have higher per capita income as a function of household size rather than more household wealth. Larger households are more likely to fall below the extreme poverty threshold, while households with a member who has completed secondary school or more are less likely to be poor.

Depth of Extreme Poverty

The depth of extreme poverty in the ZOI using the national rural extreme poverty line is 39.5 percent, which indicates that the average gap between consumption levels of the population and the extreme poverty line is $1.25 (2005 PPP). The depth of poverty is calculated by multiplying the average consumption shortfall by the prevalence of poverty.

The depth of poverty provides an indication of the amount of resource transfers that, if *perfectly* targeted to poor households, would be needed to bring everyone below the extreme poverty line up to the $2.35/day poverty line. With a ZOI population of 1.72 million, a poverty threshold of $2.35 per day, and a poverty gap of 39.5 percent, $1.6 million (2005 PPP) per day would need to be eradicate extreme poverty in the ZOI. The poverty gap increases with the household size, implying that more resources would be needed to bring larger households to the poverty line. The effect of education is similar to what we found in the consumption estimates. Households with no education seem to have the lowest poverty gap, while estimates for households with some primary education have the highest poverty gap.

Average Consumption Shortfall of the Extremely Poor

The average consumption shortfall of the extremely poor is the average amount below the extreme poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the national rural extreme poverty threshold. The average *extremely poor* person within the ZOI lives at 53.1 percent of the poverty line, or 46.9 percent below the national rural extreme poverty line. The average value of consumption of an *extremely poor* person is $1.25 (2005 PPP) per day using the national extreme poverty threshold to measure poverty; just at the $1.25 international extreme poverty line discussed before.

Table 4.4. Poverty at the national extreme threshold of Honduras[1]

Characteristic	Prevalence of Poverty[2]		Depth of Poverty[3]		Average consumption shortfall of the poor[4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2005 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	0.843	5,743	39.5	5,743	1.10	46.9	4,368
Gendered household type[a,b,c]							
Male and female adults	0.856	5,000	40.4	5,000	1.11	47.1	3,953
Female adult(s) only	0.713	546	31.6	546	1.04	44.3	326
Male adult(s) only	0.535	197	19.6	197	0.86	36.7	89
Household size[a,b,c]							
Small (1-5 members)	0.729	3,599	27.6	3,599	0.89	37.8	2,395
Medium (6-10 members)	0.935	1,997	48.6	1,997	1.22	52.0	1,831
Large (11+ members)	0.995	147	60.0	147	1.42	60.3	142
Household educational attainment[a,b,c]							
No education	0.756	224	33.0	224	1.02	43.6	134
Less than primary	0.886	1,136	44.3	1,136	1.18	50.0	894
Primary	0.844	3,860	39.0	3,860	1.09	46.2	2,979
Secondary or more	0.757	524	34.7	524	1.08	45.9	362

^ Results not statistically reliable, n<30.

[1] The poverty indicators are based on the poverty threshold of $2.35 (2005 PPP) per person per day. The poverty threshold is determined by the minimum food basket required for 1 day per person by the GOH.

[2] The poverty prevalence is the percentage of individuals living below the national extreme poverty line. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[3] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[4] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size. The sample sizes reflect the number of households in the sample.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

5. Women's Empowerment in Agriculture

While women play a prominent role in agriculture, they face persistent economic and social constraints. Because of this, women's empowerment is a main focus of Feed the Future. Empowering women is particularly important to achieving the Feed the Future objectives of inclusive agriculture sector growth and improved nutritional status. The Women's Empowerment in Agriculture Index (WEAI) was developed to track the change in women's empowerment that occurs as a direct or indirect result of interventions under Feed the Future and as a programming tool to identify and address the constraints that limit women's full engagement in the agriculture sector.[24] More information on the WEAI can be found online.[25]

5.1 Overview

The WEAI measures empowerment in five domains. The *Production* domain assesses the ability of individuals to provide input and autonomously make decisions about agricultural production. The *Resources* domain reflects individuals' control over and access to productive resources. The *Income* domain monitors individuals' ability to direct the financial resources derived from agricultural production or other sources. The *Leadership* domain reflects individuals' social capital and comfort speaking in public within their community. The *Time* domain reflects individuals' workload and satisfaction with leisure time. The WEAI aggregates information collected for each of the five domains into a single empowerment indicator.

The index is composed of two sub-indices: the Five Domains of Empowerment sub-Index (5DE), which measures the empowerment of women in the five empowerment domains, and the Gender Parity sub-Index (GPI), which measures the relative empowerment of men and women within the household. The WEAI questionnaire is asked of the primary adult male and female decision-maker in each household and compares the 5DE profiles of women and men in the same household. The primary adult decision-makers are individuals age 18 or older who are self-identified as the primary male or female decision-maker during the collection of the household roster.[26] The WEAI score is computed as a weighted sum of the ZOI-level 5DE and the GPI. Based on our 2015 survey, we calculate a WEAI score of 0.718; the score implies that women in the ZOI are considered empowered in 71.8 percent of the indicators included in the score. In what follows, we describe the different indicators included in the WEAI and the estimates for the ZOI for each of them.

The ZOI interim survey collects data for 10 indicators from the primary adult *female* decision-makers and the primary adult *male* decision-makers within sampled households that have both

[24] Alkire, S. Malapit, H., et al. (2013).
[25] IFPRI. (2013). http://feedthefuture.gov/lp/womens-empowerment-agriculture-index
[26] The respondents of the WEAI questionnaire are only the primary decision-makers in the household and, therefore, may not be representative of the entire female and male populations in the surveyed area.

female and male adults. The data collected during the 2015 interim survey allows calculation of the 10 individual empowerment indicators for primary adult female decision-makers (referred to hereafter as *surveyed women*), enabling Feed the Future to assess change to the individual indicators or constraints that are affecting women's empowerment in the ZOI. This section presents findings on these empowerment indicators and the WEAI.

Table 5.1 presents the five empowerment domains, their definitions under the WEAI, the corresponding 10 indicators, and the percentage of women who achieve adequacy in each indicator assessed in the ZOI interim survey. The percentages presented in Table 5.1 reflect the proportion of all surveyed women with adequacy in individual indicators regardless of their empowerment status (i.e., **the uncensored headcount**) as well as the proportion of surveyed women who are disempowered and achieve adequacy in individual domains (i.e., **the censored headcount**).[27] In this section we discuss both the uncensored and censored headcounts for all indicators of interest. In order to highlight the domains in which women are most struggling to achieve empowerment; i.e. the indicators which appear to be driving disempowerment we stress the information of on the censored head counts. The criteria for determining adequacy (the minimum necessary score to be classified as empowered) in each domain are provided in Appendix A2.3.

From the uncensored headcounts we see that 97.1 percent of the women surveyed indicate they have sufficient leisure time, and 79.7 percent indicate that they are happy with the time they spend on domestic tasks and employment outside the home. Furthermore, 58.7 percent of the surveyed women indicate they have some degree of input in productive decisions. Leadership indicators show that 65.3 percent of women surveyed are a member of at least one group, and 70.2 percent are comfortable speaking in public.

From the censored headcount estimates, we observe that disempowered women score highest in their time devoted to leisure (97 percent adequate), autonomy of production (88.1 percent adequate), and time spent on work (80.9 percent adequate). The domains in which disempowered women are least likely to achieve empowerment, and as such appear to be driving disempowerment, are their access to and ability to make decisions regarding credit (26.7 percent adequate), their ability to purchase, sell, or transfer assets (32 percent adequate), and their ownership of assets (48.3 percent adequate). In contrast, from the uncensored headcounts, we see that 11.3 percent of all women are able to access and make decisions on credit, 18.6 percent are able to purchase, sell, or transfer assets, and 40 percent are

[27] See Appendix 2.3 for the criteria for achieving adequacy in each WEAI indicator. In classifying women as empowered or disempowered we use a disempowerment cut-off of 20 percent. This is the share of (weighted) inadequacies a woman must have to be considered disempowered. For those whose inadequacy score is less than or equal to the disempowerment cut-off, even if it is not 0, their score is replaced by 0, and any existing inadequacies are not considered in the "censored headcounts." Alkire, S. Malapit, H., et al. (2013) refer to this important step as censoring the inadequacies of the empowered.

empowered in asset ownership; this shows that empowered women also have low adequacy in these domains.

Table 5.1. Achievement of adequacy on WEAI indicators

Domain	Definition of domain	Indicators	Uncensored headcount	n	Censored headcount	n
Production	Sole or joint decision-making over food and cash crop farming, livestock, and fisheries, and autonomy in agricultural production	Input in productive decisions	0.587	4,389	0.653	5,095
		Autonomy in production	0.861	4,732	0.881	5,095
Resources	Ownership, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit	Ownership of assets	0.401	4,778	0.483	5,095
		Purchase, sale or transfer of assets	0.186	4,776	0.320	5,095
		Access to and decisions on credit	0.113	5,118	0.267	5,095
Income	Sole or joint control over income and expenditures	Control over use of income	0.719	4,734	0.738	5,095
Leadership	Membership in economic or social groups and comfort in speaking in public	Group member	0.653	4,560	0.725	5,095
		Speaking in public	0.702	5,121	0.700	5,095
Time	Allocation of time to productive and domestic tasks and satisfaction with the available time for leisure activities	Workload	0.797	5,123	0.809	5,095
		Leisure	0.971	5,119	0.970	5,095

Source: ZOI interim survey, Honduras 2015

Table 5.2 shows the estimate of the 5DE sub-index, the GPI sub-index and the overall WEAI score for our sample. The 5DE sub-index is one minus the product of the percentage of women that are disempowered (disempowered head count ratio) and the average share of inadequacies across domains. In the table we see that in the ZOI of Honduras 20.6 percent women are empowered. The 79.4 percent of women who are not yet empowered, still have, on average, adequate achievements in 61.3 percent of dimensions. The results of the 5DE in Table 5.2 show that the 5DE is [20.6% + (79.4% x 61.3%)] = [1 − (79.4% x 38.7%)] =69.3%. The result implies that women in the Honduras ZOI achieve empowerment in only 69.3 percent of the weighted indicators or, conversely, have inadequate empowerment in 30.7 percent of the indicators. The estimated level of empowerment using the 5DE index is below the 80 percent recommended cut off, above which a woman would be classified as empowered. This cutoff is the same as saying that an individual is identified as empowered in 5DE if he or she has adequate achievements in four of the five domains.

The Gender Parity sub-Index is estimated at 94.7, in Table 5.2, and this is a measure of inequality between male and female decision makers in dual households. The GPI shows the percentage of women who have achieved parity with respect to their male counterparts. In cases of gender disparity, the GPI reflects the relative empowerment gap between the woman's 5DE score with respect to the man's. The GPI for the ZOI shows that 86.6 percent of women have gender parity with the primary male in their household. Of the13.4 percent of women who are less empowered, the empowerment gap between them and the male in their household is quite large at 39.6 percent. Thus the overall GPI is [1 − (13.4% x 39.6%)], or 0.947.

The WEAI score is a weighted average of the 5DE sub-index value of 0.693 and the GPI sub-index value of 0.947. The WEAI in the ZOI implies that women achieve empowerment in (0.9 x 69.3% + 0.1 x 94.7%), or 71.8 percent of the indicators. This estimated level of empowerment is below the 80 percent recommended cut off, above which a woman would be classified as empowered.

Figure 5.1 shows the contribution of each domain to the empowerment index for both males and females in the ZOI. The purpose of this figure is to compare men and women across the different dimensions and see in which of them women have lower adequacy scores. From the figure, we note that the largest differences in contribution come from access to resources (credit and ownership) and control of income.

Overall, these results suggest that while women have some autonomy over existing assets and income, they are unable to make impactful financial decisions for their households. Women are able to manage their own time, and appear to be able to manage decisions about existing resources within their households. However, they do not seem to be able to make major

decisions that would change the financial status of their households, such as taking out a loan, or selling an asset.

While the analysis presented does not look to compare the evolution of WEAI and its component across time, before concluding this discussion, we highlight some of the observed differences between the estimates from the 2012 survey and the estimates presented in this report (2015 survey). The WEAI estimate decrease from 0.749 to 0.718, a difference that implies a 3.1percentage point difference between the percentage of indicators in which a women is empowered in the ZOI. This small difference is driven mainly by differences in: (1) the GPI, which changed from 0.874 to 0.947; and, (2) the 5DE decreased from 0.735 to 0.693.

The change in the GPI is composed by an increase in the percentage of women with gender parity, from 41.9 percent in 2012 to 86.6 percent in 2015 and tamed by an increase in the empowerment gap between men and women in households where women are less empowered than men, 0.218 in 2012 to 0.396. This is the improvement in gender parity reflects more women being as empowered as the men in their household even when the ones that less empowered have larger differences in empowerment compared to the men.

The difference in the 5DE index comes from differences in the overall empowerment headcount ratio. Examining the components of the 5DE in both years it is evident that the difference is driven by the percentage of women that are considered empowered over all (headcount), with empowered women changing from 31.5 percent in 2012 to 20.6 percent, or a 10.9 difference. This difference in the empowerment is mainly driven by differences in the empowerment headcount in the production and the resources domains. Specifically, the censored head count for the input in productive decisions domain decreased from 88.5 percent in 2012 to 65.3 percent in 2015; and, ownership of assets changed from 88.4 percent in 2012 to 48.3 percent in 2015. This large differences in input decisions and ownership could be due to non-response or the data quality. In 2012, the WEAI instrument implemented was in its early stages and had more sections that in the end were not included in the WEAI calculation. Noting this, it would seem less likely that the higher headcount in production and resources domains for 2012 would be driven by non-response or missing data since the 2015 instrument was simplified and shorter. Another aspect to note is that the samples size used to calculate the WEAI is much larger in 2015 than in 2012, both because the 2015 sample of households is almost double that of 2012 and that the non-response to the empowerment section in 2015 was much lower than in 2012. Given this the 2015 estimates are more precise and reliable.

In the following sections we describe the indicators that are used to estimate the Women Empowerment in Agriculture Index, discussed above. The discussion describes and disaggregates each domain and presents estimates for all women in the survey identified as primary decision-makers.

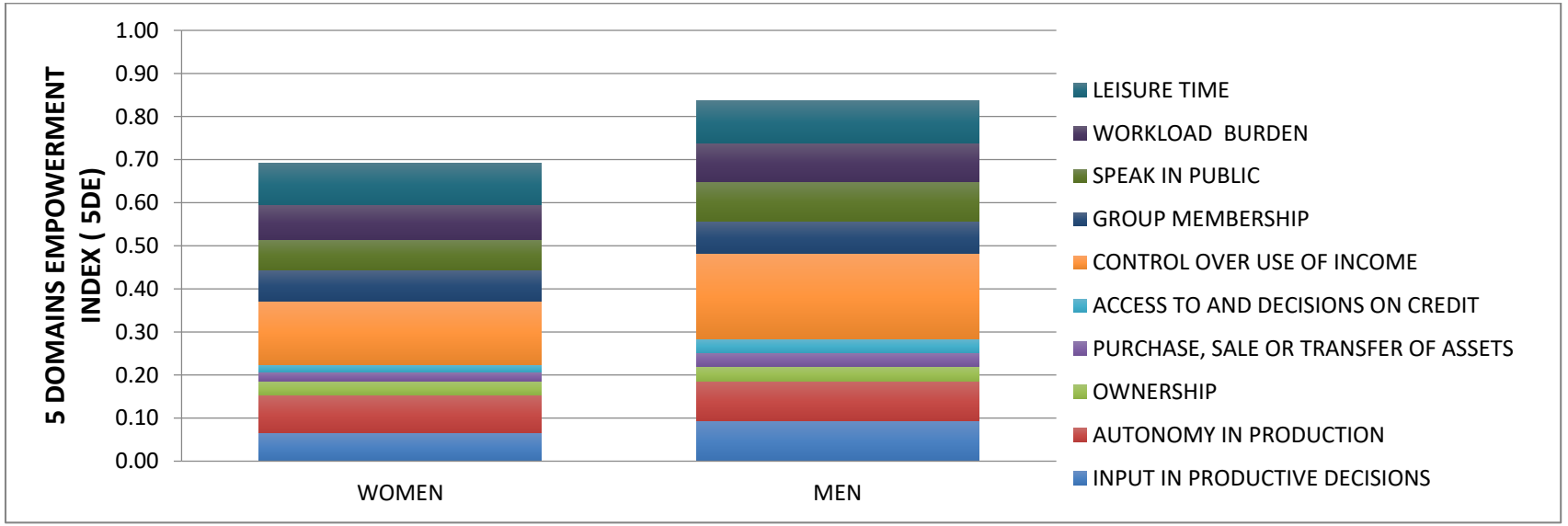
Table 5.2. A Women's Empowerment in Agriculture Index

	2015 Percent
Women's Empowerment in Agriculture Index Indicators	
Female: Disempowered Headcount : H_{20p}	0.794
Female: Average Inadequacy Share : A_{20p}	0.387
Female: 5 Domains Disempowerment Index : $M0_{20p}$	0.307
Female: 5 Domains Empowerment Index : Ea_{20p}	0.693
Inadequacy Head Count (H_{GPI})	0.134
Censored Inadequacy Scores Average	0.396
Gender Disparity Index (PI)	0.053
Gender Parity Index : GPI	0.947
Average Women's Empowerment In Agriculture Index	0.718
n	**5,095**

Source: ZOI interim survey, Honduras 2015

Figure 5.1 Contribution of each indicator to the EMPOWERMENT in the ZOI

Statistics	PRODUCTION		RESOURCES			INCOME	LEADERSHIP		TIME	
	Input in Productive Decisions	Autonomy in Production	Ownership	Purchase, Sale or Transfer of Assets	Access to and Decisions on Credit	Control Over Use of Income	Group Membership	Speak in Public	Workload Burden	Leisure Time
WOMEN										
Censored headcount	65.3%	88.1%	48.3%	32.0%	26.7%	73.8%	72.5%	70.0%	80.9%	97.0%
% Contribution	5.0%	1.7%	5.0%	6.5%	7.1%	7.6%	4.0%	4.3%	2.8%	0.4%
Contribution	0.065	0.088	0.032	0.021	0.018	0.148	0.073	0.070	0.081	0.097
% Contr. by dimension	6.7%			18.6%		7.6%	8.3%		3.2%	
MEN										
Censored headcount	94.0%	91.2%	52.0%	47.8%	49.2%	98.6%	76.0%	90.0%	91.0%	97.5%
% Contribution	0.7%	1.0%	3.8%	4.2%	4.1%	0.3%	2.9%	1.2%	1.1%	0.3%
Contribution	0.094	0.091	0.035	0.032	0.033	0.197	0.076	0.090	0.091	0.097
% Contr. by dimension	1.8%			12.0%		0.3%	4.1%		1.4%	



Source: ZOI interim survey, Honduras 2015

5.2 Agricultural Production

Tables 5.3, 5.4, and **5.5** present information contributing to two indicators of the WEAI. *Input into productive decisions*, one indicator of the *Production* domain, is measured by the extent to which individuals make decisions or feel they can make decisions on the agricultural activities listed in the three tables. The *Income* domain is comprised entirely of a single indicator measuring the control over use of income. This indicator captures individuals' ability to make decisions involving the income generated from their productive activity or the extent to which they feel they can make decisions regarding household expenditures and wage income.

Table 5.3 presents economic activities (including agricultural activities) among surveyed women. This table presents the percentage of surveyed women who are involved in agricultural activities (food crop farming, cash crop farming, livestock raising, or fishing), non-farm economic activities, and wage or salaried employment. This table also presents the percentage of women who have input into the decisions made regarding a specific activity.

We see that 89.2 percent of all women are involved in agricultural production. Approximately 75 percent of women are involved in farming food and cash crops, 23.9 percent are involved in livestock production, and a smaller number (9 to 15.7 percent) work off the farm or for a wage. Rates of participation in each category are comparable between both empowered and disempowered women. On average, women involved in wage or off-farm employment are much more likely (85 percent) to have input into the activity compared to activities such as cash or food crop farming (where only 49.3 and 53.7 percent have input into the activity respectively). However, the share that participates in wage and off-farm employment is 9 and 15.7 percent, respectively. While disempowered women have the same rates of participation in cash and food crop farming, only 42.8 and 46.9 percent of disempowered women have input into each activity respectively. Note that these figures do not take into account the proportion of land devoted to each type of crop, or the possibility that households that cultivate both cash and food crops may divide labor such that women have more agency in lower value production used for food rather than income-generating agriculture.

Table 5.3. Economic activities and input in decision-making

Activity	Participates in activity		Has input[1] into decisions about activity	
	Percent	n[2]	Percent	n[1,3]
Total (All surveyed women)	0.892	5,123	0.670	4,573
Type of activity				
Food crop farming	0.751	5,123	0.537	3,888
Cash crop farming	0.725	5,123	0.493	3,724
Livestock raising	0.239	5,123	0.657	1,295
Fishing or fishpond culture^	0.006	5,123	0.549	29
Non-farm economic activities	0.157	5,123	0.855	843
Wage or salaried employment	0.090	5,123	0.833	446

^ Results not statistically reliable, n<30.

[1] *Having input* means that a woman reported having input into most or all decisions regarding the activity.

[2] Estimates exclude households who have no primary adult female decision-maker (PAFD) or whose data are missing/incomplete.

[3] Women who do not participate in an activity or report that no decision was made are excluded from these percentages.

Source: ZOI interim survey, Honduras 2015

Table 5.4 shows the percentage of surveyed women who have input into the decisions made regarding the use of income derived from an activity. Even though 89.2 percent of women are involved in productive activities, only 72.3 percent of all women involved in at least one activity have input into the use of income generated from the activity. Looking at the same rate for disempowered women, the proportion who have input into use of income from an activity drops to 66.1 percent. In general, the average woman is more likely to have input over use of income from wage and non-farm employment, and less likely to have input over income from cash crop cultivation. The same is true for disempowered women, but the proportion who have use of income from an activity is lower than the average. As a rule, women are less likely to have input into income from an activity than having input into decisions about the activity. While both empowered and disempowered women may participate in the economic sphere, their impact is limited as they may not be able to make decisions that have meaningful financial consequences. The fact that women appear to be able to make choices that affect their own time and income, but are less likely to exert influence in domains in which their spouse also participates supports this statement. We find that this pattern appears among the subset of women classified as disempowered in addition to the whole.

Table 5.4. Input in decision-making on use of income among surveyed women

Activity	Has input[1] into use of income from activity	
	Percent	n[2,3]
Total (All surveyed women)	0.723	4,581
Type of activity		
Food crop farming	0.513	3,888
Cash crop farming	0.478	3,724
Livestock raising	0.623	1,295
Fishing or fishpond culture^	n/a	n/a
Non-farm economic activities	0.842	843
Wage or salaried employment	0.804	446

^ Results not statistically reliable, n<30.

[1] *Having input* means that a woman reported having input into most or all decisions regarding the use of income generated from the activity.

[2] Estimates exclude households who have no primary adult female decision-maker or whose data are missing/incomplete.

[3] Women who do not participate in an activity or report that no decision was made are excluded from these percentages.

Source: ZOI interim survey, Honduras 2015

In addition to the decision-making of women on broad agricultural and economic activities, the WEAI module collects information on the extent to which women can contribute to specific agricultural and economic activities. **Table 5.5** presents the percent distribution of surveyed women's perceived ability to contribute to decisions regarding various activities. The row percentages total to 100 percent.

Women participating in each activity feel that they can make their own decisions to either a small or medium extent; the lowest percentage is for non-farm business activities. In this category, we have many responses where they deemed it not applicable, and we have fewer observations. The same holds when we look specifically at the subset of women classified as disempowered. We also see more disempowered women than the average woman report either being unable to make their own decisions or to only be able to make their own decisions to a small extent; correspondingly, we observe that fewer disempowered women report being able to make their own decisions to a medium or high extent than the average woman. Our results are consistent with women being more likely to feel strongly that they can make decisions findings about activities in which they likely participate jointly with their spouse (such as food or cash crop cultivation). As most women's opinions lie in the middle of the range, this suggests that there are few women who feel unable to make decisions about any activity, but also that there are few women who perceive themselves as wholly in charge of a given activity.

Table 5.5. Decision-making on production among surveyed women

Activity	Extent to which respondents feel they can make their own decisions (percent)[1,2]				Not applicable[3]	n
	Not at all	Small extent	Medium extent	High extent		
Getting inputs for agricultural production	0.151	0.358	0.271	0.128	0.092	2,636
The types of crops to grow	0.137	0.362	0.263	0.130	0.108	3,730
Whether to take crops to the market	0.126	0.357	0.287	0.097	0.134	2,791
Livestock raising	0.122	0.246	0.265	0.164	0.204	1,127
Her own non-farm business activity	0.003	0.096	0.123	0.054	0.725	355
Her own wage or salary employment	0.093	0.215	0.219	0.072	0.401	2,797
Major household expenditures	0.079	0.217	0.364	0.126	0.213	4,102
Minor household expenditures^	n/a	n/a	n/a	n/a	n/a	n/a

^ The minor household expenditures question was not included in the survey due to a programming error.

[1] Estimates exclude households who have no primary adult female decision-maker or whose data are missing or incomplete. Women who do not participate in an activity, or who report that no decision was made, are excluded from these percentages.

[2] When a primary adult female decision-maker reports that she alone makes decisions about the specified activities, she is not asked any further questions, and is categorized during analysis as making her own decisions "to a high extent." When she reports making decisions about the specified activities in conjunction with other individuals, she is asked an additional question about the extent to which she feels she could make her own personal decisions on the specified matters, with possible response options being "not at all," "to a small extent," "to a medium extent," or "to a high extent." Responses are recoded accordingly.

[3] This category includes respondents who report participating in the activity, but say that making the specified decision is not applicable to their situation.

Source: ZOI interim survey, Honduras 2015

5.3 Productive Resources

One of the 10 indicators of the WEAI is the ownership of productive resources. The ability of women to make decisions on the use of productive resources is a second indicator of the *Resource* domain. **Table 5.6** presents households' ownership of productive resources, as reported by surveyed women. Table 5.6 also presents the percentage of women who can make a decision to purchase or to sell, give away, or rent owned items. Women are counted as

having the ability to make a decision if they can solely make a decision or if they can make these decisions with others with any degree of input.

We see that reported ownership of assets among households in our sample is generally low, which is consistent with the high rates of poverty in the ZOI. The most common assets owned by households are small consumer durables, houses, and small livestock; this is the same in the sample of households that have disempowered women, though the percent of households who own each type of asset is much lower than the average. We note that the rates of ownership in the empowerment section presented here are much lower than what is reported in the detailed agriculture and livestock sections later in the report. This is likely due to unwillingness of respondents to respond to this sections when the themes are repetitive. We are exploring how to consolidate these themes across the survey instrument to improve the data quality in this section.

In households where women report any member owning a resource, their ability to make decisions regarding asset acquisition varies widely. Among all women, 22 percent believe they can decide to acquire a mode of transportation but 89.2 percent indicate they can decide to purchase a small consumer durable. Looking at the subset of disempowered women, we see that first, asset ownership is uniformly lower in these households, suggesting that disempowered women come from poorer households. Second, we find that a smaller proportion of disempowered women than the average believe they can decide to purchase a given asset. In general, women believe they can acquire small items such as poultry, small livestock, or small consumer durables, but are less likely to make decisions to acquire more valuable items such as agricultural land or farm equipment.

We see a very similar pattern regarding a woman's ability to sell, rent, or donate household assets; approximately the same proportion (within 2 percentage points) of women who believe they can purchase an asset believe they can decide to transfer ownership, i.e. sell, give, or trade the asset. We again see that women are more likely to have control over smaller assets with limited financial impacts, than higher value assets that represent a larger fraction of the household's wealth.

Table 5.6. Household ownership and surveyed women's control over productive resources

Type of resource	Someone in the household owns item		Woman can decide to purchase items		Woman can decide to sell/give/rent owned items	
	Percent	n[1]	Percent	n[1]	Percent	n[1]
Agricultural land	0.076	5,083	0.515	399	0.555	399
Large livestock	0.033	5,096	0.523	175	0.543	175
Small livestock	0.086	5,099	0.799	452	0.800	452
Chickens, ducks, turkeys, and pigeons	0.072	5,109	0.905	392	0.928	392
Fish pond or fishing equipment^	0.001	5,123	n/a	n/a	n/a	n/a
Non-mechanized farm equipment	0.075	5,031	0.348	382	0.349	382
Mechanized farm equipment	0.048	4,861	0.385	212	0.387	212
Nonfarm business equipment	0.060	4,919	0.468	277	0.494	277
House or other structures	0.088	5,110	0.681	468	0.712	468
Large consumer durables	0.074	5,017	0.821	375	0.810	375
Small consumer durables	0.090	5,115	0.892	473	0.905	473
Cell phone	0.076	5,122	0.577	409	0.593	409
Non-agricultural land^	0.002	5,121	n/a	n/a	n/a	n/a
Means of transportation	0.026	5,121	0.220	143	0.201	143

^ Results not statistically reliable, n<30.

[1] Estimates exclude households that have no primary adult female decision-maker or in which Module G data are missing/incomplete. Those who indicate "Not applicable" are excluded from estimates.

n/a: Questions regarding who can decide to purchase, sell, give or rent the item were not included in the ZOI interim surveys.

Source: ZOI interim survey, Honduras 2015

Table 5.7 shows the third indicator of the *Resources* domain, access to, and decision-making on credit. The table presents the percent of surveyed women who report that a member of the household has in the past 12 months received any loan, either an in-kind loan (such as food items or raw materials), or a cash loan. These categories are not mutually exclusive. Further, for women living in households where a household member has received a loan, the table presents the percentage who report having contributed to the decision to take the loan and the

subsequent decisions on how to use the loan. For each type of loan and type of lender, we calculate statistics for all women, as well as for disempowered women.

We find that 20 percent of women surveyed indicate their household has received any loan in the past 12 months. This proportion is lower for disempowered women (16.7 percent), which adds support to the argument that disempowered women come from households that are financially worse off than the average. The vast majority of loans in our sample originate from informal lenders and microfinance groups and are disbursed in cash rather than in-kind. This pattern holds among all types of lenders for disempowered women, though we see slightly more disempowered women receiving in-kind loans from informal lenders than the average. We find that women are least likely to borrow from friends or relatives, perhaps because friends and relatives are equally credit constrained, or because households in the ZOI face common financial shocks, and are unable to borrow and lend from each other in times of need.

We find that 50.2 percent of women living in households that received a loan in the past year contribute to a decision on credit (either whether to borrow or how to use credit). We see that 45.7 percent of women contribute to decisions on whether to take out a line of credit, while 49.4 percent help decide how to manage borrowed funds. The proportions are lower among disempowered women; only 39 percent contribute to a decision on credit, 36.8 percent regarding whether to borrow, and 38.4 on how to spend a loan. In general, decision-making is higher when the credit source is a formal lender or a group based microfinance. Women appear to have more influence on how to spend a loan than whether to take out a loan.

Table 5.7. Credit access among surveyed women

Estimate (All Surveyed Women)	Any source (percent)	Credit source (percent)[1]				
		Non-governmental organization	Informal lender	Formal lender	Friends or relatives	Group-based micro-finance
Total receiving a loan	**0.200**	**0.033**	**0.061**	**0.038**	**0.027**	**0.058**
Type of loan						
In-kind loan	0.018	0.002	0.008	0.002	0.003	0.002
Cash loan	0.185	0.030	0.053	0.036	0.024	0.056
n[2]	**5,118**	**5,075**	**5,073**	**5,089**	**5,075**	**5,091**
Total contributing to a credit decision	**0.502**	**0.422**	**0.427**	**0.501**	**0.359**	**0.536**
Type of decisions						
On whether to borrow	0.457	0.366	0.386	0.466	0.334	0.496
On how to use loan	0.494	0.421	0.424	0.496	0.347	0.522
n[2]	**1,147**	**227**	**335**	**251**	**171**	**342**

[1] Percentages sum to more than 100 because loans may have been received from more than one source.

[2] Estimates exclude households who have no primary adult female decision-maker or whose data are missing/incomplete.

Source: ZOI interim survey, Honduras 2015

5.4 Leadership in the Community

The *Leadership* domain measures an individual's influence and involvement with community organizations and issues impacting her community. The first indicator of the domain is an individual's ease speaking in public, which is measured by three questions related to the level of difficulty an individual faces when voicing her opinion regarding community decisions. Individuals are deemed adequate if they are comfortable speaking in public, even if with difficulty. On this indicator, 70.2 percent of surveyed women in the ZOI achieves adequacy in voicing their opinions on community matters (**Table 5.8**). This proportion is lower (65.7 percent) for disempowered women. Women appear much more comfortable speaking about infrastructure and public goods provision within their communities, but are hesitant to protest the misbehavior of authorities. This is true for both disempowered women and our entire sample. For each of the three scenarios we pose about public speaking, disempowered women are less comfortable speaking up than the average woman.

Table 5.8. Comfort with speaking in public among surveyed women

Topics for public discussion	Percent	
	Comfortable speaking in public about selected topics	n[1]
Total (All surveyed women)	0.702	5,121
Topics		
To help decide on infrastructure to be built in the community	0.644	5,121
To ensure proper payment of wages for public works or other similar programs	0.603	5,121
To protest the misbehavior of authorities or elected officials	0.518	5,121

[1] Estimates exclude households who have no primary adult female decision-maker or whose data are missing/incomplete.

Source: ZOI interim survey, Honduras 2015

The second indicator of the *Leadership* domain is an individual's participation in a community organization. **Table 5.9** shows the percentage of surveyed women who report being an active member of a group or organization in the community. We include all surveyed women, even those who reported that no group exists or that she is unaware of the existence of a group in her community. Women who report that no group exists or who are unaware of a group are counted as having inadequate achievement of this indicator.

We find that over half of the women in our sample (56.7 percent) are active members of at least one community organization. Slightly fewer disempowered women are members of

community organizations, at 52.5 percent. Membership varies by type of group; the most popular groups are religious groups and water user groups, with 51.2 (47.8 percent of disempowered women) and 14.5 percent (12.4 percent of disempowered women) of women participating, respectively. These types of groups are organizations through which women can exercise meaningful autonomy and make a positive impact on their community. While some women are members of agriculture producer, microfinance and local government groups, most are not. Depending on the reach and efficacy of such groups, this may be a reason why women seem to lack agency in making major decision regarding productive resources within their households.

Table 5.9. Group membership among surveyed women

Group type	Percent[1] Is an active group member	n[2]
Total (All surveyed women)	0.567	5,123
Group type		
Agricultural producers' group	0.008	5,123
Water users' group	0.145	5,123
Forest users' group	0.001	5,123
Credit or microfinance group	0.043	5,123
Mutual help or insurance group	0.001	5,123
Trade and business association	0.001	5,123
Civic or charitable group	0.017	5,123
Local government	0.056	5,123
Religious group	0.512	5,123
Other	0.027	5,123

[1] The denominator for this percentage includes all surveyed women, even those who reported that no group exists or that she is unaware of the existence of a group in her community. Women who report that no group exists or who are unaware of a group are counted as having inadequate achievement of this indicator.

[2] Estimates exclude households who have no primary adult female decision-maker or whose data are missing/incomplete.

Source: ZOI interim survey, Honduras 2015

5.5 Time Use

The last domain of the WEAI is time use. This domain assesses women's work load as directly measured through a time allocation log, as well as the satisfaction felt by the surveyed woman with her workload and leisure time. **Table 5.10** shows the percentage distribution and average hours spent participating in various activities and chores that women often perform. The percentage of women performing an activity indicates the percentage of women who reported doing an activity within the past 24 hours, irrespective of the length of time spent performing the activity. The average hours spent performing an activity is the average across all women,

assigning zero hours to women who did not perform an activity. In the ZOI, 97 percent are deemed to be adequate; that is, the surveyed women do not express any level of dissatisfaction with the amount of leisure time available (or respond with 5 or above on a 1 to 10 scale of satisfaction).

Table 5.10. Time allocation among surveyed women

Activity	Primary activity	
	Percent of women	Mean hours devoted
Sleeping and resting	1.000	10.03
Eating and drinking	0.939	1.48
Personal care	0.579	0.69
School and homework	0.006	0.02
Work as employed	0.031	0.19
Own business work	0.031	0.18
Farming/livestock/fishing	0.054	0.16
Shopping/getting services	0.014	0.06
Weaving, sewing, textile care	0.560	1.11
Cooking	0.942	3.68
Domestic work (fetching wood and water)	0.022	0.03
Care for children/adults/elderly	0.251	0.61
Travel and commuting	0.020	0.08
Watching TV/listening to radio/reading	0.872	3.17
Exercising	0.000	0.00
Social activities and hobbies	0.310	1.07
Religious activities	0.109	0.31
Other	0.035	0.09
n	**5,123**	

[1] Respondents were allowed to report one main activity in the prior 24 hours; the period between each activity were not blocked by minutes, respondents can spend any positive amount of minutes in any activity.

Source: ZOI interim survey, Honduras 2015

The highest participation rates (excluding basic needs activities) are: cooking, weaving, sewing, or textile care, and employment/business activities. Women in the ZOI spend over 3.5 hours each day cooking for their households, which is the maximum amount of time spent on any given activity. We also see women spend significant portions (1.1 hours) of their days on textile care (laundry, sewing, mending), and caring for children or the elderly (0.6 hours). Women in our sample also spend 0.19 and 0.18 hours working as employees or working on their own business activities respectively. Women also report spending about 3.17 hours a day watching

TV/listening to radio/reading, but this is likely done in tandem with other productive activities. Among disempowered women, we see nearly identical allocations of time.

Leisure activities do have a place in women's lives. On average, women get about 10 hours of sleep per day (overnight and during the day), spend another 1.5 hours eating and drinking every day, an additional hour on social activities or hobbies, and approximately 45 minutes on personal care. Again, time spent on leisure activities is the same among disempowered women.

As these numbers don't take into account the proportion of women in our sample who participate in each activity, they do not necessarily represent how the average woman spends her time. However, we observe that women do spend a significant proportion of their time working on unpaid work within the household, rather than pursuing paid employment outside of the household. This may have an impact on their bargaining power within the household, and subsequently on their ability to make meaningful decisions regarding productive resources within their households.

6. Hunger and Dietary Intake

This section presents findings related to hunger in the ZOI as well as women's and young children's dietary intake.

6.1 Household Hunger

The HHS is used to calculate the prevalence of households in the Honduras ZOI experiencing moderate or severe hunger. The HHS was developed by the USAID-funded Food and Nutrition Technical Assistance II Project (FANTA-2/FHI 360) in collaboration with the United Nations Food and Agriculture Organization. It has been cross-culturally validated to allow comparison across different food-insecure contexts. The HHS is used to assess, geographically target, monitor, and evaluate settings affected by substantial food insecurity. The HHS is used to estimate the percentage of households affected by three different severities of household hunger: little to no household hunger (HHS score 0-1); moderate household hunger (HHS score 2-3); and severe household hunger (HHS score 4-6)[28,29].The lean season in Honduras occurs from April through August. Data for the HHS were collected during the lean season before the primera harvests.

Table 6.1 presents estimates of household hunger for all households, as well as by household characteristics, including gendered household type, household size, and household educational attainment.

[28] Deitschler, Ballard, Swindale, & Coates (2011).
[29] For further description of the household hunger indicator and its calculation, refer to the Feed the Future Indicator Handbook, available at http://feedthefuture.gov/resource/feed-future-handbook-indicator-definitions.

We find that 95.9 percent of the households surveyed have little to no hunger, and 3.7 percent have moderate or severe hunger. A very small number of households (0.3 percent) are severely hungry. When we examine the results by household type, we find that households with both male and female adults are less likely to be hungry, while households with only male or only female adults are slightly more likely to have moderate to severe hunger. Moderate hunger increases with household size, and decreases with education attainment. We find that changes across educational attainment occur on the likelihood of suffering from little to no hunger or moderate hunger; that is households with no education are not so much more likely to suffer from severe hunger than households with some education. Broad categories of hunger prevalence for a household do not give us any insight into the distribution of hunger within the household.

Table 6.1. Household hunger

Characteristic	Percent			n[1]
	Little to no hunger [a]	Moderate hunger	Severe hunger	
Total (All households)	0.959	0.037	0.003	5,690
Gendered household type[a]				
Male and female adults	0.970	0.029	0.001	4,957
Female adult(s) only	0.883	0.101	0.017	539
Male adult(s) only	0.924	0.060	0.016	194
Household size				
Small (1-5 members)	0.963	0.033	0.004	3,560
Medium (6-10 members)	0.953	0.045	0.002	1,984
Large (11+ members)	0.941	0.059	0.000	146
Household educational attainment[a]				
No education	0.888	0.096	0.016	221
Less than primary	0.934	0.064	0.003	1,127
Primary	0.969	0.028	0.003	3,822
Secondary or more	0.987	0.013	0.000	521

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample size may not total to the aggregated sample size.

[a] Significance tests were performed for associations between little to no hunger and household characteristics, which is equivalent to testing the association between moderate to severe hunger and household characteristics. For example, a test was done between little to no hunger and gendered household type. When differences were found to be significant ($p<0.05$), the superscript is noted next to the household characteristic.

Source: ZOI interim survey, Honduras 2015

6.2 Dietary Intake

This section presents information on the dietary diversity of women of reproductive age and on infant and young child feeding in the ZOI.

6.2.1 Dietary Diversity among Women Age 15-49 Years

Women of reproductive age (15-49 years) are at risk of multiple micronutrient deficiencies, which can jeopardize their health and their ability to care for their children and participate in income-generating activities (Darnton-Hill *et al.* 2005). The Feed the Future women's dietary diversity indicator is a proxy for the micronutrient adequacy in women's diets. The dietary diversity indicator reports the mean number of food groups consumed in the previous day by non-pregnant women of reproductive age.

For the ZOI interim survey, two dietary diversity indicators for women are calculated: the Women's Dietary Diversity Score (WDDS) and Women's Minimum Dietary Diversity (MDD-W).

Women's Dietary Diversity Score

The Feed the Future women's dietary diversity indicator, presented in **Table 6.2**, is based on nine food groups: (1) grains, roots, and tubers; (2) legumes and nuts; (3) dairy products; (4) organ meat; (5) eggs; (6) flesh food and small animal protein; (7) vitamin A-rich dark green leafy vegetables; (8) other vitamin A-rich vegetables and fruits; and (9) other fruits and vegetables. The number of food groups consumed is averaged across all women of reproductive age in the sample for whom dietary diversity data were collected to produce a WDDS.

Table 6.2 shows the mean and median WDDS for all women of reproductive age in the ZOI, and by individual-level and household-level characteristics. Mean WDDS is the Feed the Future high-level indicator. Individual-level characteristics include women's age groups and educational attainment. Household-level characteristics include categories of gendered household type, household size, and household hunger.

The average WDDS among women in the ZOI is 3.68 and the median is 4. We see little variation among different age groups of women; women between the age of 15 and 19 have a nearly identical WDDS to women 45 to 49 years old. However, more educated women have higher WDDSs; women with no education score 3.32 on average, while their counterparts who have achieved secondary or more education score 3.93. While the mean WDDS for households with both male and female adults is unsurprisingly the highest relative to other household types, the mean for male adult only households is lower (3.06). The lack of adult female can be reflected in a less diversified diet for the non-adult (15-18) women in these households. Finally, as expected, we see households with moderate to severe hunger are associated with a much lower WDDS.

Table 6.2. Women's dietary diversity score

Characteristic	Mean [a]	Median	n[1]
Total (All women 15-49)	3.68	4	6,669
Age			
15-19	3.66	3	1,664
20-24	3.69	4	1,153
25-29	3.72	4	890
30-34	3.68	3	849
35-39	3.70	4	846
40-44	3.63	3	675
45-49	3.68	4	592
Educational attainment[a]			
No education	3.32	3	922
Less than primary	3.55	3	1,937
Primary	3.84	4	3,558
Secondary or more	3.93	4	272
Gendered household type			
Male and female adults	3.70	4	6,093
Female adult(s) only	3.55	3	535
Male adult(s) only	3.06	3	41
Household size			
Small (1-5 members)	3.72	4	3,057
Medium (6-10 members)	3.65	4	3,205
Large (11+ members)	3.58	4	407
Household hunger[a]			
Little to no hunger	3.72	4	6,435
Moderate or severe hunger	2.85	3	193

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between mean women's dietary diversity score and individual/household characteristics. For example, a test was done between mean women's dietary diversity score and age. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: ZOI interim survey, Honduras 2015

Women's Minimum Dietary Diversity

The Feed the Future Women's Minimum Dietary Diversity (MDD-W) indicator is a new measure introduced in the interim assessments and uses the following 10 food groups: (1) grains, roots, and tubers; (2) legumes and beans; (3) nuts and seeds; (4) dairy products; (5) eggs; (6) flesh foods, including organ meat and miscellaneous small animal protein; (7) vitamin A-rich dark green leafy vegetables; (8) other vitamin A-rich vegetables and fruits; (9) other fruits; and (10) other vegetables.[30] Achievement of MDD-W is defined as having consumed foods from five

[30] The differences between the nine food groups used for the WDDS (Table 6.2), which is the current standard Feed the Future indicator, and the 10 food groups used for the new MDD-W measure (Table 6.3) include: (1)

of the 10 food groups in the past 24 hours. Thus this indicator is a dichotomous variable, and the measure is reported as the percentage of women who achieve a minimum dietary diversity.[31]

Table 6.3 shows the percentage of all women of reproductive age in the ZOI who have achieved the minimum dietary diversity threshold by individual-level and household-level characteristics. Individual-level characteristics include women's age groups and educational attainment. Household-level characteristics include categories of gendered household type, household size, and household hunger.

Over half of all women in the ZOI achieve minimum dietary diversity. We again see little variation among age groups, and a positive correlation between education and achieving a minimally diverse diet. The percentage of women in households with male adults only that have a minimally diverse diet is small—only 15 percent pass the threshold, while three times that number achieve minimal dietary diversity in households that only have female adults; the sample size of women living in female-only households is small. As the differences in poverty rates among households with only male or only female adults is not large, allocation of food within the household may be very unequal to the detriment of adolescent girls. In households with moderate or severe hunger, only 25 percent of women have adequate minimum dietary diversity.

legumes and beans are separated from nuts and seeds; (2) meat (flesh foods) and organ meat are combined into one group; and (3) other fruits and other vegetables are separated into two groups.

[31] For more information, refer to Volume 11: Guidance on the First Interim Assessment of the Feed the Future Zone of Influence Population-Level Indicators (October 2014), Section 4.2, available for download at http://www.feedthefuture.gov/sites/default/files/resource/files/ftf_guidanceseries_vol11_interimassessment_oct2014.pdf. Because of some food groups were agglomerated in one category in the survey, we are not able to separate some of the 10 foods. To resolve this we constructed an 8 food group score and 10 food group score by doubling the score assigned to categories that contained two food groups. The results using both scores are qualitatively the same and we present the 10 food group version of the score to be consistent with FTF reporting guidelines.

Table 6.3. Women's minimum dietary diversity

Characteristic	Percent [a]	n[1]
Total (All Women 15-49)	0.513	6,669
Age		
15-19	0.503	1,664
20-24	0.520	1,153
25-29	0.539	890
30-34	0.493	849
35-39	0.522	846
40-44	0.497	675
45-49	0.528	592
Educational attainment [a]		
No education	0.397	922
Less than primary	0.473	1,937
Primary	0.565	3,558
Secondary or more	0.585	272
Gendered household type		
Male and female adults	0.520	6,093
Female adult(s) only	0.471	535
Male adult(s) only	0.151	41
Household size		
Small (1-5 members)	0.520	3,057
Medium (6-10 members)	0.505	3,205
Large (11+ members)	0.526	407
Household hunger [a]		
Little to no hunger	0.526	6,435
Moderate or severe hunger	0.252	193

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between women's minimum dietary diversity and individual/household characteristics. For example, a test was done between women's minimum dietary diversity and age. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: ZOI interim survey, Honduras 2015

Table 6.4 shows the percentages of women age 15-49 years who consume different food groups by dietary diversity achievement status. The percentages of all women who consume each of the 10 food groups is shown (the *Overall* column), as well as the percentages among women who achieve a minimum dietary diversity and among women who do not achieve a minimum dietary diversity.

We find that the most consumed food groups are the staples (led by corn, rice and beans) and eggs. Both women who do achieve and who do not achieve a minimally diverse diet consume grains and legumes. The women that achieve minimum dietary diversity consume meat in a higher proportion (44.3 percent) than those who do not (9.5 percent). The proportion of women who achieve a minimally diverse diet consume eggs and vitamin-A rich fruits and vegetables is also larger.

Table 6.4. Consumption of foods by women's minimum dietary diversity status

Category	Percent of women according to achievement of a minimum dietary diversity[a]		
	Overall	Achieving	Not achieving
Women consuming a specific food group			
Grains, roots and tubers [a]	0.945	0.986	0.903
Legumes and beans/ Nuts and seeds [a]	0.877	0.920	0.833
Dairy products [a]	0.432	0.678	0.179
Meat and organ meats [a]	0.272	0.443	0.095
Eggs [a]	0.659	0.829	0.484
Vitamin A-rich dark green leafy vegetables [a]	0.070	0.119	0.018
Other Vitamin A-rich vegetables and fruits [a]	0.252	0.442	0.056
Other fruits/vegetables [a]	0.166	0.271	0.058
n	**6,669**	**3,318**	**3,351**

[a] Significance tests were performed for associations between women's achievement of minimum dietary diversity and consumption of a specific food group. For example, a test was done between women's achievement of minimum dietary diversity and consumption of grains, roots and tubers. When an association is found to be significant ($p<0.05$), a superscript is noted next to the food group.

Source: ZOI interim survey, Honduras 2015

6.2.2 Infant and Young Child Feeding

This section presents young children's dietary intake measures, including the Feed the Future indicators of exclusive breastfeeding among children 0-5 months and the minimum acceptable diet (MAD) indicator among children 6-23 months.

Exclusive Breastfeeding

Exclusive breastfeeding provides children with significant health and nutrition benefits, including protection from gastrointestinal infections and reduced risk of mortality due to infectious disease. Exclusive breastfeeding means the child received breast milk (including expressed

breast milk or breast milk from a wet nurse) and may have received oral rehydration salts, vitamins, minerals, and/or medicines, but did not receive any other food or liquid. This indicator measures the percentage of children 0-5 months of age who were exclusively breastfed during the day preceding the survey.

Table 6.5 shows the prevalence of exclusive breastfeeding among children 0-5 months in the ZOI. Estimates are shown for all children, as well as by children's sex and by educational attainment of the child's mother. The mother's educational categories include no education, less than primary, completed primary, and completed secondary or more.

Sixty-five percent of children under the age of 6 months are exclusively breastfed; the proportion of girls and boys who are breastfed is very nearly equal. We find that children whose mothers have no education are more likely to be breastfed. This may be because slightly more educated women are active in the workforce and are unable to breastfeed their children exclusively or less educated mothers are poorer and see breast feeding as an economical option given its benefits, but it may also be due to other factors (lack of knowledge of the benefits of breastfeeding across different groups, inability, or unwillingness).

Table 6.5. Prevalence of exclusive breastfeeding among children under 6 months

Characteristic	Percent[a]	n[1]
Total (All children under 6 months)	0.655	288
Child sex		
Male	0.670	142
Female	0.639	146
Mother's educational attainment		
No education	0.756	35
Less than primary	0.676	92
Primary	0.624	148
Secondary or more^	n/a	n/a

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between exclusive breastfeeding and child/caregiver characteristics. For example, a test was done between exclusive breastfeeding and the child's sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: ZOI interim survey, Honduras 2015

Minimum Acceptable Diet

The prevalence of children 6-23 months receiving a minimal acceptable diet (MAD) measures the proportion of young children who receive a MAD apart from breastfeeding. This composite indicator measures both the minimum feeding frequency and minimum dietary diversity based on the mother's reports of the frequency with which the child was fed in the past 24 hours, and

what foods were consumed during the past 24 hours. Tabulation of the indicator requires data on children's age in months, breastfeeding status, dietary diversity, number of semi-solid or solid feeds, and number of milk feeds.

Table 6.6 presents the Feed the Future MAD indicator for children in the ZOI. Estimates are shown for all children, as well as by characteristics of the children, mother, and household. Children's characteristics include children's sex and age group. Mothers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

It is recommended that children aged 6-23 months that are breastfed are fed at least with four different food groups and are fed with a minimum daily frequency, depending on your age. Children that are not breastfed aged 6-23 months should consume milk or dairy products and four food groups at least four times a day. The results indicate that these recommendations have been implemented in very few children; only 16.9 percent of the 952 children sampled in the ZOI receive a minimum acceptable diet. We see a 3 percentage point difference between boys and girls which is not statistically significant. In addition, we see that children between 12 and 17 months are more likely to consume a sufficiently varied diet than children 6 to 11 months or 18 to 23 months of age.

Table 6.6. Percentage of children age 6-23 months who receive a minimum acceptable diet

Characteristic	Percent[a]	n[1]
Total (All children 6-23 months)	0.169	952
Child sex		
Male	0.164	473
Female	0.175	479
Child age		
6-11 months	0.138	321
12-17 months	0.200	587
18-23 months	0.146	279
Mother's educational attainment[2]		
No education	0.093	139
Less than primary	0.181	274
Primary	0.181	478
Secondary or more^	n/a	n/a
Gendered household type		
Male and female adults	0.172	875
Female adult(s) only	0.155	65
Male adult(s) only	n/a	n/a
Household size		
Small (1-5 members)	0.181	392
Medium (6-10 members)	0.144	464
Large (11+ members)	0.249	96
Household hunger[a]		
Little to no hunger	0.174	921
Moderate or severe hunger^	n/a	n/a

^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a] Significance tests were performed for associations between children receiving a minimum acceptable diet and child/caregiver/household characteristics. For example, a test was done between children receiving a minimum acceptable diet and child's sex. When an association is found to be significant ($p<0.05$), the superscript is noted next to the characteristic.

Source: ZOI interim survey, Honduras 2015

Table 6.7 presents the percentage of children achieving the MAD components (e.g., minimum meal frequency, minimum dietary diversity) and consuming each of the food groups of the minimum dietary diversity indicator for children. Estimates are shown for all children, as well as

by specific age groups, and presented separately for breastfed children and non-breastfed children[32].

Table 6.7. Components of a minimum acceptable diet among children age 6-23 months

MAD components and food groups	Percent			
	All children[a]	By child age (in months)		
		6 to 11	12 to 17	18 to 23
Breastfed children				
Achieving minimum meal frequency[a]	0.777	0.763	0.820	0.808
Achieving minimum dietary diversity[a]	0.169	0.099	0.216	0.218
Consuming:				
Grains, roots, and tubers	0.859	0.818	0.927	0.904
Legumes and nuts	0.654	0.552	0.735	0.747
Dairy products	0.203	0.161	0.240	0.216
Flesh foods	0.118	0.064	0.149	0.134
Eggs	0.452	0.379	0.529	0.563
Vitamin A-rich fruits and vegetables	0.189	0.135	0.216	0.215
Other fruits and vegetables	0.154	0.137	0.171	0.176
n	**690**	**268**	**404**	**137**
Non-breastfed children				
Achieving minimum meal frequency[a]	0.443	0.544	0.412	0.424
Achieving minimum milk feeding frequency	0.333	0.491	0.274	0.287
Achieving minimum dietary diversity[a]	0.439	0.343	0.478	0.495
Consuming:				
Grains, roots, and tubers	0.869	0.765	0.888	0.959
Legumes and nuts	0.707	0.594	0.722	0.812
Dairy products	0.212	0.085	0.225	0.249
Flesh foods	0.134	0.110	0.128	0.154
Eggs	0.552	0.388	0.618	0.639
Vitamin A-rich fruits and vegetables	0.183	0.194	0.185	0.207
Other fruits and vegetables	0.218	0.169	0.246	0.267
n	**262**	**53**	**183**	**142**

[a] Significance tests were performed for associations between MAD components/food groups for breastfed and non-breastfed children. For example, a test was done for achieving minimum meal frequency and breastfeeding status. When an association is found to be significant ($p<0.05$), a superscript is noted next to the breastfed and non-breastfed row headings corresponding to the MAD component/food group.

Source: ZOI interim survey, Honduras 2015

[32] For non-breastfed children, the dietary diversity component of the MAD indicator is not the same as the Minimum dietary diversity indicator. The difference is that a 6 food group score (instead of a 7 food group score) that **excludes dairy products** is used for non-breastfed children for this indicator.

We find that while 77.7 percent of nursing children in the ZOI have at least the minimum recommended number of meals per day, only 16.9 percent achieve the minimum dietary diversity. Among all nursing children, 85.9 percent consume grains, roots and tubers and 65.4 percent consume legumes. However, we see very few children consume fruits and vegetables rich in vitamin A—proportions vary between 15 and 22 percent.

When we disaggregate consumption patterns among different age cohorts who are still nursing, we find that more children in older cohorts (ages 12 to 17 or 18 to 23 months, compared to those aged 6 to 11 months) consume a minimally diverse diet. We see that in areas where average consumption of a food group is low (meat, dairy, vitamin A rich fruits and vegetables), consumption by older cohorts outpaces consumption by 6 to 11 month olds suggesting the introduction of different food groups as they get older. We see no considerable differences in the number of feedings between different age cohorts, so low consumption of certain food groups among younger children may be substituted with nursing.

We see that non-nursing children are less likely (44.3 percent) to achieve minimum meal frequency. Only a third non-nursing children achieve a minimum two milk feedings, and 43.9 percent consume a minimally diverse diet compare to 16.9 of nursing children (consuming 4 or more food groups, excluding dairy for nursing children). We see similar rates of consumption of different food groups between breastfed and non-breastfed children, though slightly more non-nursing children consume legumes, eggs, meat, and vitamin A rich fruits and vegetables.

One key difference between nursing and non-nursing children is that children age 6 to 11 months who are nursing are more likely to achieve minimal meal frequency (76.3 percent) but are less likely to consume a minimally diverse diet (9.9 percent). This is the opposite of our finding among children who are currently not nursing who have lower feeding frequency and higher dietary diversity. This may be due to two key factors: first, there are few differences between consumption of different food groups among older cohorts that do and do not consume breastmilk, which suggests that older cohorts achieve minimal meal frequency and dietary diversity by supplementing food with nursing. Secondly, there are few younger children who do not breastfeed, and as such are likely different than their counterparts who continue to nurse.

Our results suggest that the low MAD in the ZOI is driven by breastfed children who are not being introduced to different food groups as they age and by non-breastfed children that while having a more diverse diet, are not feeding frequently enough and including milk in their feedings.

7. Nutritional Status of Women and Children

Anthropometric data are a useful, simple and practical way of describing the overall nutritional status of population groups. Their usefulness stems from anthropometry's close correlation with the multiple dimensions of individual health and development and their socio-economic and environmental determinants. In addition to the dietary information discussed above, these data are a useful way to design appropriate dietary interventions for targeted groups.

This section presents findings related to the Feed the Future indicators of women's underweight and children's anthropometry (stunting, wasting, and underweight).

7.1 Body Mass Index and Anemia of Women Age 15-49 Years

Table 7.1 presents women's mean Body Mass Index (BMI) as well as the BMI categories of underweight (BMI < 18.5), normal weight (18.5 ≤ BMI < 25.0), overweight (25.0 ≤ BMI < 30.0), and obese (BMI ≥ 30.0). Estimates are disaggregated by individual-level and household-level characteristics. Individual characteristics include age and educational attainment. Household characteristics include gendered household type, household size, and household hunger.

We see that the majority of women in our sample (59 percent) have normal weight; the mean BMI is 23.3, which falls in the normal range of 18.5 to 24. We see that 10.7 percent of women surveyed are underweight, and 22.7 percent are overweight; the proportion of overweight women increases with age, while the proportion of underweight women tends to decrease with age. A quarter of women aged 15 to 19 are underweight, a proportion which is halved among women age 20 to 24. Similarly, only 6 percent of women ages 15 to 19 are overweight, a proportion which more than doubles among women ages 20 to 24. Obesity in women 15-49 is estimated at 7.5 percent. **Figure 7.1** shows the geographic distribution of underweight women in the ZOI.

Table 7.1. Prevalence of underweight, normal weight, overweight, and obesity in women

Characteristic	Mean BMI[a]	Body Mass Index (BMI) category (percent)				n[1]
		Under-weight[b]	Normal weight[c]	Over-weight[d]	Obese[e]	
Total (All women age 15-49)	23.30	0.107	0.590	0.227	0.075	4,474
Age[a,b,c,d,e]						
15-19	20.70	0.25	0.68	0.06	0.01	991
20-24	22.18	0.12	0.71	0.14	0.03	696
25-29	23.51	0.07	0.59	0.27	0.06	612
30-34	24.59	0.04	0.57	0.25	0.13	587
35-39	24.54	0.06	0.50	0.35	0.10	641
40-44	25.14	0.06	0.48	0.31	0.15	509
45-49	24.59	0.05	0.50	0.35	0.10	438
Educational attainment[a, b,d]						
No education	23.38	0.10	0.59	0.25	0.06	639
Less than primary	23.79	0.07	0.58	0.27	0.08	1,422
Primary	22.97	0.14	0.59	0.20	0.07	2,301
Secondary or more	22.93	0.11	0.66	0.13	0.09	122
Gendered household type						
Male and female adults	23.30	0.11	0.59	0.23	0.07	4,131
Female adult(s) only	23.57	0.09	0.59	0.23	0.09	316
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a	n/a
Household size[a,c,d,e]						
Small (1-5 members)	23.75	0.09	0.57	0.26	0.08	2,047
Medium (6-10 members)	22.92	0.12	0.60	0.20	0.07	2,182
Large (11+ members)	22.68	0.11	0.68	0.15	0.06	245
Household hunger[a,d]						
Little to no hunger	23.37	0.10	0.59	0.23	0.08	4,309
Moderate or severe hunger	21.92	0.20	0.59	0.15	0.06	132

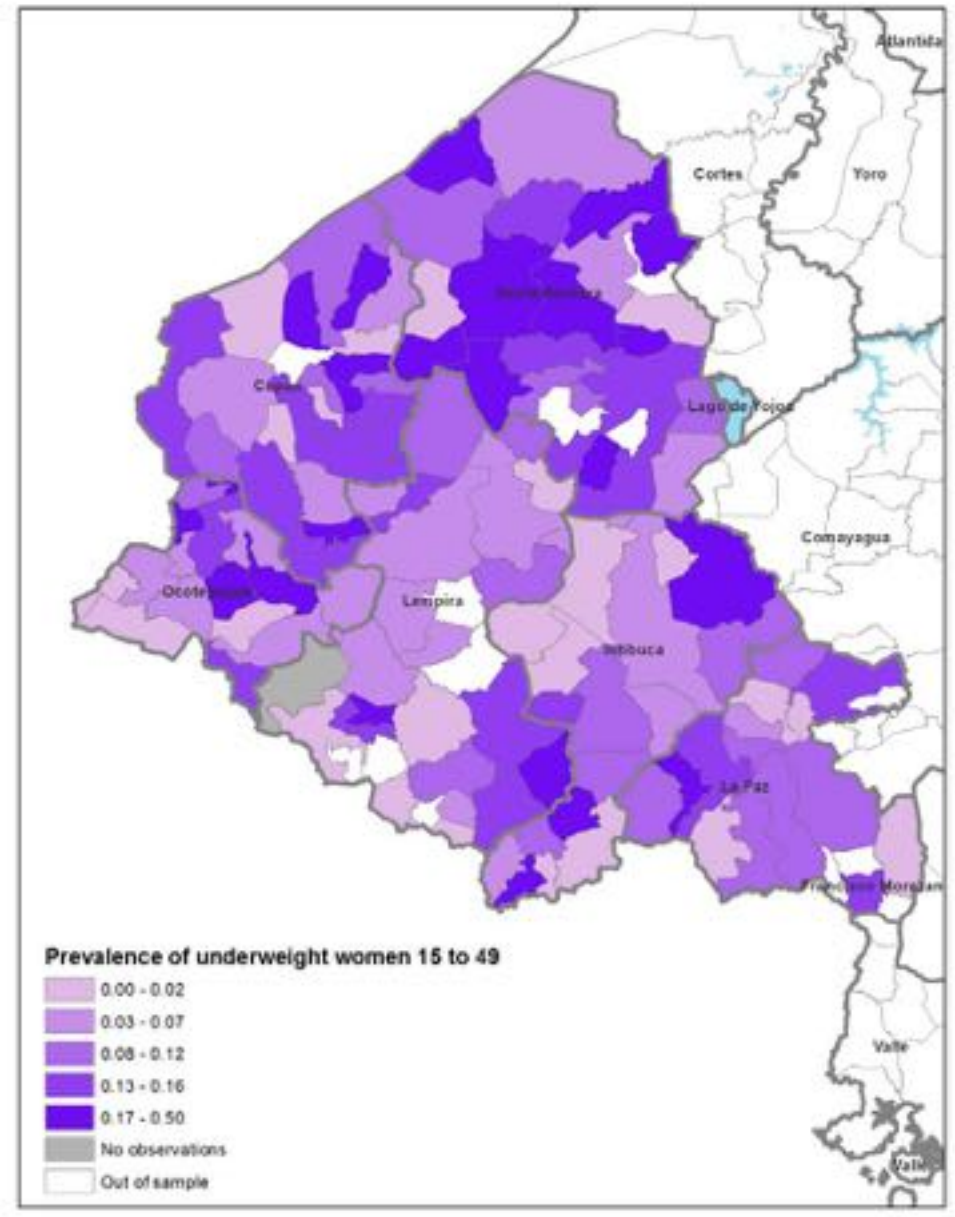
^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between BMI and the woman's age. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Figure 7.1. Prevalence of Underweight Women, 15 to 49 years of age



Source: ZOI interim survey, Honduras 2015

We conducted anemia testing using a HemoCue photometer (Hb201+). Anemia is defined as a reduction in the normal number of red blood cells or a decrease in the concentration of hemoglobin in the blood. Symptoms of anemia include pallor, fatigue and weakness, shortness of breath and heart problems. Non-pregnant women who had a hemoglobin levels below 12 g/dl are classified as anemic. Estimates are shown for all non-pregnant women age 15-49, as well as disaggregated by individual-level and household-level characteristics. Individual characteristics

include age and educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Table 7.2 shows the estimates for the prevalence of anemia in non-pregnant women of reproductive age is 24.7 percent in the ZOI with an average measure of hemoglobin in the blood of 12.7 g/dl, just above the mild anemia cutoff. We note that these most of the prevalence are cases of mild anemia (between 10-11.9 g/dl). The prevalence of anemia seems higher among women with no education and that live in households with moderate of severe hunger; however these differences are not significant. For pregnant women, **Table 7.3**, the prevalence rates are higher, with 29.4 percent of pregnant women having anemia at the time of the survey; however the sample for these estimates is much smaller. **Figure 7.2** shows the geographic distribution of anemia among women in the ZOI.

Table 7.2. Prevalence of anemia in non-pregnant women

Characteristic	% Anemia[a]	% Severe Anemia	Moderate Anemia	Hemoglobine (g/dL) [b]	n[2]
Total (All Women 15-49) - Non-Pregnant	0.247	0.00	0.020	12.7	4,114
Age					
15-19	0.26	0.00	0.021	12.7	914
20-24	0.22	0.00	0.007	12.9	638
25-29	0.21	0.01	0.024	12.7	553
30-34	0.24	0.00	0.016	12.7	534
35-39	0.26	0.00	0.019	12.6	587
40-44	0.29	0.00	0.030	12.5	477
45-49	0.24	0.01	0.029	12.7	411
Educational attainment					
No education	0.28	0.00	0.042	12.6	577
Less than primary	0.25	0.00	0.013	12.7	1,304
Primary	0.24	0.00	0.019	12.7	2,126
Secondary or more	0.20	0.00	0.009	12.7	117
Gendered household type					
Male and female adults	0.25	0.00	0.019	12.7	3,808
Female adult(s) only	0.23	0.01	0.038	12.7	280
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a
Household size					
Small (1-5 members)	0.25	0.00	0.026	12.7	1,890
Medium (6-10 members)	0.25	0.00	0.016	12.7	1,997
Large (11+ members)	0.21	0.00	0.012	12.8	227
Household hunger					
Little to no hunger	0.25	0.00	0.020	12.7	3,970
Moderate or severe hunger	0.29	0.02	0.031	12.4	115

^ Results not statistically reliable, n<30.

1 Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

2 Severe anemia refers to Hemoglobin level less than 7g/dl, moderate to Hemoglobin level less than 7-9.9 g/dl

[a-b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between anemia status and the woman's age. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Table 7.3. Prevalence of anemia in pregnant women

Characteristic	% Anemia[a]	% Severe Anemia	Moderate Anemia	Hemoglobin (g/dL) [b]	n[2]
Total (All Women 15-49) - Pregnant	0.294	0.00	0.112	11.7	223
Age					
15-19	0.38	0.00	0.176	11.5	52
20-24	0.28	0.00	0.110	11.5	57
25-29	0.35	0.00	0.097	11.7	41
30-34	0.12	0.00	0.046	12.5	39
35-39^	n/a	n/a	n/a	n/a	n/a
40-44^	n/a	n/a	n/a	n/a	n/a
45-49^	n/a	n/a	n/a	n/a	n/a
Educational attainment					
No education	0.38	0.00	0.152	11.4	38
Less than primary	0.25	0.00	0.046	11.9	66
Primary	0.32	0.00	0.150	11.6	116
Secondary or more^	n/a	n/a	n/a	n/a	n/a
Gendered household type					
Male and female adults	0.28	0.00	0.110	11.7	208
Female adult(s) only^	n/a	n/a	n/a	n/a	n/a
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a
Household size					
Small (1-5 members)	0.25	0.00	0.045	11.9	128
Medium (6-10 members)	0.31	0.00	0.236	11.5	81
Large (11+ members)^	n/a	n/a	n/a	n/a	n/a
Household hunger					
Little to no hunger	0.28	0.00	0.117	11.7	216
Moderate or severe hunger^	n/a	n/a	n/a	n/a	n/a

^ Results not statistically reliable, n<30.

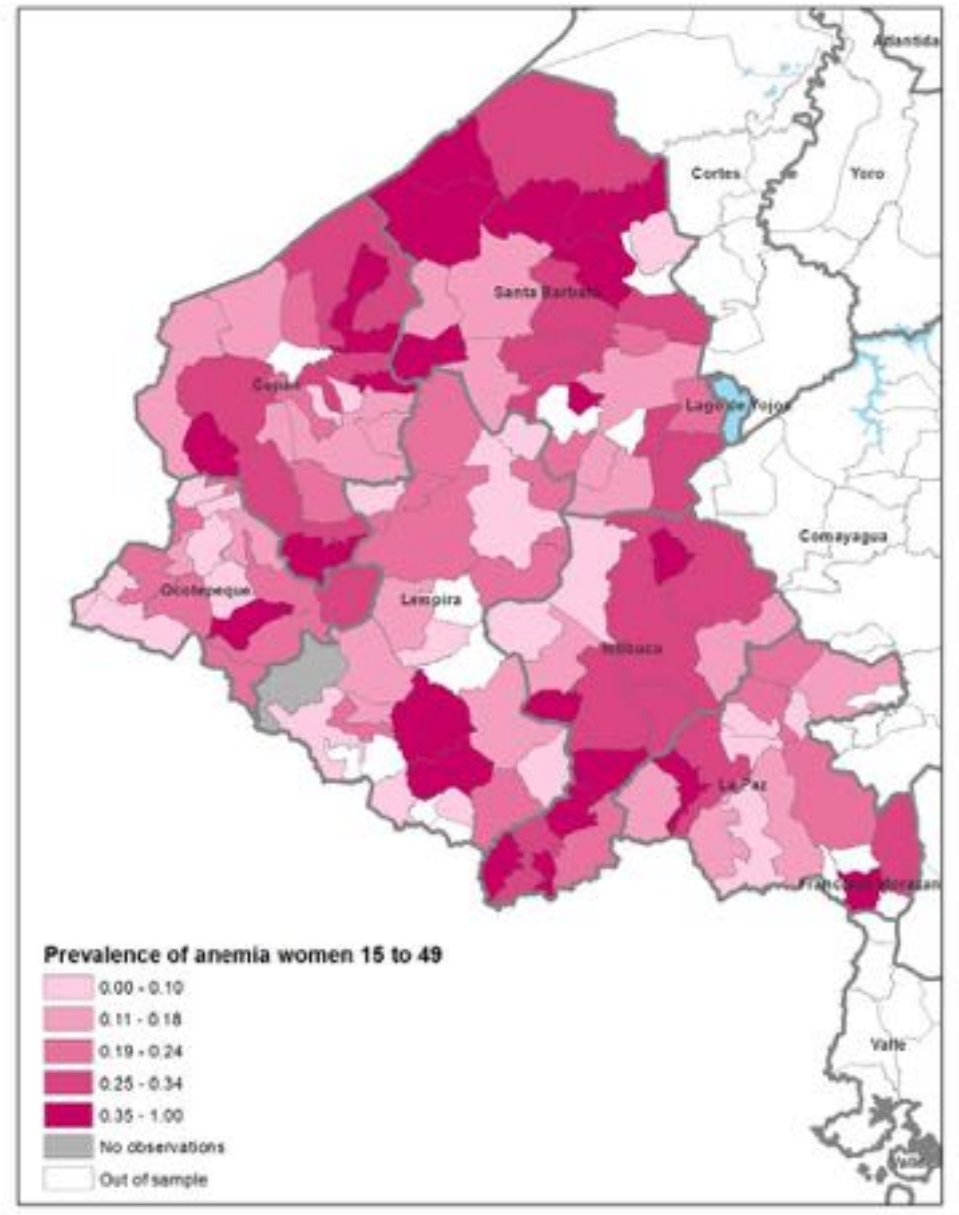
1 Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

2 Severe anemia refers to Hemoglobin level less than 7g/dl, moderate to Hemoglobin level less than 7-9.9 g/dl

[a-b] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between anemia status and the woman's age. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Figure 7.2. Prevalence of Anemia among Women 15 to 49 (Pregnant and non-pregnant)



Source: ZOI interim survey, Honduras 2015

7.2 Stunting, Wasting, Underweight and Anemia among Children Under 5 Years

The standard indices of physical growth for children are height-for-age, weight-for-height, and weight-for-age. These indices are related to different aspects of nutritional status.

We express the child growth survey results using Z-scores and present results on the cut-off-based prevalence and summary statistics of the Z-scores: mean, standard deviation. These estimates provide different insights into the nutritional status of children. The prevalence measures (stunting, wasting, underweight) the proportion of children that when compare to their reference population fall on the extremes of the distribution and classify children as healthy or unhealthy.

A child who is below minus two standard deviations (-2 SD) from the median of a reference population in terms of height-for-age is considered short for his/her age or stunted. Stunting reflects the cumulative effect of chronic malnutrition or long term insufficient nutrient intake. A child who is below minus two standard deviations (-2 SD) from the median of a reference population in terms of weight-for-height is considered too thin for his/her height, or wasted. Wasting is a condition reflecting acute or recent nutritional deficit or severe food shortages. Weight-for-age is a composite index of stunting and wasting and is a good indicator to monitor nutritional status over time. A child who is below minus two standard deviations (-2 SD) from the median of a reference population in terms of weight-for-age is considered too thin for his/her age, or underweight. This section reports on these three anthropometric measurements of under-nutrition among children under 5 years in the ZOI.

The mean Z-score describes the nutritional status of the entire population directly. A mean Z-score significantly lower than zero means that the entire distribution has shifted downward with respect of the distribution of the reference population, suggesting that most, if not all, individuals have been affected. The mean Z-score can be used as an index of severity for health and nutrition problems and increased awareness that many more children can benefit even if they are not classified as malnourished with the cutoff measure.

The observed SD value of the Z-score distribution can be used to assess data quality. With accurate age assessment and anthropometric measurements, the SDs of the observed height-for-age, weight-for-age, and weight-for-height Z-score distributions should be relatively constant and close to the expected value of 1.0 for the reference distribution. Any standard deviation of the Z-scores above 1.3 suggests inaccurate data due to measurement error or incorrect age reporting[33].

[33] See the WHO Global Database on Child Growth and Malnutrition for an extended discussion of the cut-off points and summary statistics. http://www.who.int/nutgrowthdb/about/introduction/en/index5.html

The data used in the analysis excludes observations identified as outliers, or observations that are considered to be "biologically implausible values (BIVs)". It has become common practice to use z-scores to define which observations are beyond the range of what one would normally expect to find in a population. Typically these outliers are the result of data entry errors or measurement error, rather than from true extreme growth[34].

We used a fixed exclusion range and exclude observations with:

- Height-for-age: <-5.0 and >+3.0
- Weight-for-age: <-5.0 and >+5.0
- Weight-for-height: <-4.0 and >+5.0

To homogenize the sample of children included in the analysis, children that have outliers in any of the measures are excluded from the analysis. After excluding outliers, the analysis sample consists of 2,130 children under the age of 5.

7.2.1 Stunting (Height-for-Age)

Stunting is an indicator of linear growth retardation, most often due to a prolonged inadequate diet and poor health. Reducing the prevalence of stunting among children, particularly age 0-23 months, is important because linear growth deficits accrued early in life are associated with cognitive impairments, poor educational performance, and decreased work productivity as adults (Black et al. 2008, Victora *et al.* 2008). Stunting is a height-for-age measurement that reflects chronic under-nutrition. This indicator measures the percentage of children 0-59 months who are stunted, as defined by a height-for-age Z-score more than two standard deviations (SD) below the median of the 2006 WHO Child Growth Standard (<-2SD).[35] The stunting measures presented below include the Feed the Future stunting indicator of moderate or severe stunting combined (<-2SD) as well as the indicator for severe stunting (<-3SD). Mean Z-scores are also presented.

Table 7.4 shows the prevalence of stunting, severe stunting, mean and SD of Z-scores for children under 5 years in the ZOI. Estimates are presented for all children and by child, caregiver, and household characteristics. Children's characteristics include sex and age. Mothers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Stunting is prevalent in the ZOI; we estimate that 25.3 percent of children in the ZOI are stunted, and 8.1 percent are severely stunted. We find that the mean height-for-age z-score

[34] http://www.cdc.gov/nccdphp/dnpa/growthcharts/resources/biv-cutoffs.pdf
[35] WHO. (2006).

among children in the ZOI is negative, and continues to be for various disaggregations of the data; indicating a downward shift of the distribution of Z-scores when compared to the reference population. As stunting measures malnutrition over time, it is not surprising that we find more children in older cohorts to be stunted; however, this does not indicate that younger cohorts are better nourished. Stunting falls as education of the caretaker increases, specifically severe stunting. Stunting seems most common in medium-sized households (6 to 10 members), and is lower in small and large households. We find that stunting is more common in households with moderate to severe hunger; however the difference is not precisely estimated. **Figure 7.3** shows the geographic distribution of stunting in the ZOI.

The estimates of the SD of the population is 1.41 and it is outside of the expected range for the height-for-age Z-score SD of 1.10 to 1.30. This indicates that there is over dispersion when compared to the reference population. The SD is larger for younger children and within the expected range, indicating that age misreporting is not likely to be driving the size of the SD[36].

[36] Note that this difference is not that large and that the age in months is not calculated manually by the enumerators but automatically by the electronic survey instrument after inquiring about the age and date of birth of children under 5.

Table 7.4. Stunting (height-for-age) among children under 5 years old

Characteristic	% Stunted (<-2 SD)[a]	% Severely stunted (<-3 SD)[b]	Mean Z-score[c]	SD Z-score	n[1]
Total (All children under 5 years)	0.253	0.081	-1.10	1.41	2,130
Child sex					
Male	0.267	0.081	-1.12	1.41	1,059
Female	0.240	0.080	-1.08	1.41	1,071
Child age[a, c]					
0-11 months	0.157	0.062	-0.56	1.55	365
12-23 months	0.262	0.091	-0.95	1.59	441
24-35 months	0.315	0.114	-1.22	1.54	506
36-47 months	0.263	0.070	-1.28	1.20	938
48-59 months	0.305	0.091	-1.42	1.20	472
Mothers' educational attainment[2, a, b, c]					
No education	0.415	0.164	-1.64	1.42	275
Less than primary	0.321	0.102	-1.35	1.42	702
Primary	0.168	0.047	-0.78	1.34	979
Secondary or more	0.192	0.000	-0.57	0.00	49
Gendered household type					
Male and female adults	0.251	0.079	-1.09	1.41	1,968
Female adult(s) only	0.280	0.087	-1.18	1.45	146
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a
Household size[b]					
Small (1-5 members)	0.235	0.063	-1.01	1.36	931
Medium (6-10 members)	0.277	0.096	-1.19	1.45	1,053
Large (11+ members)	0.212	0.095	-1.02	1.43	146
Household hunger					
Little to no hunger	0.248	0.078	-1.09	1.40	2,053
Moderate or severe hunger	0.395	0.142	-1.48	1.52	65

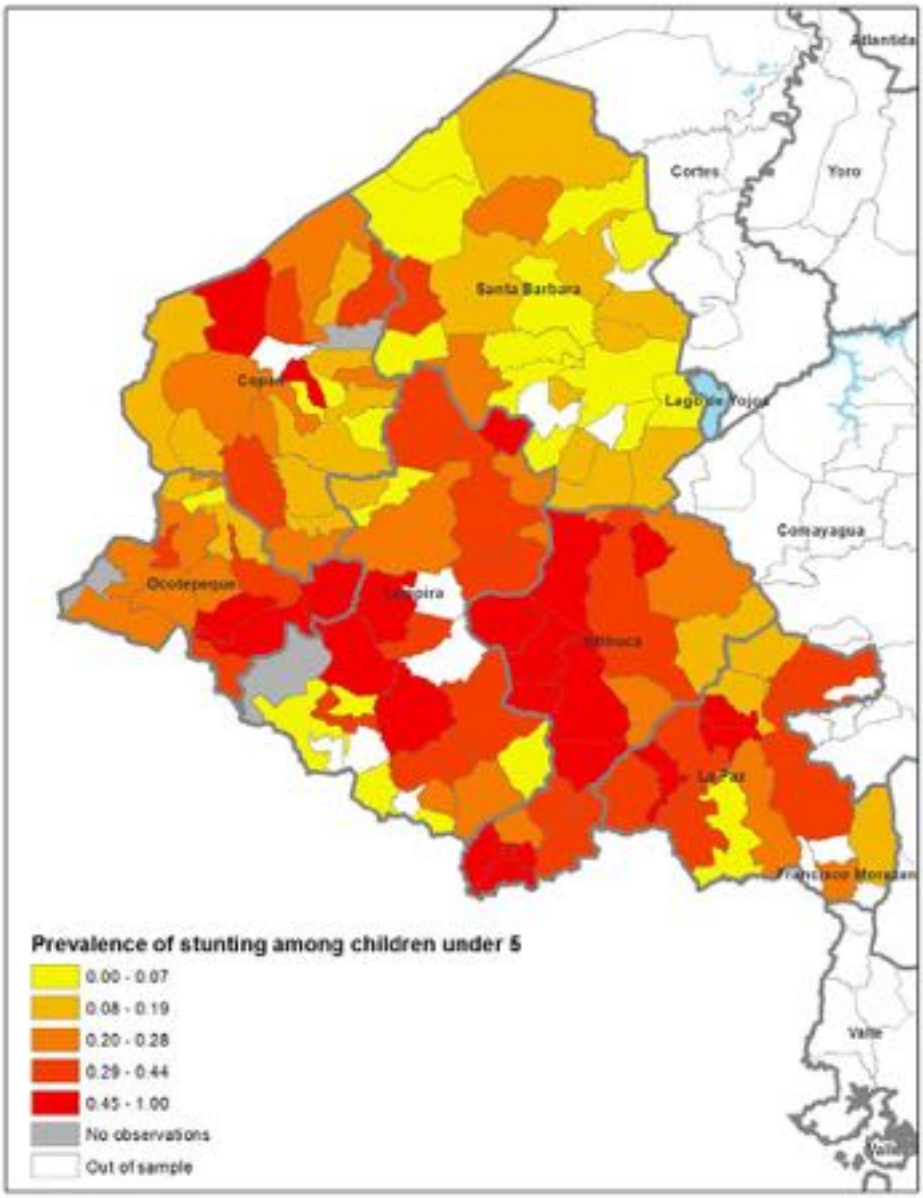
^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between percent stunted and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Figure 7.3. Prevalence of Stunting, Children 0 to 59 months



Source: ZOI interim survey, Honduras 2015

7.2.2 Wasting (Weight-for-Height)

Wasting is an indicator of acute malnutrition. Children who are wasted are too thin for their height and have a much greater risk of dying than children who are not wasted. This indicator measures the percentage of children 0-59 months who are acutely malnourished, as defined by a weight-for-height Z-score more than two SD below the median of the 2006 WHO Child Growth Standard. The wasting measures presented below include the Feed the Future wasting indicator of moderate or severe wasting combined (<-2SD) as well as the indicator for severe wasting (<-3SD), and the percentage of children who are overweight (>+2SD) and obese (>+3SD). Mean Z-scores are also presented.

Table 7.5 shows the prevalence of wasting, severe wasting, overweight, obesity, mean and SD of Z-scores for children under 5 years in the ZOI. Estimates are presented for all children and by child, mother, and household characteristics. Children's characteristics include sex and age. Mothers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

We find fewer wasted children than stunted children in the ZOI; 8.6 percent of children are wasted, and 2.2 percent are severely wasted. Male children are more likely to be overweight or obese than female children. There are no significant differences between rates of wasting among different age cohorts.

Different levels of mother's education are correlated with wasting, with children whose mothers have at only a primary education less likely to be wasted or severely wasted. As sample sizes are small, these differences are likely due to selection rather than causality. Households with only female adults have the lowest prevalence of wasting. This suggests there may be less equal food allocation in households with adult males. Larger households seem to have fewer wasted children, even though the prevalence among them is not precisely estimated. Wasting is positively correlated with the presence of hunger in a household. **Figure 7.4** shows the geographic distribution of wasting prevalence in the ZOI.

On the right side of the distribution we find, that 4.4 percent of children in the ZOI are overweight and 1.2 percent are obese. The strongest relationship with age is with the overweight indicator. Children under 12 months are more likely to be overweight or obese than children in other cohorts.

The mean weight for height score negative and small, indicating that scores are near to what we would expect in a normal "healthy" population. The estimates of the SD of the population is outside of the expected range for the height-for-age Z-score SD of 0.85 to 1.10. This indicates that there is over dispersion when compared to the reference population. The SD is larger for younger children and within the expected range, indicating that age misreporting is not likely to be driving the size of the SD.

Table 7.5. Wasting (weight-for-height) among children under 5 years old

Characteristic	% Wasted (<-2 SD) [a]	% Severely wasted (<-3 SD) [b]	% Overweight (> +2SD) [c]	% Obese (> +3SD) [d]	Mean Z-score [e]	SD Z-score	n [1]
Total (All children under 5 years)	0.086	0.022	0.044	0.013	-0.352	1.27	2,130
Child sex							
Male	0.081	0.024	0.052	0.018	-0.346	1.29	1,059
Female	0.091	0.020	0.036	0.009	-0.357	1.25	1,071
Child Age [c, d, e]							
0-11 months	0.063	0.038	0.108	0.031	0.110	1.51	365
12-23 months	0.081	0.008	0.039	0.010	-0.346	1.26	441
24-35 months	0.101	0.029	0.037	0.018	-0.464	1.21	506
36-47 months	0.087	0.016	0.027	0.007	-0.475	1.15	938
48-59 months	0.076	0.019	0.021	0.005	-0.445	1.12	472
Mother's Education [a, b, c, d, e]							
No education	0.108	0.017	0.037	0.019	-0.352	1.32	275
Less than primary	0.109	0.033	0.030	0.011	-0.505	1.25	702
Primary	0.072	0.015	0.051	0.011	-0.265	1.25	979
Secondary or more	0.078	0.030	0.140	0.093	0.138	0.00	49
Gendered Household Type [a, e]							
Male and female adults	0.090	0.023	0.039	0.011	-0.376	1.25	1,968
Female adult(s) only	0.038	0.008	0.092	0.043	-0.043	1.44	146
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Household Size							
Small (1-5 members)	0.089	0.026	0.053	0.018	-0.367	1.31	931
Medium (6-10 members)	0.088	0.020	0.033	0.007	-0.360	1.24	1,053
Large (11+ members)	0.039	0.000	0.048	0.030	-0.149	1.10	146
Household Hunger [b, c]							
Little to no hunger	0.084	0.023	0.045	0.014	-0.339	1.27	2,053
Moderate or severe hunger	0.156	0.000	0.011	0.010	-0.691	1.23	65

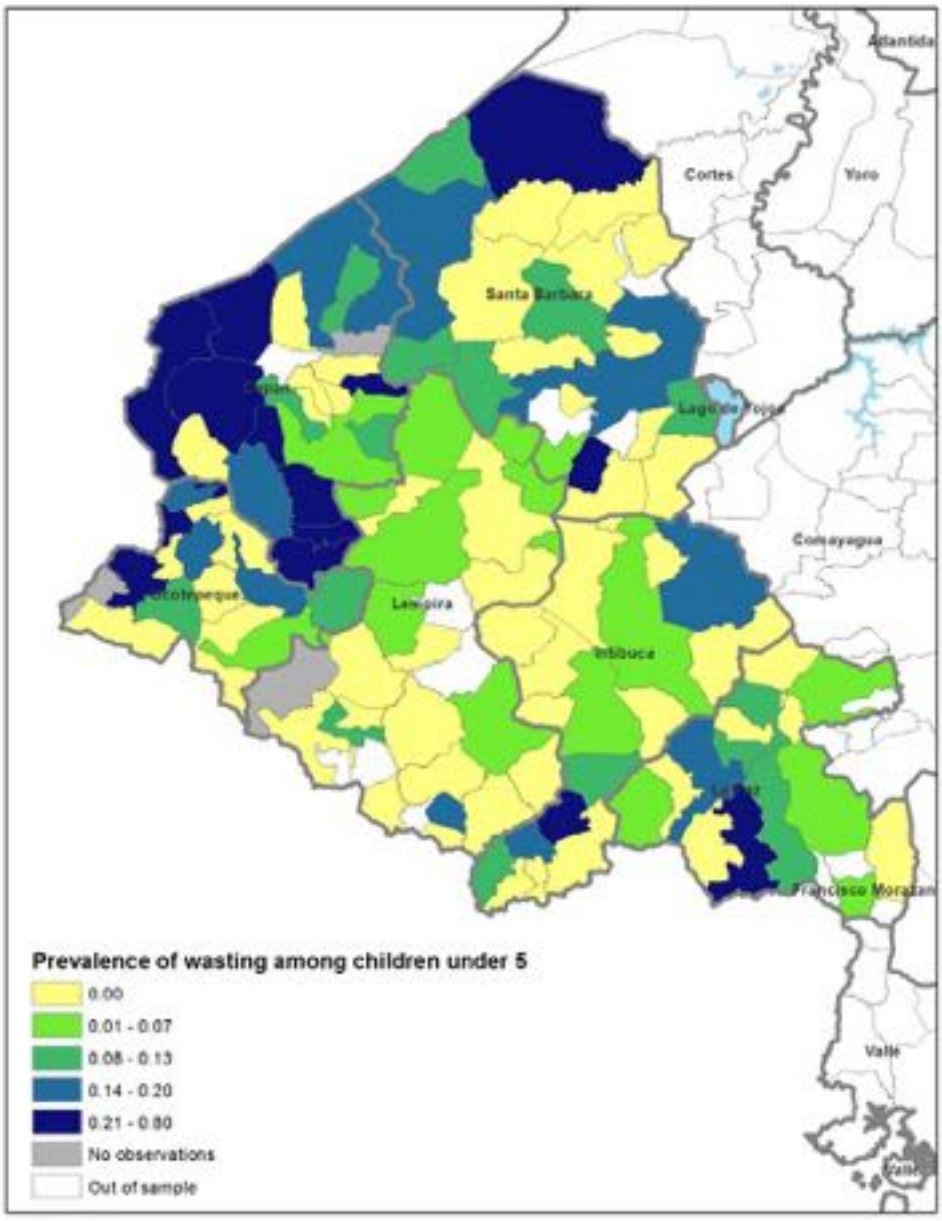
^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-e] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between the percent wasted and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Figure 7.4. Prevalence of Wasting, Children 0 to 59 months



Source: ZOI interim survey, Honduras 2015

7.2.3 Underweight (Weight-for-Age)

Underweight is a weight-for-age measurement and is a reflection of acute and/or chronic under-nutrition. This indicator measures the percentage of children 0-59 months who are underweight, as defined by a weight-for-age Z-score of more than two SD below the median of the 2006 WHO Child Growth Standard. The underweight measures presented below include the Feed the Future underweight indicator of moderate or severe underweight combined (<-2SD) as well as the indicator for severe underweight (<-3SD). Mean Z-scores are also presented.

The WHO Global Database on Child Growth and Malnutrition uses a Z-score cut-off point of <-2 SD to classify low weight-for-age, low height-for-age and low weight-for-height as moderate and severe undernutrition, and <-3 SD to define severe undernutrition. The cut-off point of >+2 SD classifies high weight-for-height as overweight in children.

Table 7.6 shows the prevalence of underweight, severe underweight, mean and SD of Z-scores for children under 5 years in the ZOI. Estimates are presented for all children and by child, mother, and household characteristics. Children's characteristics include sex and age. Mothers' characteristics include educational attainment. Household characteristics include gendered household type, household size, and household hunger.

Thirteen percent of children in the ZOI are underweight, and 2.9 percent are severely so. Children under a year are least likely to be underweight; though other cohorts are more likely to be underweight, there are few differences between the rates of underweight children between them. In addition, the Z-score decreases with age, meaning that older children are more severely underweight. Nearly a quarter of children whose mothers have no education are underweight; this fraction and decreases significantly as mothers' education increases. We do not find significant differences across household size in the underweight prevalence. As expected, the prevalence of underweight children is higher in households that have moderate to severe hunger. **Figure 7.5** shows the geographic distribution of underweight prevalence in the ZOI.

The mean weight for age score below zero and small, indicating that scores are near to what we would expect in a normal "healthy" population. The estimates of the SD of the population is within the expected range for the height-for-age Z-score SD of 1.00 to 1.20.

Table 7.6. Underweight (weight-for-age) among children under 5 years old

Characteristic	% Underweight (<-2 SD)[a]	% Severely underweight (<-3 SD)[b]	Mean Z-score[c]	SD Z-score	n[1]
Total (All children under 5 years)	0.131	0.029	-0.87	1.12	2,130
Child sex					
Male	0.131	0.031	-0.87	1.12	1,059
Female	0.132	0.026	-0.88	1.11	1,071
Child age[c]					
0-11 months	0.082	0.021	-0.32	1.17	365
12-23 months	0.130	0.017	-0.72	1.23	441
24-35 months	0.138	0.036	-0.99	1.11	506
36-47 months	0.141	0.036	-1.08	0.98	938
48-59 months	0.167	0.028	-1.16	0.92	472
Mother's educational attainment[2, a,b,c]					
No education	0.242	0.066	-1.20	1.17	275
Less than primary	0.166	0.034	-1.12	1.07	702
Primary	0.081	0.014	-0.62	1.06	979
Secondary or more	0.053	0.000	-0.19	0.00	49
Gendered household type					
Male and female adults	0.134	0.029	-0.88	1.11	1,968
Female adult(s) only	0.100	0.025	-0.71	1.25	146
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a
Household size					
Small (1-5 members)	0.132	0.021	-0.82	1.11	931
Medium (6-10 members)	0.139	0.039	-0.94	1.13	1,053
Large (11+ members)	0.060	0.008	-0.69	0.96	146
Household hunger[c]					
Little to no hunger	0.128	0.025	-0.85	1.10	2,053
Moderate or severe hunger	0.229	0.118	-1.33	1.29	65

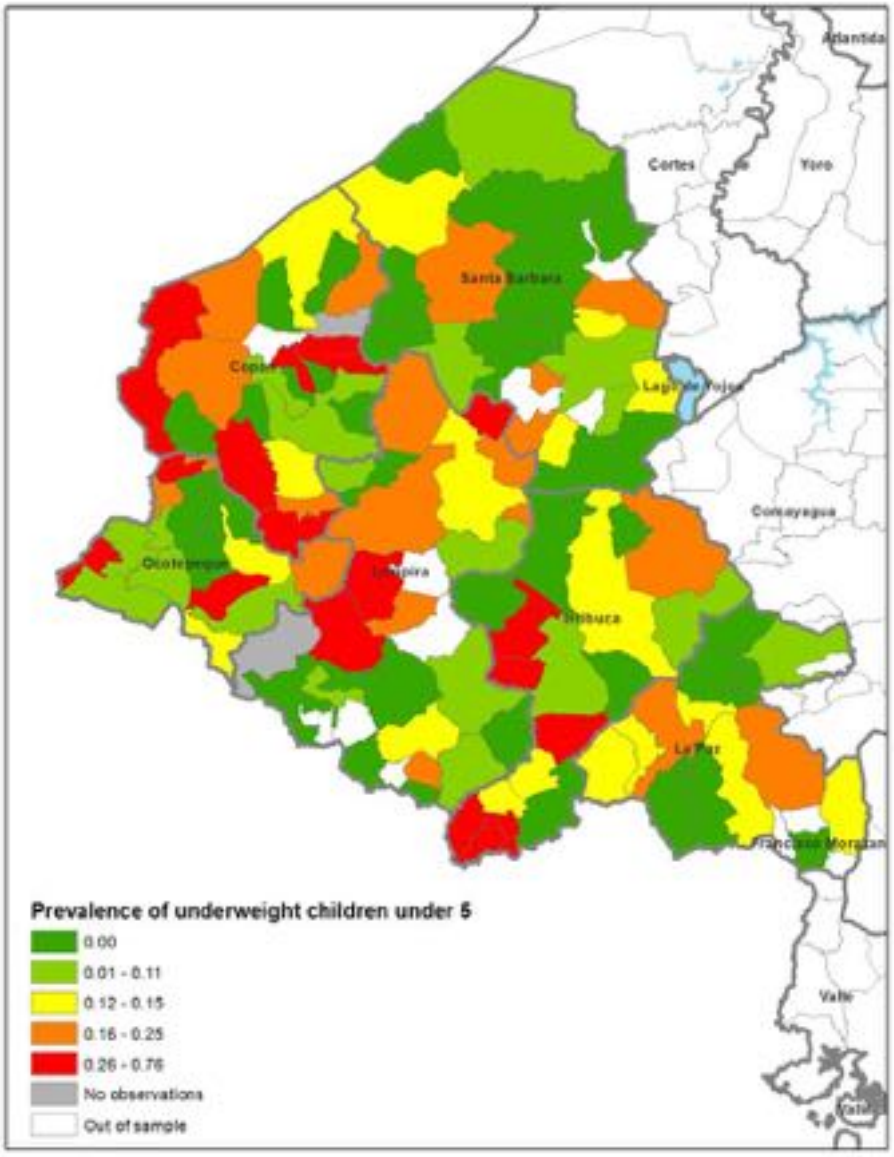
^ Results not statistically reliable, n<30.

[1] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

[a-c] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between the percent underweight and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Source: ZOI interim survey, Honduras 2015

Figure 7.5. Prevalence of Underweight Children 0 to 59 months



Source: ZOI interim survey, Honduras 2015

7.2.3 Anemia

For children between 6 to 59 months, we also tested the hemoglobin level. Children who had a hemoglobin level below 11 g/dl are classified as anemic, those with less than 7g/dl as severely anemic and between 7 g/dl and 9.9 g/dl as moderately anemic.

Table 7.7 shows the results for the mean of the hemoglobin level, on the prevalence of anemia in children age 6 to 59 months. We find that 48.7 percent of children in the ZOI are anemic but that most of these cases are not severe and 17.2 percent are moderate. The average hemoglobin is just at the threshold to classify children as anemic (mild). Male children tend to have higher prevalence of moderate anemia, as do children under 24 months. Consistent with the previous results, we find that children in larger households have higher anemia prevalence. Also, the few cases of severe anemia we found were for children in households suffering from moderate to severe hunger.

Table 7.8 shows the anemia estimates for children between 6 to 23 months depending if they are breastfed and if they achieve a minimum acceptable diet (MAD). The prevalence of anemia in children 6 to 23 months in the previous table is high and Table 7.7 looks to explore the relation between anemia and breastfeeding. We find that the anemia prevalence is slightly lower among children receiving a MAD. Children that are nursing have higher prevalence of anemia, with 66.8 percent of children age 6-23 months having anemia versus 61 percent of the non-nursing children.

Table 7.7. Anemia among children 6 to 59 months old

Characteristic	% Anemia[a]	% Severe Anemia[2,b]	Moderate Anemia[2,c]	Hemoglobin (g/dL) [d]	n[1]
Total (Children under 6-59 months)	0.487	0.00	0.172	11.0	1,899
Child sex					
Male	0.513	0.00	0.198	10.9	939
Female	0.463	0.00	0.148	11.0	960
Child age[a,c,d]					
6-11 months	0.740	0.00	0.349	10.3	172
12-23 months	0.617	0.00	0.279	10.6	422
24-35 months	0.500	0.01	0.168	10.9	507
36-47 months	0.391	0.00	0.111	11.3	924
48-59 months	0.366	0.00	0.093	11.3	464
Caregiver's educational attainment[2, a,c,d]					
No education	0.494	0.00	0.166	11.0	259
Less than primary	0.510	0.01	0.148	10.9	621
Primary	0.498	0.00	0.199	10.9	856
Secondary or more	0.331	0.00	0.116	11.2	43
Gendered household type					
Male and female adults	0.486	0.00	0.168	11.0	1,754
Female adult(s) only	0.484	0.00	0.224	10.9	133
Male adult(s) only^	n/a	n/a	n/a	n/a	n/a
Household size[a,d]					
Small (1-5 members)	0.456	0.00	0.161	11.0	824
Medium (6-10 members)	0.508	0.00	0.180	10.9	941
Large (11+ members)	0.553	0.00	0.194	10.8	134
Household hunger					
Little to no hunger	0.487	0.00	0.169	11.0	1,839
Moderate or severe hunger	0.534	0.05	0.272	10.4	50

^ Results not statistically reliable, n<30.

1 Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

2 Severe anemia refers to Hemoglobin level less than 7g/dl, moderate to Hemoglobin level less than 7-9.9 g/dl

[a-d] A superscript in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between the percent anemic and the child's sex. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

Table 7.8. Anemia among children 6 to 59 months old by MAD and Nursing Status

Characteristic	% Anemia	% Severe Anemia	Moderate Anemia	Hemoglobin (g/dL)	n[1]
Not Achieving MAD	**0.654**	**0.000**	**0.307**	**10.4**	**443**
Achieving MAD	**0.643**	**0.000**	**0.263**	**10.6**	**108**
Non-breastfed children	**0.610**	**0.000**	**0.273**	**10.7**	**141**
Not Achieving MAD	0.605	0.000	0.291	10.6	130
Achieving MAD^	0.693	0.000	0.000	10.9	11
Breastfed children	**0.668**	**0.000**	**0.309**	**10.4**	**410**
Not Achieving MAD	0.678	0.000	0.315	10.4	313
Achieving MAD	0.637	0.000	0.290	10.5	97

^ Results not statistically reliable, n<30.

1 Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size.

2 Severe anemia refers to Hemoglobin level less than 7g/dl, moderate to Hemoglobin level less than 7-9.9 g/dl

8. Land Use

In **Table 8.1**, we look at rates of land ownership among the 5,743 households in our sample. We observe that 75 percent of households have at least one plot of land under their control. On average, landowning households control 1.7 plots of land. Households with only female adults are less likely to own land, with 40 percent of these households owning at least one plot and compared to households with only male adults with 76 percent or male and female adults households with 79 percent. Households with no education have lower levels of land ownership at 56 percent.

Table 8.1. Land Ownership in the ZOI

Plot Characteristics	Household owns land	n	Number of plots under household's control	n[1]
All households	**0.75**	**5,743**	**1.7**	**4,446**
Gendered household type				
Male and female adults	0.79	5,000	1.7	4,074
Female adult(s) only	0.40	546	1.4	225
Male adult(s) only	0.76	197	1.6	147
Household educational attainment				
No education	0.56	224	1.4	130
Less than primary	0.72	1,136	1.6	856
Primary	0.77	3,860	1.7	3,046
Secondary or more	0.74	524	1.7	415
Household size				
Small (1-5 members)	0.70	3,599	1.6	2,618
Medium (6-10 members)	0.82	1,997	1.8	1,702
Large (11+ members)	0.82	147	1.8	126

1 Only the sample of agricultural households is included. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Shown in **Table 8.2,** the agricultural plots are 3 kilometers from the home on average and the number of uses (or crops) for each plot is 1.6**. Table 8.3** presents statistics on the different types of land tenancy we observe in our sample. Of the variety of land tenancy arrangements common in the ZOI, we find that 46 percent of plots are under a formal arrangement where the household has a title. An additional 19 percent of plots are controlled by households who lack a formal title. Fifteen percent of plots are rented from another party (non-household members).

Table 8.2. Land: Uses and distance

Plot Characteristics	Distance to plot in kilometers	n	No. of uses/crops in plot	n[1]
Agricultural Plots	**3.0**	**7,196**	**1.6**	**7,152**
Gendered household type				
Male and female adults	3.1	6,684	1.6	6,651
Female adult(s) only	2.1	294	1.4	287
Male adult(s) only	2.2	218	1.7	214
Household educational attainment				
No education	1.7	170	1.5	171
Less than primary	3.1	1,336	1.6	1,322
Primary	3.1	4,948	1.6	4,925
Secondary or more	2.8	749	1.6	741
Household size				
Small (1-5 members)	2.9	4,008	1.6	3,978
Medium (6-10 members)	3.2	2,963	1.7	2,947
Large (11+ members)	2.5	225	1.8	227

2 Only the sample of agricultural households is included. The data are at the plot level. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 8.3. Land rights

Plot Characteristics	Mean
Household has rights to plot, with title	0.46
Household has rights to plot, no title	0.19
Communal property/state property leased to a group	0.04
Property through agrarian reform	0.01
Household occupies plot without rights	0.01
Household gave away plot to other person without payment	0.00
Household rented plot TO other person	0.01
Household partially owns plot	0.00
Household was given plot BY another person, no payment	0.08
Household rents plot from other person	0.15
Plot is partially owned by other person	0.00
Other type of ownership	0.04
n[1]	**7,239**

1 Only the sample of agricultural households is include. The data are at the plot level. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 8.4 shows the average area of land under a household's control (total among all plots) is 1.94 hectares. On average irrigated land area is 0.07 hectares when any type of irrigation system is present. The area under drip irrigation is estimated at 0.02 hectares. To illustrate the use of different time of systems of irrigation, we calculate the prevalence of each system at the household level and the percentage of household land with irrigation of each type; results are presented in **Table 8.5**. Most farming households do not have irrigation systems installed; 92.7 percent of households that farm report at least one plot without irrigation. Irrigation by gravity/house and drip irrigation remains low, with 3.8 percent of households reporting irrigation by gravity/house and 3.3 percent reporting drip irrigation. In addition, we calculate the percentage of land under each type of irrigation for each household. The average household has 1.5 percent of their agricultural land with gravity/hose irrigation and 1.2 percent with drip irrigation.

Table 8.4. Land ownership and Irrigation

Plot Characteristics	Total agricultural area under HH's control (ha.)	Total area irrigated (ha.) - Any	Area drip irrigation	n[1]
Agricultural Households	**1.94**	**0.07**	**0.02**	**4,363**
Gendered household type				
Male and female adults	0.08	0.08	0.02	4,000
Female adult(s) only	0.03	0.03	0.00	217
Male adult(s) only	0.11	0.11	0.07	146
Household educational attainment				
No education	0.05	0.05	0.01	127
Less than primary	0.04	0.04	0.00	842
Primary	0.07	0.07	0.02	2,990
Secondary or more	0.22	0.22	0.11	405
Household size				
Small (1-5 members)	0.06	0.06	0.02	2,567
Medium (6-10 members)	0.09	0.09	0.02	1,674
Large (11+ members)	0.08	0.08	0.02	122

1 Only the sample of farmers/ land users is included. The data is at the household level. The unweighted sample size reflects this loss in observations and includes zeros for farmers that do not have or used land in the previous 2 agricultural seasons. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 8.5. Distribution of Irrigated Area:

Plot Irrigation Type Indicator	Household Mean	Household Percentage Area
Plot not irrigated	**93.7%**	**-**
Irrigated via gravity/hose	3.6%	1.4%
Irrigated via drilled well	0.0%	0.0%
Irrigated via winched well	0.2%	0.1%
Irrigated via drip irrigation	2.7%	1.1%
Irrigated via sprinkler	2.4%	1.1%
Irrigated by pump	0.6%	0.3%
Other irrigation method	0.4%	0.1%
Do not know irrigation method for plot	1.7%	
n[1]	**4,363**	**4,363**

1 Only the sample of farmers/ land users is include. The data is at the household level. The unweighted sample size reflects this loss in observations and includes zeros for farmers that do not have or used land in the previous 2 agricultural seasons. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

9. Agriculture Production

This section presents some agriculture indicators for the ZOI. We focus in the key value chains in the area, namely corn, beans, coffee, and vegetables/horticulture. We also present information for fruits and tubers. We provide descriptive tables to characterize these value chains at the ZOI level. Estimation of indicators such as hectare under coffee, number of horticulture farmers, etc., in the ZOI (or at the department level) are not appropriate given that the sample frame was based on household and not farmers. Given that the sample is rural and agrarian, these estimates are indicative of the size of the activity in the ZOI and a reliable representation of activities in the ZOI among farming households in the sample.

Table 9.1 shows the average hectares planted for each crop or crop group among farmers. On average, farmers plant 0.6 hectare of corn and 0.3 of beans. The average land size used for coffee production is 1.11 hectare. For other cash crops, like vegetables, fruits, and tubers the average area planted is 0.7, 0.5, and 0.3 hectares, respectively. In addition, we estimate the number of farmers for each type of crop. The estimate suggest that there are 177 thousands households that grow corn, 133 thousand that grow coffee and 14 thousand that grow vegetables; these figures are not additive, as households can produce multiple crops.

Table 9.1. Agricultural area Planted (ha.)

Crop Classification	Area planted (Ha.)	Growers	
	Mean	Number	n[1]
Corn	0.6	177,888	3,041
Beans	0.3	91,621	1,541
Coffee	1.1	133,319	2,232
Vegetables	0.7	14,309	278
Fruits	0.5	11,833	216
Tubers	0.3	8,844	247

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 9.2 shows the estimates of annual input cost and labor cost for households that farm corn, beans, coffee, vegetables, fruits and tubers in 2005 PPP dollars inflated to 2010 U.S. prices. The lowest input and labor cost is for traditional crops; the average cost for corn production for farmers in the ZOI is $124 in inputs and $135 in total labor cost, for beans it is about half of this. Costs are higher for cash crops; specifically, coffee and tubers production is labor intensive with high labor costs.

Table 9.2. Agricultural input and labor costs (2010 USD)

Crop Classification	Total Cost of Inputs	Total Labor Costs	
	Mean	Mean	n[1]
Corn	124.66	135.31	3,041
Beans	59.38	79.72	1,541
Coffee	467.64	987.88	2,232
Vegetables	490.48	809.71	278
Fruits	230.14	201.31	216
Tubers	746.09	1,250.42	247

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

In **Table 9.3** and **Table 9.4** we disaggregate these numbers by gendered household type, household size and hunger. Taking into account that the sample size is small in some of the categories, the estimates suggest that female only households tend to spend more on labor and less on inputs than male only households in corn and bean production, suggesting that male households provide more household labor to production. As expected, labor cost decrease with the size of the household for basic grains and coffee, as larger households have more supply of family labor.

Table 9.3. Agricultural input and labor costs: Gendered, Household Size and Hunger

Classification		Total Cost of Inputs	Total Labor Costs	Growers	
		Mean	Mean	Number	n[1]
Gendered household type					
Corn	Female adult(s) only	99.83	265.69	6,325	108
	Male adult(s) only	116.82	91.07	6,247	97
	Male and female adults	125.91	132.00	165,315	2,836
Beans	Female adult(s) only^	68.76	113.73	2,204	39
	Male adult(s) only^	48.23	61.22	2,613	45
	Male and female adults	59.48	79.41	86,805	1,457
Coffee	Female adult(s) only	273.36	636.16	6,112	89
	Male adult(s) only	440.41	1,060.78	4,579	78
	Male and female adults	478.34	1,002.69	122,628	2,065
Vegetables	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	481.74	826.62	13,755	271
Fruits	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	221.86	170.51	11,156	206
Tubers	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	750.27	1,281.44	8,608	241
Household size					
Corn	Small (1-5 members)	112.92	125.49	101,686	1,702
	Medium (6-10 members)	140.93	152.98	70,684	1,241
	Large (11+ members)	132.72	90.06	5,518	98
Beans	Small (1-5 members)	55.80	79.48	49,847	830
	Medium (6-10 members)	64.31	86.06	38,423	654
	Large (11+ members)	56.15	10.39	3,351	57
Coffee	Small (1-5 members)	404.01	989.49	81,579	1,327
	Medium (6-10 members)	567.16	991.61	48,177	850
	Large (11+ members)	578.83	900.53	3,563	55
Vegetables	Small (1-5 members)	570.34	1,389.38	7,067	138
	Medium (6-10 members)	439.45	254.47	6,605	128
	Large (11+ members) ^	-	-	-	-
Fruits	Small (1-5 members)	277.70	298.80	7,482	131
	Medium (6-10 members)	146.68	21.78	3,907	77
	Large (11+ members) ^	-	-	-	-
Tubers	Small (1-5 members)	700.36	1,108.52	4,077	102
	Medium (6-10 members)	843.94	1,529.78	4,183	126
	Large (11+ members) ^	-	-	-	-

^ Results not statistically reliable, n<30.

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 9.4. Agricultural input and labor costs: Gendered, Household Size and Hunger

Classification		Total Cost of Inputs	Total Labor Costs	Growers	
		Mean	Mean	Number	n[1]
Household hunger					
Corn	Little to no hunger	609.49	373.65	171,674	2,944
	Moderate or severe hunger	348.90	208.95	4,608	70
Beans	Little to no hunger	187.33	266.23	89,313	1,510
	Moderate or severe hunger^	-	-	-	-
Coffee	Little to no hunger	1,470.56	3,842.97	130,283	2,181
	Moderate or severe hunger	408.43	1,025.96	2,123	34
Vegetables	Little to no hunger	72,975.48	2,661.61	13,969	271
	Moderate or severe hunger^	-	-	-	-
Fruits	Little to no hunger	72,070.25	664.94	11,528	211
	Moderate or severe hunger^	-	-	-	-
Tubers	Little to no hunger	3,045.85	1,764.83	8,612	240
	Moderate or severe hunger^	-	-	-	-

^ Results not statistically reliable, n<30.

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 9.5 shows the production in kilograms (kg) and the value of the production using the median price reported by the farmers in the department (in 2010 USD adjusted for 2005 PPP). The average production of corn is 604 kilograms per household in the previous two agricultural seasons (primera 2014 and postrera 2014-2015) and for beans it was 185 kilograms per household; these are on the lower end of the range we would expect based on previous surveys conducted in 2012 and 2013 for corn (around 850 kg) and similar to what we would expect for beans (around 185 kg). The monetary value of production for the previous 12 months was $370 for corn and $263 for beans when we price the production with the median price reported in each department.

The value of production measure is more informative in the case of vegetables, fruits and tubers, which are used for commercialization. The crops in these categories have high value. Vegetable and tubers production is valued at $2,601 and $1,726, respectively. The crop that brings the most income in the area is coffee, as expected, with $3,792 in the 12 months previous to the survey. However, this valuation is lower than the estimate of $8,000 in 2012, reflecting the lower production in the previous seasons due to the coffee rust and the decline in coffee prices since then.

Table 9.5. Agricultural Production (kgs. and 2010 USD)

Crop Classification	Total Production (Kgs.)	Value of Production	Growers	
	Mean	Mean	Number	n[1]
Corn	604	370	177,888	3,041
Beans	185	263	91,621	1,541
Coffee	1,451	3,792	133,319	2,232
Vegetables	71,248	2,601	14,309	278
Fruits	70,247	651	11,833	216
Tubers	2,979	1,726	8,844	247

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

In **Table 9.6** and **Table 9.7** we disaggregate these numbers by gendered household type, household size and hunger. The disaggregated estimates suggest that female-only households with corn and bean production have lower potential income or value from these crops. As expected, households with little or no hunger have higher values of production. There is no consistent or expected order with respect to household size.

Table 9.6. Production (kgs. and 2010 USD): Gendered, Household Size and Hunger

Crop Classification		Total Production (Kgs.)	Value of Production	Growers	
		Mean	Mean	Number	n[1]
Gendered household type					
Corn	Female adult(s) only	366	225	6,325	108
	Male adult(s) only	496	296	6,247	97
	Male and female adults	617	378	165,315	2,836
Beans	Female adult(s) only	112	134	2,204	39
	Male adult(s) only	308	339	2,613	45
	Male and female adults	183	264	86,805	1,457
Coffee	Female adult(s) only	1,478	3,425	6,112	89
	Male adult(s) only	950	2,378	4,579	78
	Male and female adults	1,468	3,863	122,628	2,065
Vegetables	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	72,058	2,660	13,755	271
Fruits	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	73,814	682	11,156	206
Tubers	Female adult(s) only^	-	-	-	-
	Male adult(s) only^	-	-	-	-
	Male and female adults	2,990	1,734	8,608	241
Household size					
Corn	Small (1-5 members)	543	332	101,686	1,702
	Medium (6-10 members)	682	418	70,684	1,241
	Large (11+ members)	731	450	5,518	98
Beans	Small (1-5 members)	188	251	49,847	830
	Medium (6-10 members)	183	279	38,423	654
	Large (11+ members)	166	268	3,351	57
Coffee	Small (1-5 members)	1,256	3,228	81,579	1,327
	Medium (6-10 members)	1,762	4,698	48,177	850
	Large (11+ members)	1,691	4,465	3,563	55
Vegetables	Small (1-5 members)	39,136	3,137	7,067	138
	Medium (6-10 members)	110,247	2,217	6,605	128
	Large (11+ members) ^	23,096	626	637	12
Fruits	Small (1-5 members)	58,214	560	7,482	131
	Medium (6-10 members)	100,963	889	3,907	77
	Large (11+ members) ^	-	-	-	-
Tubers	Small (1-5 members)	3,297	1,926	4,077	102
	Medium (6-10 members)	2,883	1,658	4,183	126
	Large (11+ members) ^	-	-	-	-

^ Results not statistically reliable, n<30.

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Table 9.7. Production (kgs. and 2010 USD): Gendered, Household Size and Hunger

Classification		Total Production (Kgs.)	Value of Production	Growers	
		Mean	Mean	Number	n[1]
Household hunger					
Corn	Little to no hunger	609	374	171,674	2,944
	Moderate or severe hunger	349	209	4,608	70
Beans	Little to no hunger	187	266	89,313	1,510
	Moderate or severe hunger^	-	-	-	-
Coffee	Little to no hunger	1,471	3,843	130,283	2,181
	Moderate or severe hunger	408	1,026	2,123	34
Vegetables	Little to no hunger	72,975	2,662	13,969	271
	Moderate or severe hunger^	-	-	-	-
Fruits	Little to no hunger	72,070	665	11,528	211
	Moderate or severe hunger^	-	-	-	-
Tubers	Little to no hunger	3,046	1,765	8,612	240
	Moderate or severe hunger^	-	-	-	-

^ Results not statistically reliable, n<30.

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Finally, we present the estimated average yields for these crops and disaggregate them by gendered household type (**Table 9.8**). We estimate that average corn yield in the two agricultural seasons before the survey was 1,481 kilograms per hectare and 747 kg/ha for beans. These yields were lower in comparison to previous seasons; for example, in 2012 we estimated corn yield between 1,480 and 1,660 kg/ha, and between 620 kg/ha and 720 kg/ha for beans. For coffee, the estimated yield is 2,109 kg/ha. In 2012, we estimated coffee yields to be between 900 kg/ha and 1250 kg/ha; however, in 2014-2015 (this survey) the coffee area planted was lower than in 2012, which might inflate the yield measure. The stability of the coffee yield, perhaps, reflects the effects and recovery from the drought and coffee rust of previous seasons.

We use the value of the production of each type of crop and the land surface to compute a yield in monetary terms. This yield gives us information on how much money we can expect on average if we invested in one hectare in the ZOI under each crop. Across the different crops, vegetables and tubers have the highest monetary yield or value per hectare, or gross total value per area unit, with vegetables at $10,813/ha, tubers at $8,903/ha, and followed by coffee at $5,489/ha.

Table 9.8. Agricultural yield (kgs/ha and $/ha): Total and Gendered

Classification		Average Yield (Kgs./ha.)	Average Yield ($/ha.)	n
Corn		1,481	912	3,041
Beans		747	1,116	1,541
Coffee		2,146	5,489	2,232
Vegetables		-	10,813	278
Fruits		-	2,682	216
Tubers		-	8,903	247
Gendered household type				
Corn	Female adult(s) only	1,793	1,127	108
	Male adult(s) only	1,162	698	97
	Male and female adults	1,481	912	2,836
Beans	Female adult(s) only	650	812	39
	Male adult(s) only	1,598	1,388	45
	Male and female adults	723	1,116	1,457
Coffee	Female adult(s) only	2,906	6,575	89
	Male adult(s) only	1,351	3,493	78
	Male and female adults	2,138	5,509	2,065
Vegetables	Female adult(s) only^	-	-	-
	Male adult(s) only^	-	-	-
	Male and female adults	-	11,112	271
Fruits	Female adult(s) only^	-	-	-
	Male adult(s) only^	-	-	-
	Male and female adults	-	2,830	206
Tubers	Female adult(s) only^	-	-	-
	Male adult(s) only^	-	-	-
	Male and female adults	-	8,854	241

^ Results not statistically reliable, n<30.

1 Only the sample of farmers is included. All farmers that choose to plant a particular crop are included in each row; each observation represents a household that grows a particular crop. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

10. Livestock

Table 10.1 shows the prevalence of livestock ownership in our sample. The columns indicate the animal group. The first column explores overall livestock ownership; we see that 70 percent of households in our sample own livestock. Among the households that participate in animal rearing, 62 percent of livestock owners own poultry and 14 percent own non-dairy cattle and 5 percent dairy cows. In female only households and in smaller households, poultry represents a higher proportion of animal rearing activities.

Table 10.1 Livestock Ownership: Household Level

Classification	All Livestock		Dairy Cows	Cattle	Swine	Poultry	
	Mean	n	Mean				n[1]
	0.70	**5,743**	**0.05**	**0.14**	**0.07**	**0.62**	**4,095**
Gendered household type							
Male and female adults	0.73	5,000	0.05	0.15	0.07	0.60	3,694
Female adult(s) only	0.59	546	0.02	0.05	0.06	0.85	327
Male adult(s) only	0.37	197	0.14	0.16	0.06	0.55	74
Household size							
Small (1-5 members)	0.66	3,599	0.04	0.12	0.07	0.66	2,410
Medium (6-10 members)	0.78	1,997	0.06	0.17	0.07	0.56	1,566
Large (11+ members)	0.79	147	0.06	0.19	0.04	0.54	119

1 Mean for each animal group includes only households that have at least one animal. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

Among livestock owners, the average number of animals owned varies depending on the type of animal. **Table 10.2** shows the average number of poultry (chickens, ducks, etc.) owned at the time of the survey was 11 and 20 in the year before the survey (2014). Households that own dairy cows own 2.4 animal and 3.9 for non-dairy cattle. Households with at least one male adult own larger numbers of animals than those with only female adults. Larger households own fewer dairy cows, cattle, and pigs, a trend which is not apparent among smaller livestock. The data presented in Table 10.2 to be little turnover in livestock ownership. Households have approximately the same number of animals as they reported the previous year.

Table 10.2. Livestock Inventories

	Animals at time of the Survey 2015	Number of animals in 2014	Number of animals sold	Number of animals purchased	Number of animals consumed	n[1]
Dairy Cows	2.41	2.36	0.32	0.16	0.02	442
Cattle	3.92	3.43	0.84	0.25	0.04	582
Swine	2.35	4.33	1.47	0.68	0.18	500
Poultry	11.40	20.05	0.90	0.72	3.69	3,774

1 Only the sample of households with livestock is included. The data are at the household animal group level. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

In **Table 10.3** we disaggregate the estimate by gendered household type and household size. Households have approximately the same number of animals as they reported the previous year and smaller households tend to own more animals.

Table 10.3. Livestock Inventories: Gendered and Household Size

Classification	Number of animals at time of the Survey 2015	Number of animals in 2014	Number of animals sold	Number of animals purchased	Number of animals consumed	
	Mean					n[1]
Dairy Cows						
Gendered household type						
Male and female adults	2.40	2.37	0.30	0.11	0.01	423
Female adult(s) only^	-	-	-	-	-	-
Male adult(s) only^	-	-	-	-	-	-
Household size						
Small (1-5 members)	2.66	2.57	0.38	0.25	0.01	233
Medium (6-10 members)	2.16	2.12	0.26	0.06	0.02	190
Large (11+ members)^	-	-	-	-	-	-
Cattle						
Gendered household type						
Male and female adults	3.99	3.39	0.87	0.25	0.04	559
Female adult(s) only^	-	-	-	-	-	-
Male adult(s) only^	-	-	-	-	-	-
Household size						
Small (1-5 members)	4.31	3.64	0.97	0.25	0.02	289
Medium (6-10 members)	3.53	3.28	0.72	0.24	0.06	263
Large (11+ members)	2.97	2.14	0.46	0.23	0.04	30
Swine						
Gendered household type						
Male and female adults	2.19	4.24	1.41	0.67	0.19	460
Female adult(s) only	1.63	0.63	0.40	0.95	0.03	32
Male adult(s) only^	-	-	-	-	-	-
Household size						
Small (1-5 members)	2.47	6.05	1.74	0.83	0.17	252
Medium (6-10 members)	2.25	2.70	1.26	0.53	0.21	234
Large (11+ members)^	-	-	-	-	-	-
Poultry						
Gendered household type						
Male and female adults	11.52	20.89	0.88	0.68	3.76	3,404
Female adult(s) only	10.66	13.46	1.12	1.10	3.11	320
Male adult(s) only	8.14	8.24	0.55	1.29	2.68	50
Household size						
Small (1-5 members)	11.14	18.84	0.95	0.72	3.39	2,216
Medium (6-10 members)	11.81	22.37	0.84	0.73	3.99	1,448
Large (11+ members)	11.28	15.24	0.61	0.68	5.99	110

^ Results not statistically reliable, n<30.

1 Mean for each animal group includes only households that have at least one animal. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

The average value of a household's livestock holdings vary widely by type of livestock in **Table 10.4**. Dairy cows and cattle are most valuable, their current total values averaging at $ 2,539 and $2,543 respectively. The value of swine holdings is $192 and for poultry it was $66 at the time of the survey. Trends in value among different types of households mirror the trends in the quantity of livestock owned.

The income generated from livestock sales varies by type of animal. Average sales of dairy cows generated $ 2,840 in income in the 12 month before the survey, and average sales of cattle generated $ 1,976. In contrast, sales of swine generated $439 in income, and sales of poultry yielded $44. This variation is due both to the relative value of each type of animal, as well as the actual number of animals sold, which varied based on type.

Table 10.4 Livestock value and sales

Classification	Total value		Total income from sales		Total cost for transportation for purchase	
	Mean	n[1]	Mean	n[1]	Mean	n[1]
Dairy Cows	2,538.89	431	2,839.79	51	-	-
Cattle	2,542.52	570	1,975.81	153	-	-
Swine	192.13	486	438.96	132	74.88	49
Poultry	65.81	3,774	44.15	573	27.65	146

^ Results not statistically reliable, n<30.

1 Mean for each animal group includes only households that have at least one animal. The unweighted sample size reflects this loss in observations. Disaggregates' sample sizes do not total to the aggregated sample size.

Source: ZOI interim survey, Honduras 2015

11. Summary and Conclusions

The Feed the Future Initiative, led by the U.S. Agency for International Development (USAID), seeks to reduce poverty and under-nutrition in 19 developing countries through its focus on accelerating growth of the agriculture sector, addressing root causes of under-nutrition, and reducing gender inequality.

Feed the Future monitors its performance in part by periodic assessments of a number of standardized indicators. These indicators reflect data collected through population-based surveys in the geographic areas targeted by Feed the Future interventions, known as the Feed the Future Zones of Influence (ZOI).

In this report we have documented fourteen of the Feed the Future's population-based indicators for the ZOI in Honduras and characterized other indicators of interest for the USAID/Honduras Mission.

We found 45.8 percent of households in the ZOI fall below the $1.25/day per capita poverty line, and the median daily per capita expenditure in our sample is $1.70. When we compare our sample to the national extreme poverty threshold, we estimate that 84.3 percent spend less each day than the minimum basket of food necessary for sustenance calculated by the Honduran government ($2.35 per person per day). The consumption shortfall of the poor with respect to the national extreme poverty line in the ZOI suggests that 84 percent of the ZOI population would require a daily transfer of $1.76 USD 2005 PPP 2010 USD to afford a basic basket of food. While these measures help quantify the resources necessary to help households in the ZOI exit poverty, the important goal will be making this exit sustainable.

We calculate a WEAI score for the ZOI of 0.718, which is below the 80 percent threshold above which women would be considered empowered. We find that overall, women score highest in their leisure, autonomy in production, and their time spent on paid and unpaid labor activities. While the WEAI score does not capture certain elements of empowerment, it gives us an idea of what kind of interventions might be more fruitful both in reducing poverty and increasing empowerment of women. The WEAI score in the ZOI implies that women achieve empowerment in 71.8 percent of the indicators, below the 80 percent above which they would be considered empowered.

Our data shows very little evidence of household hunger, even though we conducted our survey during Honduras's lean season. We estimate the prevalence of moderate to severe hunger at 4 percent. However, we may underestimate the extent to which households are undernourished due to social desirability bias—respondents may not be comfortable revealing to enumerators that they have skipped meals or not eaten in multiple days. Given the large estimates of poverty in the ZOI that we find in this and previous years, we suspect the hunger

scale may not reflect the true rate of "hunger" in the region to the extent that hunger (as measured by the scale) has a positive correlation with poverty.

We find that over half of women have a minimally diverse diet. However, the most frequently consumed food groups are concentrated in grains, legumes and eggs, rather than foods rich in vitamin A or iron. Through promoting activities that actively integrate agriculture and nutrition, Feed the Future could influence this indicator by introducing diverse crops of high nutritional value in the ZOI.

The data shows that rates of exclusive breastfeeding are high, at 65.5 percent for children age 0 to 5 months. This is likely a result of the variety of programs targeting women of reproductive age and training them in child feeding practices in the ZOI. However, there is a discrepancy between the nutritional status of breastfed and weaned children. Children who are not exclusively breastfed seem to lack of diversity in their diets. Only 16.9 percent of children under 2 years received a minimally acceptable diet in the day before the survey. The results suggest that the low levels of minimally acceptable diets in the ZOI are driven by breastfed children who are not simultaneously introduced to different food groups, and by non-breastfed children who consume a more diverse diet, but do not eat sufficiently frequently or consume sufficient quantities of milk.

Aside from information on consumption, the anthropometric data we collect provide us with a simple and practical way of describing the overall nutritional status of women and children in the ZOI. We estimate that approximately 10.7 percent of women in the ZOI are underweight, 22.7 percent are overweight, and 7.5 percent are obese. Our data shows that the prevalence of anemia in non-pregnant women of reproductive age increased to 24.7 percent in the ZOI, from 12 percent in the 2012 baseline.

For children under 5 years, the anthropometric data reveal that 25.3 percent of our sample was stunted, with 8.1 percent severely stunted. Wasting in the ZOI is estimated at 8.6 percent with 2.2 percent severely wasted. The weight for height scores also imply that 4.5 percent of children are overweight, and 1.3 percent are obese. The underweight indicator (weight for age) shows that 13.1 percent of children are underweight. The rates of anemia in children are very high, with 48.7 percent of the children under 5 being anemic. These anemia cases tend to be mild, thus small changes in behavior and their diet could make a considerable change in their nutritional status.

The sections in the report on land use, agricultural production, and livestock ownership give us insight into the livelihoods of the majority of our sample. Farming households comprise 75 percent of the sample. Farmers in our sample cultivate on average 2 hectares with most land holdings remaining unirrigated (relying on rain fed agriculture), and used to farm basic grains and coffee.

The quantity and value of production of these crops suffered in recent agricultural seasons, likely due to drought, and additionally for coffee, the proliferation of coffee rust. For corn we found levels of output were 70 percent of the harvest that we would have expected in a normal year (based on previous surveys). For coffee, both the quantity produced and the market value of the quantity harvested suffered due to the decrease in world coffee prices in 2014-2015 which was likely driven by coffee rust. While the number of farmers that cultivate vegetables and tubers is not very large, the yield we estimate for these crops show that they have potential to be good investments for some farmers, and that Feed the Future's agricultural extension services have real potential to help alleviate poverty in a sustainable manner. In terms of the monetary value of output, the yield of vegetables and tubers were the highest. Taking these yields into account and the land, capital and credit constraints of farmers, these high value crops can serve to make farmers more resilient to changes in the environment that affect corn and coffee.

Finally, while 70 percent of households surveyed own livestock, we see limited evidence of sales and purchases, and note that stocks changed little in the year between surveys. Mostly, we observe that less financially secure households own smaller animals like chickens, while households that are less credit constrained own larger animals (cattle and dairy cows).

The average value of a household's livestock holdings vary widely, but in general dairy cows and cattle are most valuable. Average sales of dairy cows generated $ 2,539 in income in the 12 month before the survey, and average sales of cattle generated $ 2,542. Sales of swine and poultry yield less sales but are more accessible to credit constrain households.

The income generated from livestock sales varies with average sales of dairy cows estimated at $ 2,840 in the 12 month period before the survey, and average sales of cattle at $ 1,976. In contrast, sales of swine generated $439 in income, and sales of poultry yielded $44.

The results from our survey suggest that while the population of the ZOI is poor and vulnerable to climactic shocks, activities under the Feed the Future program have significant potential to help households exit poverty sustainably, while simultaneously improving nutritional outcomes for women and children.

Comparison of 2012 Baseline and 2015 Interim

The analysis presented did not look to compare the evolution of the indicators across time or statistically qualify the observed differences between the estimates from the 2012 survey and the estimates presented in this report from the 2015 survey. However, in the executive summary we presented a discussion of the main indicators in the report and how they compared to the estimates from 2012. The comparison consisted in a statistical test of the difference between years with the goal of identifying the indicators that changed considerably between the surveys. A comparison of the expenditure and poverty measures showed that

between 2012 and 2015 these measures have not changed much in the ZOI with the poverty prevalence (at the $1.25 poverty line) remaining unchanged. The depth of poverty indicates that the average gap between the level of consumption of the poor and the poverty line decreased but the statistical test conducted confirm that these differences are not statistically significant.

The food security in the ZOI as measured by the proportion of households that suffer from moderate or severe hunger, remained unchanged at 4 percent.

The comparison of the health and nutritional status for women of reproductive age in the ZOI showed that it worsened. Objective indicators of health and nutrition, such as anemia status and body mass index, show that the prevalence of anemia increased from 12 percent in 2012 to 25 percent in 2015; and, the proportion of underweight women increased from 7.4 percent to 10.7 percent.

The changes in nutritional status for children under 5 indicate that chronic malnutrition has decreased since 2012. In 2012, 36.2 percent of the children presented growth retardation compared to 25.3 percent in 2015. On the other hand, the proportion of children with low weight for height, or wasted, increased from 2.2 percent in 2012 to 8.6 percent in 2015, signaling increases in acute or recent malnutrition in the ZOI. Both of these increases are statistically significant. The estimate proportion of children underweight increased from 11.9 percent in 2012 to 13.1 percent in 2015 but this difference is not statistically significant.

The prevalence of anemia in the 2012 survey showed that 23.7 percent of children age 6 to 59 months were anemic. In 2015, anemia increased significantly, with 48.7 percent of children found to be anemic, a 25 percentage point statistically significant difference.

Changes in women empowerment, measured by the WEAI, shows a small decrease. The WEAI estimate decreased from 0.749 to 0.718, a difference that implies a 3.1percentage point difference between the percentage of indicators in which a women is empowered in the ZOI. This small difference is driven mainly by an increase in the empowerment gap between men and women in households where women are less empowered than men; and, a decrease in the overall empowerment headcount ratio. Examining the components of the 5DE in both years showed that the production and the resources domains were the most influential. Specifically, input in productive decisions and ownership of assets decreased between 2012 and 2015.

The year comparison results suggest that the population of the ZOI remains poor and that nutritional outcomes for women and children have worsened on various fronts, but improved on other fronts, highlighting the importance of continuing involvement in the area and promoting activities that look to achieve better health outcomes and decrease poverty.

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Appendix 1. Supplementary Data and Figures

A1.1. Interim Feed the Future Indicator Estimates

Unweighted sample sizes, point estimates, standard deviations, confidence intervals, design effects (DEFF), and nonresponse rates for the interim Feed the Future indicators for the Zone of Influence.

Feed the Future indicator	Estimate						n
	Indicator[a]	SD	95% CI		DEFF	Non-response rate[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2010 USD)							
All households	**2.11**	**0.04**	**2.04**	**2.18**	**3.53**	**0.00**	**5,743**
Male and female adults	1.97	0.03	1.91	2.04	3.23	0.00	5,000
Female adult(s) only	2.74	0.11	2.53	2.95	1.15	0.00	546
Male adult(s) only	3.58	0.21	3.16	3.99	0.97	0.00	197
Prevalence of Poverty: Percent of people living on less than $1.25 per day (2005 PPP)							
All households	**0.46**	**0.01**	**0.43**	**0.48**	**3.92**	**0.00**	**5,743**
Male and female adults	0.47	0.01	0.45	0.50	3.58	0.00	5,000
Female adult(s) only	0.33	0.03	0.27	0.39	1.17	0.00	546
Male adult(s) only	0.17	0.04	0.09	0.26	0.97	0.00	197
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day (2005 PPP) poverty line							
All households	**13.5**	**0.53**	**12.43**	**14.50**	**4.35**	**0.00**	**5,743**
Male and female adults	13.8	0.55	12.70	14.88	3.96	0.00	5,000
Female adult(s) only	10.6	1.38	7.85	13.27	1.20	0.00	546
Male adult(s) only	5.3	1.58	2.22	8.46	0.97	0.00	197
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators [2]							
Input in productive decisions	0.59	0.01	0.56	0.61	3.15	0.14	4,389
Ownership of assets	0.40	0.02	0.37	0.44	6.87	0.07	4,778
Purchase, sale or transfer of assets	0.19	0.01	0.17	0.20	3.20	0.07	4,776
Access to and decisions on credit	0.11	0.01	0.10	0.13	2.14	0.00	5,118
Control over use of income	0.72	0.01	0.70	0.74	3.38	0.08	4,734
Group member	0.65	0.01	0.63	0.67	2.16	0.11	4,560
Speaking in public	0.70	0.01	0.68	0.72	3.01	0.00	5,121
Workload	0.80	0.01	0.78	0.81	1.65	0.00	5,123
Leisure	0.97	0.00	0.96	0.98	2.24	0.00	5,119

n/a – Not available. ^ Results not statistically reliable, n<30.

[1] Non-response rates for each indicator are derived by the difference between the number of eligible cases and the number of observations available for analysis divided by the number of eligible cases.

Source: ZOI interim survey, Honduras 2015

Feed the Future indicator	Estimate						n
	Indicator[a]	SD	95% CI		DEFF	Non-response rate[1]	
Prevalence of households with moderate or severe hunger							
All Households	0.04	0.00	0.03	0.05	2.43	0.06	5,690
Male and female adults	0.03	0.00	0.02	0.04	2.26	0.01	4,957
Female adult(s) only	0.12	0.02	0.08	0.16	1.08	0.01	539
Male adult(s) only	0.08	0.02	0.03	0.12	0.99	0.02	194
Women's Dietary Diversity: Mean number of food groups consumed by women of reproductive age							
All women age 15-49	**3.68**	**0.03**	**3.61**	**3.75**	**4.73**	**0.20**	**6,669**
Prevalence of exclusive breastfeeding among children under 6 months of age							
All children	0.65	0.04	0.57	0.74	0.89	0.95	288
Male children	0.67	0.05	0.56	0.78	0.88	0.14	142
Female children	0.64	0.06	0.53	0.75	0.88	0.14	146
Prevalence of children 6-23 months receiving a minimum acceptable diet							
All children	0.17	0.02	0.14	0.20	1.00	0.84	952
Male children	0.16	0.02	0.12	0.21	0.98	0.05	473
Female children	0.17	0.02	0.13	0.22	0.98	0.06	479

n/a – Not available. ^ Results not statistically reliable, n<30.

[1] Non-response rates for each indicator are derived by the difference between the number of eligible cases and the number of observations available for analysis divided by the number of eligible cases.

Source: ZOI interim survey, Honduras 2015

Feed the Future indicator	Estimate						n
	Indicator[a]	SD	95% CI		DEFF	Non-response rate[1]	
Prevalence of underweight women							
All non-pregnant women age 15-49	0.11	0.01	0.09	0.12	1.00	0.37	4,474
Prevalence of stunted children under 5 years of age							
All children	0.25	0.01	0.22	0.28	1.51	0.68	2,130
Male children	0.27	0.02	0.23	0.31	1.21	0.12	1,059
Female children	0.24	0.02	0.20	0.28	1.18	0.13	1,071
Prevalence of wasted children under 5 years of age							
All children	0.09	0.01	0.07	0.10	1.09	0.68	2,130
Male children	0.08	0.01	0.06	0.10	1.04	0.12	1,059
Female children	0.09	0.01	0.07	0.11	1.03	0.13	1,071
Prevalence of underweight children under 5 years of age							
All children	0.13	0.01	0.11	0.15	1.21	0.68	2,130
Male children	0.13	0.01	0.10	0.16	1.09	0.12	1,059
Female children	0.13	0.01	0.10	0.16	1.07	0.13	1,071

n/a – Not available.

^ Results not statistically reliable, n<30.

[1] Non-response rates for each indicator are derived by the difference between the number of eligible cases and the number of observations available for analysis divided by the number of eligible cases.

Source: ZOI interim survey, Honduras 2015

A1.2. *Poverty at the $1.90 (2011 PPP) per person per day threshold*

Characteristic	Prevalence of Poverty[1,4]		Depth of Poverty[2,4]		Average consumption shortfall of the poor[3,4]		
	Percent population[a]	n[5]	Percent of poverty line[b]	n[5]	In USD 2011 PPP[c]	Percent of poverty line[c]	n[5]
Total (All households)	**0.504**	5,743	15.71	5,743	0.59	31.2	2,294
Gendered household type[a, b]							
Male and female adults	0.516	5,000	16.10	5,000	0.59	31.2	2,115
Female adult(s) only	0.384	546	12.17	546	0.60	31.7	150
Male adult(s) only	0.197	197	6.19	197	n/a	n/a	n/a
Household size[a, b,c]							
Small (1-5 members)	0.299	3,599	7.23	3,599	0.46	24.2	929
Medium (6-10 members)	0.661	1,997	21.91	1,997	0.63	33.1	1,247
Large (11+ members)	0.846	147	32.77	147	0.74	38.7	118
Household educational attainment[a,b,c]							
No education	0.431	224	10.29	224	0.45	23.9	64
Less than primary	0.585	1,136	19.35	1,136	0.63	33.1	520
Primary	0.491	3,860	15.15	3,860	0.59	30.9	1,518
Secondary or more	0.451	524	13.77	524	0.58	30.6	193

[1] The prevalence of poverty is the percentage of individuals living below the $1.90 (2011 PPP) per person per day threshold. Poverty prevalence is sometimes referred to as the poverty incidence or poverty headcount ratio.

[2] The depth of poverty, or poverty gap, is the average consumption shortfall multiplied by the prevalence of poverty.

[3] The average consumption shortfall of the poor is the average amount below the poverty threshold of a person in poverty. This value is estimated only among individuals living in households that fall below the poverty threshold.

[4] A significance test was performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable.

[5] Records missing information for the disaggregate variables have been excluded from the disaggregated estimates. The unweighted sample size reflects this loss in observations; therefore disaggregates' sample sizes may not total to the aggregated sample size. Sample size in the table indicate the number of households living in the sampled households.

[a-c] Superscripts in the column heading indicates significance tests were performed for associations between the indicator in the column heading and each of the variables in the rows. For example, a test was done between prevalence of poverty and gendered household type. When an association between the column indicator and row variable is found to be significant ($p<0.05$), the superscript for the indicator in the column heading is noted next to the row variable

Source: ZOI interim survey, Honduras 2015.

Appendix 2. Methodology

A2.1 Sampling and Weighting

Sampling

The sample of households for the interim survey followed a two-stage stratified cluster sampling design. In the first stage, 180 primary sampling units (PSU's) were selected from the 2001 National Census. In each of the 6 departments of the ZOI, 30 PSU's were selected by probability proportional to size (PPS) sampling. In the second stage, 16 households were selected for interview at random from a map of structures from the census (updated to 2013 when possible) and our previous list of households. To this sample we added the previous representative sample to evaluate ACCESO (3,000 households), for an expected total of 5,880 households in the sample list.

The survey is representative of poverty prevalence and/or undernourishment incidence in rural areas for each department in the FTF ZOI. A random sample of the beneficiaries was added to the sample to improve the power of the sampling design in detecting the expected changes in the target population for the impact evaluation of the FTF activities under MERCADO and ACS.

Weighting

The data required for weighting of survey data is the following: (1) size of the PSU's (number of population in each aldea); (2) measure of size of strata from which PSUs are drawn (population size of the department); and (3) response rates among households, women, and men. Weights were calculated for households, women, men, and children in the sample.

Design weights were calculated based on the separate sampling probabilities for each sampling stage and for each cluster. We have:

$P_{1hi} =$ first-stage sampling probability of the *i*-th cluster in stratum *h*.
$P_{2hi} =$ second-stage sampling probability within the *i*-th cluster (household selection).

The probability of selecting cluster *i* in the sample is:

$$P_{1hi} = \frac{m_h \times N_{hi}}{N_h}$$

The second-stage probability of selecting a household in cluster *i* is:

$$P_{2hi} = \frac{n_{hi}}{L_{hi}}$$

Where:

$m_h =$ number of sample clusters selected in stratum *h*.

$N_{hi}=$ total population in the frame for the *i*-th sample cluster in stratum *h*.

$N_h =$ total population in the frame in stratum *h*.

$n_{hi} =$ number of sample households selected for the *i*-th sample cluster in stratum *h*.

$L_{hi} =$ number of households listed in the household listing for the *i*-th sample cluster in stratum *h*. Or the number of household i-th sample cluster (N_{hi}) if no update listing is available.

The overall selection probability of each household in cluster *i* of stratum *h* is the product of the selection probabilities of the two stages:

$$P_{hi} = P_{1hi} \times P_{2hi} = \frac{m_h \times N_{hi}}{N_h} \times \frac{n_{hi}}{L_{hi}} = \frac{m_h \times N_{hi}}{N_h} \times \frac{n_{hi}}{N_{hi}} = \frac{m_h}{N_h} \times n_{hi}$$

This is the sampling rate in each strata. The design weight for each household in cluster *i* of stratum *h* is the inverse of its overall selection probability:

$$W_{hi} = \frac{1}{p_{hi}} = \frac{N_h}{m_h \times n_{hi}}$$

The sampling weight was calculated with the design weight corrected with the population projections for 2015 with the 2013 census. Non-response for each of the selected clusters was not further adjusted. Response rates for individual women and children were calculated at the cluster level as ratios of the number of interviewed units over the number of eligible units, and at the household level if not all women and eligible children were interviewed. In the analysis we use the 2015 population corrected design weights that take into account the distribution of the realized sample.

Additional indicators by department

Below the mean and standard deviations that can be used to calculate the sample size for each department following the discussion in section "2.1.1 Primary Data: The ZOI Interim Survey in Honduras" (pg. 28).

Department	Variable	Mean	Std. Dev.
Copán	Expenditure PC Day	1.379	0.853
	Extreme Poor	0.838	0.369
	Relative Poor	0.909	0.288
	PPP Poor	0.330	0.471
	Stunting	0.316	0.466
	Wasting	0.033	0.178
	Underweight	0.120	0.326
	Anemia	0.162	0.370
Intibucá	Expenditure PC Day	1.503	1.029
	Extreme Poor	0.770	0.422
	Relative Poor	0.879	0.326
	PPP Poor	0.342	0.475
	Stunting	0.415	0.494
	Wasting	0.046	0.210
	Underweight	0.162	0.369
	Anemia	0.253	0.436
La Paz	Expenditure PC Day	1.334	1.081
	Extreme Poor	0.839	0.368
	Relative Poor	0.921	0.271
	PPP Poor	0.417	0.493
	Stunting	0.462	0.500
	Wasting	0.079	0.271
	Underweight	0.221	0.416
	Anemia	0.189	0.392
Lempira	Expenditure PC Day	1.243	0.938
	Extreme Poor	0.845	0.362
	Relative Poor	0.926	0.261
	PPP Poor	0.457	0.499
	Stunting	0.387	0.488
	Wasting	0.083	0.276
	Underweight	0.191	0.394
	Anemia	0.219	0.415
Ocotepeque	Expenditure PC Day	1.952	1.544
	Extreme Poor	0.626	0.484
	Relative Poor	0.761	0.427
	PPP Poor	0.244	0.430
	Stunting	0.298	0.459
	Wasting	0.041	0.200
	Underweight	0.150	0.359
	Anemia	0.387	0.490
Santa Bárbara	Expenditure PC Day	1.405	0.999
	Extreme Poor	0.827	0.379
	Relative Poor	0.908	0.290
	PPP Poor	0.364	0.482
	Stunting	0.275	0.448
	Wasting	0.064	0.246
	Underweight	0.101	0.302
	Anemia	0.192	0.395

A2.2 Poverty Prevalence and Expenditure Methods

Data Source

Poverty prevalence was calculated from expenditure data of the ZOI interim Survey implemented in June-August 2015

Data Preparation

Data excluded from analysis:

- Expenditures are composed of the following items: food (including food purchased, food consumed out of the household and self-supplied food products) and non-food items (including transportation, non-durable household products, educational expenses, clothes, shoes, travel expenses). Housing expenditures include rent for renters, expected rental value for owners, utility payments, and fuel expenses.
- Expenditures on durable goods and tax payments are excluded.
- Wedding and funeral ceremonies are often excluded because these are large, infrequent expenses that impose considerable measurement error into the consumption aggregates.
- Durable goods are not included in the estimate.

Currency Conversions using CPI and PPP

- Lempiras are the local currency units (LCU) in Honduras. These were converted to 2010 USD using the USD Consumer Price Index (USD CPI) and the PPP Index estimated by the World Bank. The LCU were deflated to 2005 prices using the local CPI (LCU CPI)

- Where for 2005 PPP prices:

$$(2005\ CPI\ LCU\ /\ 2015\ CPI\ LCU) * (1/PPP\ 2005) * (2010\ USD\ CPI\ /2005\ USD\ CPI)$$

LCU PPP 2005 = 9.66
2015 CPI LCU = 179.5
2005 CPI LCU = 100
2010 USD CPI =111.65
2005 USD CPI = 100

- Where for 2011 PPP prices:

$$(2011 CPI\ LCU\ /\ 2015\ CPI\ LCU) * (1/PPP\ 2011)$$

LCU PPP 2011 = 10.08
2015 CPI LCU = 121.01
2011 CPI LCU = 100

The conversion factor was = 0.08198 for 2011 PPP prices
The conversion factor was= 0.0577 for 2005 PPP
The conversion factor was= 0.0644 for 2005 PPP prices in 2010 USD

Poverty Thresholds

- In addition to the international extreme thresholds of $1.25 per capita per day in 2005 PPP and $1.90 per capita per day in 2011 PPP, we used the rural poverty line of Honduras for 2015.

- The threshold is established using an alternative data source, such as a prior LSMS using the cost of basic needs approach.

- The poverty line (relative poverty) is defined as the value of a typical basket of goods and services that would satisfy an individual's basic needs. In May 2015, the national rural poverty line was 1,631.40 lempiras per month per person, and the national urban poverty line was 3,140.10 lempiras per month. This is equivalent to a rural poverty threshold of $3.14/day per person, and an urban poverty threshold of $6.05/day per person in 2005 PPP dollars. In what follows, we apply the rural poverty line for the complete sample, as rural prices reflect better the situation in the ZOI.

- The extreme poverty threshold in Honduras is calculated separately for urban and rural areas using the price of a basic food basket. For 2015, the extreme poverty threshold for rural areas was set at 1,222.00 lempiras/month per person, or $2.35/day per person in 2005 PPP dollars, and at 1,570.10 lempiras/month per person, or $3.02/day per person for urban areas.

A2.3 Criteria for Achieving Adequacy for Women's Empowerment in Agriculture Indicators

The below table presents the Women's Empowerment in Agriculture five dimensions of empowerment, their corresponding empowerment indicators, the survey questions that are used to elicit the data required to establish adequacy or inadequacy for each empowerment indicator, and how adequacy criteria are defined for each empowerment indicator.

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
Production	Input in productive decisions	G2.02 A-C, F How much input did you have in making decisions about: food crop farming, cash crop farming, livestock raising, fish culture; G5.02 A-D To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: agriculture production, what inputs to buy, what types of crops to grow for agricultural production, when or who would take crops to market, livestock raising	Must have at least some input into or can make own personal decisions in at least two decision-making areas	Inadequate if individual participates BUT does not have at least some input in decisions; or she does not make the decisions nor feels she could.
Resources	Ownership of assets	G3.02 A-N Who would you say owns most of the [ITEM]? Agricultural land, Large livestock, Small livestock, chicks etc.; Fish pond/equip; Farm equipment (non-mechanized); F arm equip (mechanized); Nonfarm business equipment ;House; Large durables; Small durables; Cell phone; Non-agricultural land (any); Transport	Must own at least one asset, but not only one small asset (chickens, non-mechanized equipment, or small consumer durables)	Inadequate if household does not own any asset or only owns one small asset, or if household owns the type of asset BUT she does not own most of it alone

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
	Purchase, sale, or transfer of assets	G3.03-G3.05 A-G Who would you say can decide whether to sell, give away, rent/mortgage [ITEM] most of the time? G3.06 A-G Who contributes most to decisions regarding a new purchase of [ITEM]? Ag land; Large livestock, Small livestock; Chickens etc; Fish pond; Farm equipment (non-mechanized); Farm equipment (mechanized)	Must be able to decide to sell, give away, or rent at least one asset, but not only chickens and non-mechanized farming equipment	Inadequate if household does not own any asset or only owns one small asset, or household owns the type of asset BUT she does not participate in the decisions (exchange or buy) about it
	Access to and decisions on credit	G3.08-G3.09 A-E Who made the decision to borrow/what to do with money/item borrowed from [SOURCE]? Non-governmental organization (NGO); Informal lender; Formal lender (bank); Friends or relatives; ROSCA (savings/credit group)	Must have made the decision to borrow or what to do with credit from at least one source	Inadequate if household has no credit OR used a source of credit BUT she did not participate in ANY decisions about it
Income	Control over use of income	G2.03 A-F How much input did you have in decisions on the use of income generated from: Food crop, Cash crop, Livestock, Non-farm activities, Wage & salary, Fish culture; G5.02 E-G To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you want(ed) to: Your own wage or salary employment? Minor household expenditures?	Must have some input into decisions on income, but not only minor household expenditures	Inadequate if participates in activity BUT she has no input or little input on decisions about income generated

Dimension	Indicator name	Survey questions	Aggregation of adequacy criteria	Inadequacy criteria
Leadership	Group member	G4.05 A-K Are you a member of any: Agricultural / livestock/ fisheries producer/ market group; Water, forest users', credit or microfinance group; Mutual help or insurance group (including burial societies); Trade and business association; Civic/charitable group; Local government; Religious group; Other women's group; Other group.	Must be an active member of at least one group	Inadequate if not an active member of a group or if unaware of any group in the community or if no group in community
	Speaking in public	G4.01 – G4.03 Do you feel comfortable speaking up in public: To help decide on infrastructure (like small wells, roads) to be built? To ensure proper payment of wages for public work or other similar programs? To protest the misbehavior of authorities or elected officials?	Must feel comfortable speaking in at least one public setting	Inadequate if not at all comfortable speaking in public
Time	Workload	G6 Worked more than 10.5 hours in previous 24 hours.	Total summed hours spent toward labor must be less than 10.5	Inadequate if works more than 10.5 hours a day
	Leisure	G6.02 How would you rate your satisfaction with your available time for leisure activities like visiting neighbors, watching TV, listening to radio, seeing movies or doing sports?	Must rate satisfaction level as at least five out of 10	Inadequate if not satisfied (<5)

Appendix 3 Feed the Future ZOI Indicators Department Level Estimates

Baseline (2012) and interim (2015) estimates of indicator values in the ZOI at the department level are shown in the Feed the Future Zone of Influence Indicator Estimates tables on the following pages. The estimates presented below for the baseline and interim use population weights that expand the cross section sample in each year to the population of households in in each department of the ZOI for each year using the 2013 population census projections.

This appendix presents other computable results in this report at the department level.

Note that "–" and "." Represent not available or non-computable estimates. Any results with fewer than 30 unweighted observations are not statistically reliable (n<30).

Department 04 - Copán

Table ES-A04.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	1.86	1.69	2.02	565	1.93	1.82	2.05	1,006	0.338	
Male and female adults	1.73	1.58	1.88	486	1.84	1.72	1.96	869	0.127	
Female adult(s) only	2.36	1.81	2.91	57	2.45	2.08	2.82	106	0.776	
Male adult(s) only^	3.44	2.29	4.59	22	2.81	2.21	3.42	31	0.185	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.541	0.463	0.619	565	0.477	0.418	0.535	1,006	0.073	
Male and female adults	0.557	0.477	0.636	486	0.493	0.432	0.555	869	0.083	
Female adult(s) only	0.448	0.213	0.682	57	0.314	0.189	0.439	106	0.274	
Male adult(s) only^	-	-	-	-	0.116	-0.084	0.316	31	0.230	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.424	0.350	0.498	565	0.383	0.331	0.435	1,006	0.242	
Male and female adults	0.452	0.376	0.528	486	0.415	0.358	0.473	869	0.321	
Female adult(s) only	0.350	0.161	0.540	57	0.212	0.118	0.306	106	0.167	
Male adult(s) only^	-	-	-	-	0.079	-0.038	0.196	31	0.165	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	17.1	13.5	20.7	565	13.9	11.6	16.2	1,006	0.065	
Male and female adults	17.6	13.8	21.4	486	14.3	11.9	16.8	869	0.068	
Female adult(s) only	14.6	4.3	24.9	57	10.4	4.6	16.2	106	0.405	
Male adult(s) only^	-	-	-	-	3.9	-3.4	11.2	31	0.270	
Prevalence of households with moderate or severe hunger										
All households	0.02	0.00	0.03	549	0.04	0.02	0.06	1,000	0.035	*
Male and female adults	0.01	0.00	0.02	405	0.03	0.01	0.04	863	0.108	
Female adult(s) only	0.04	-0.01	0.08	131	0.17	0.07	0.27	106	0.011	*
Male adult(s) only^	-	-	-	-	-	-	-	-	-	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A04.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.072	0.036	0.108	438	0.115	0.087	0.143	830	0.035	*
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.106	0.065	0.147	432	0.282	0.239	0.326	779	0.000	*
Non-Pregnant women15-49	0.102	0.058	0.145	404	0.274	0.228	0.320	728	0.000	*
Pregnant women age 15-49	0.161	-0.033	0.355	28	0.406	0.218	0.595	51	0.055	
Women's Dietary Diversity: Women of reproductive age 15- 49										*
Mean number of food groups consumed (9 Food)	3.11	2.92	3.30	476	3.74	3.56	3.93	1,165	0.000	*
Minimum Dietary Diversity (10 Food>=5)	0.28	0.21	0.36	476	0.49	0.43	0.54	1,165	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A04.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.694	0.408	0.979	19	0.613	0.410	0.815	54	0.590	
Male children^	-	-	-	-	0.695	0.439	0.951	27	0.018	*
Female children^	-	-	-	-	0.511	0.240	0.782	27	0.852	
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.052	-0.002	0.107	94	0.178	0.085	0.271	165	0.016	*
Male children	0.101	-0.009	0.211	44	0.180	0.057	0.303	80	0.242	
Female children	0.005	-0.005	0.014	50	0.176	0.057	0.295	85	0.005	*
by Household type										
Male and female adults	0.052	-0.005	0.110	86	0.179	0.082	0.277	152	0.020	*
Female adult(s) only^	-	-	-	-	-	-	-	-	-	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.370	0.284	0.456	243	0.215	0.155	0.275	416	0.004	*
Male children	0.430	0.287	0.572	111	0.250	0.161	0.340	189	0.029	*
Female children	0.320	0.218	0.423	132	0.182	0.121	0.243	227	0.014	*
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.020	0.001	0.040	243	0.170	0.125	0.215	416	0.000	*
Male children	0.042	-0.002	0.086	111	0.174	0.108	0.240	189	0.002	*
Female children	0.002	-0.003	0.007	132	0.166	0.098	0.235	227	0.000	*
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.048	0.011	0.085	243	0.171	0.117	0.225	416	0.000	*
Male children	0.064	0.003	0.125	111	0.213	0.133	0.294	189	0.005	*
Female children	0.035	0.002	0.068	132	0.131	0.072	0.191	227	0.007	*
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.042	-0.005	0.088	115	0.157	0.062	0.251	138	0.028	*
Male children	0.057	0.000	0.114	54	0.213	0.082	0.344	66	0.034	*
Female children	0.026	-0.018	0.070	61	0.097	-0.011	0.205	72	0.210	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.229	0.144	0.315	202	0.434	0.386	0.483	352	0.000	*
Male children	0.320	0.199	0.442	99	0.527	0.433	0.621	160	0.009	*
Female children	0.139	0.045	0.233	103	0.343	0.269	0.417	192	0.001	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A04.4/5. FTF ZOI, Copán: Women Empowerment domains, Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.899	0.852	0.945	285	0.539	0.476	0.603	730	0.000	*
Autonomy in production	0.952	0.921	0.983	294	0.970	0.954	0.986	839	0.334	
Ownership of assets	0.895	0.854	0.935	511	0.375	0.294	0.456	915	0.000	*
Purchase, sale or transfer of assets	0.208	0.168	0.249	511	0.109	0.081	0.138	915	0.000	*
Access to and decisions on credit	0.056	0.033	0.079	511	0.077	0.052	0.101	931	0.173	
Control over use of income	0.521	0.451	0.590	416	0.664	0.604	0.724	837	0.003	*
Group member	0.767	0.718	0.816	477	0.790	0.746	0.834	843	0.451	
Speaking in public	0.610	0.551	0.670	511	0.664	0.607	0.721	931	0.153	
Workload	0.792	0.741	0.843	541	0.824	0.784	0.864	931	0.360	
Leisure	0.916	0.882	0.951	511	0.949	0.928	0.970	931	0.133	

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.901	0.871	0.931	253	0.647	0.594	0.700	931	0.000	*
Autonomy in production	0.960	0.938	0.983	253	0.973	0.961	0.986	931	0.376	
Ownership of assets	0.937	0.904	0.969	253	0.454	0.356	0.553	931	0.000	*
Purchase, sale or transfer of assets	0.415	0.361	0.469	253	0.223	0.174	0.273	931	0.000	*
Access to and decisions on credit	0.328	0.269	0.387	253	0.203	0.142	0.264	931	0.001	*
Control over use of income	0.538	0.469	0.606	253	0.708	0.647	0.769	931	0.000	*
Group member	0.802	0.761	0.844	253	0.802	0.772	0.833	931	1.000	
Speaking in public	0.700	0.622	0.777	253	0.677	0.616	0.737	931	0.497	
Workload	0.897	0.861	0.934	253	0.814	0.783	0.845	931	0.001	*
Leisure	0.921	0.867	0.975	253	0.965	0.950	0.979	931	0.108	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Department 10 – Intibucá

Table ES-A10.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	2.15	1.96	2.34	550	2.36	2.20	2.52	1,004	0.081	
Male and female adults	1.98	1.82	2.13	497	2.17	2.04	2.31	873	0.050	
Female adult(s) only	3.56	2.49	4.62	39	3.18	2.65	3.71	99	0.493	
Male adult(s) only^	4.35	2.97	5.72	14	3.95	3.16	4.75	32	0.605	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.384	0.322	0.447	550	0.370	0.317	0.423	1,004	0.681	
Male and female adults	0.397	0.332	0.462	497	0.386	0.330	0.443	873	0.768	
Female adult(s) only	0.196	0.007	0.385	39	0.243	0.095	0.391	99	0.697	
Male adult(s) only^	0.049	-0.054	0.152	14	0.031	-0.034	0.097	32	0.745	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.294	0.238	0.350	550	0.268	0.224	0.311	1,004	0.386	
Male and female adults	0.314	0.253	0.375	497	0.293	0.246	0.340	873	0.525	
Female adult(s) only	0.137	0.013	0.261	39	0.162	0.058	0.265	99	0.764	
Male adult(s) only^	0.036	-0.047	0.120	14	0.021	-0.023	0.064	32	0.712	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	13.0	9.9	16.0	550	9.1	7.2	11.0	1,004	0.018	*
Male and female adults	13.5	10.4	16.7	497	9.5	7.4	11.6	873	0.020	*
Female adult(s) only	3.6	0.2	7.1	39	6.1	2.3	9.9	99	0.336	
Male adult(s) only^	0.2	-0.2	0.7	14	0.2	-0.3	0.7	32	0.941	
Prevalence of households with moderate or severe hunger										
All households	0.04	0.01	0.06	503	0.04	0.02	0.05	993	0.969	
Male and female adults	0.02	0.00	0.03	353	0.02	0.01	0.04	864	0.496	
Female adult(s) only	0.07	0.01	0.14	139	0.10	0.02	0.18	98	0.606	
Male adult(s) only^	-	-	-	-	0.10	-0.05	0.25	31	-	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A10.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.075	0.045	0.105	456	0.084	0.059	0.109	830	0.643	
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.092	0.055	0.129	483	0.306	0.254	0.359	818	0.000	*
Non-Pregnant women15-49	0.094	0.056	0.132	463	0.310	0.255	0.364	790	0.000	*
Pregnant women age 15-49	0.040	-0.031	0.111	20	0.208	-0.014	0.431	28	0.127	
Women's Dietary Diversity: Women of reproductive age 15- 49										*
Mean number of food groups consumed (9 Food)	3.30	3.17	3.42	465	3.86	3.71	4.00	1,240	0.000	*
Minimum Dietary Diversity (10 Food>=5)	0.40	0.34	0.46	465	0.63	0.58	0.69	1,240	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A10.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.851	0.621	1.081	20	0.734	0.537	0.931	49	0.417	
Male children^	0.744	0.301	1.188	9	0.819	0.553	1.085	20	0.736	
Female children	0.988	0.954	1.023	11	0.668	0.392	0.944	29	0.020	*
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.059	-0.003	0.121	90	0.234	0.158	0.310	195	0.001	*
Male children	0.068	-0.029	0.165	48	0.221	0.117	0.326	102	0.030	*
Female children	0.049	-0.036	0.135	42	0.247	0.134	0.359	93	0.010	*
by Household type										
Male and female adults	0.063	-0.003	0.129	86	0.253	0.171	0.336	180	0.001	*
Female adult(s) only^	-	-	-	-	0.094	-0.105	0.293	14	-	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.470	0.367	0.574	232	0.409	0.315	0.503	400	0.345	
Male children	0.489	0.362	0.617	125	0.405	0.292	0.519	204	0.303	
Female children	0.449	0.299	0.600	107	0.412	0.296	0.528	196	0.694	
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.002	-0.002	0.007	232	0.061	0.022	0.101	400	0.004	*
Male children	0.003	-0.003	0.010	125	0.073	0.022	0.124	204	0.009	*
Female children	0.001	-0.001	0.003	107	0.052	0.010	0.094	196	0.019	*
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.183	0.108	0.259	232	0.178	0.104	0.252	400	0.918	
Male children	0.188	0.080	0.296	125	0.182	0.101	0.263	204	0.927	
Female children	0.178	0.071	0.286	107	0.175	0.077	0.272	196	0.960	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.169	0.065	0.273	87	0.134	0.058	0.209	161	0.566	
Male children	0.260	0.056	0.465	46	0.160	0.056	0.264	78	0.371	
Female children	0.089	-0.033	0.212	41	0.112	0.011	0.214	83	0.764	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.275	0.181	0.368	245	0.472	0.389	0.556	356	0.002	*
Male children	0.333	0.207	0.460	133	0.454	0.339	0.569	186	0.161	
Female children	0.213	0.113	0.313	112	0.489	0.377	0.602	170	0.001	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A10.4/5. FTF ZOI Intibucá, Honduras: WEAI, Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.909	0.871	0.946	404	0.774	0.732	0.817	864	0.000	*
Autonomy in production	0.895	0.863	0.928	409	0.890	0.860	0.920	884	0.800	
Ownership of assets	0.851	0.798	0.903	450	0.397	0.314	0.479	865	0.000	*
Purchase, sale or transfer of assets	0.534	0.471	0.596	450	0.287	0.226	0.348	865	0.000	*
Access to and decisions on credit	0.096	0.060	0.133	445	0.205	0.165	0.244	915	0.000	*
Control over use of income	0.843	0.787	0.900	414	0.823	0.776	0.869	891	0.560	
Group member	0.621	0.551	0.690	413	0.747	0.705	0.789	884	0.001	*
Speaking in public	0.669	0.617	0.722	447	0.715	0.666	0.764	915	0.164	
Workload	0.482	0.419	0.546	534	0.741	0.697	0.786	916	0.000	*
Leisure	0.906	0.867	0.945	441	0.984	0.974	0.994	916	0.000	*

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.935	0.911	0.958	353	0.785	0.733	0.837	916	0.000	*
Autonomy in production	0.909	0.886	0.933	353	0.909	0.889	0.930	916	0.997	
Ownership of assets	0.867	0.817	0.917	353	0.502	0.406	0.598	916	0.000	*
Purchase, sale or transfer of assets	0.612	0.568	0.656	353	0.406	0.321	0.491	916	0.000	*
Access to and decisions on credit	0.439	0.376	0.502	353	0.393	0.313	0.473	916	0.443	
Control over use of income	0.856	0.797	0.914	353	0.829	0.773	0.884	916	0.565	
Group member	0.688	0.652	0.725	353	0.779	0.742	0.817	916	0.001	*
Speaking in public	0.739	0.700	0.778	353	0.740	0.712	0.768	916	0.971	
Workload	0.686	0.634	0.737	353	0.764	0.735	0.794	916	0.020	*
Leisure	0.926	0.904	0.949	353	0.979	0.971	0.987	916	0.000	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Department 12 - La Paz

Table ES-A12.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	2.07	1.80	2.33	551	1.70	1.57	1.83	854	0.001	*
Male and female adults	1.87	1.64	2.10	474	1.58	1.46	1.69	741	0.001	*
Female adult(s) only	2.95	2.31	3.59	61	2.27	1.82	2.72	89	0.069	
Male adult(s) only^	4.29	1.39	7.18	16	3.07	1.84	4.31	24	0.396	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.496	0.409	0.582	551	0.625	0.564	0.687	854	0.000	*
Male and female adults	0.516	0.425	0.608	474	0.648	0.583	0.712	741	0.000	*
Female adult(s) only	0.310	0.177	0.442	61	0.435	0.291	0.579	89	0.206	
Male adult(s) only^	0.147	-0.038	0.331	16	0.244	0.034	0.455	24	0.182	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.396	0.315	0.477	551	0.508	0.449	0.566	854	0.001	*
Male and female adults	0.426	0.338	0.513	474	0.544	0.482	0.606	741	0.001	*
Female adult(s) only	0.242	0.135	0.349	61	0.326	0.204	0.448	89	0.287	
Male adult(s) only^	0.134	-0.018	0.287	16	0.132	0.016	0.249	24	0.969	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	17.1	12.8	21.4	551	20.6	17.1	24.1	854	0.050	
Male and female adults	18.3	13.7	22.8	474	21.1	17.5	24.7	741	0.114	
Female adult(s) only	5.5	2.4	8.5	61	16.4	7.9	24.9	89	0.019	*
Male adult(s) only^	5.4	-2.5	13.2	16	7.6	-3.8	19.1	24	0.439	
Prevalence of households with moderate or severe hunger										
All households	0.06	0.03	0.09	524	0.04	0.02	0.06	849	0.233	
Male and female adults	0.07	0.03	0.10	398	0.04	0.02	0.05	738	0.119	
Female adult(s) only	0.05	0.00	0.09	117	0.08	0.01	0.16	88	0.455	
Male adult(s) only^	-	-	-	-	-	-	-	-	-	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A12.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.057	0.031	0.082	509	0.098	0.063	0.134	520	0.047	*
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.078	0.046	0.110	544	0.203	0.151	0.255	506	0.000	*
Non-Pregnant women15-49	0.077	0.045	0.110	508	0.207	0.153	0.261	476	0.000	*
Pregnant women age 15-49	0.085	-0.025	0.194	36	0.140	-0.010	0.291	30	0.512	
Women's Dietary Diversity: Women of reproductive age 15- 49										*
Mean number of food groups consumed (9 Food)	2.89	2.74	3.04	479	3.48	3.37	3.59	1,035	0.000	*
Minimum Dietary Diversity (10 Food>=5)	0.27	0.21	0.34	479	0.45	0.40	0.50	1,035	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A12.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.420	0.178	0.662	26	0.729	0.559	0.899	51	0.042	*
Male children^	0.415	0.096	0.733	13	0.624	0.355	0.893	29	0.276	
Female children^	0.426	0.035	0.816	13	0.927	0.793	1.060	22	0.013	*
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.054	0.015	0.093	133	0.262	0.151	0.372	131	0.001	*
Male children	0.050	-0.011	0.111	65	0.213	0.077	0.349	65	0.023	*
Female children	0.057	-0.005	0.119	68	0.319	0.158	0.481	66	0.004	*
by Household type										
Male and female adults	0.062	0.017	0.107	117	0.261	0.142	0.380	115	0.002	*
Female adult(s) only^	-	-	-	-	0.280	-0.094	0.653	14	0.114	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.404	0.312	0.496	306	0.263	0.197	0.328	264	0.005	*
Male children	0.413	0.293	0.534	146	0.242	0.145	0.339	126	0.010	*
Female children	0.396	0.278	0.514	160	0.280	0.184	0.375	138	0.126	
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.032	0.005	0.059	306	0.036	0.008	0.064	264	0.831	
Male children	0.032	-0.005	0.069	146	0.032	-0.005	0.068	126	0.995	
Female children	0.032	-0.013	0.076	160	0.040	-0.003	0.083	138	0.797	
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.162	0.118	0.206	306	0.063	0.027	0.099	264	0.000	*
Male children	0.170	0.089	0.251	146	0.056	0.004	0.109	126	0.017	*
Female children	0.155	0.078	0.233	160	0.069	0.018	0.120	138	0.072	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.080	0.027	0.133	132	0.087	0.011	0.164	81	0.875	
Male children	0.126	0.015	0.237	63	0.067	-0.028	0.162	40	0.410	
Female children	0.042	-0.013	0.096	69	0.107	-0.021	0.234	41	0.332	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.219	0.175	0.263	310	0.396	0.309	0.484	218	0.000	*
Male children	0.226	0.155	0.298	148	0.328	0.180	0.476	96	0.224	
Female children	0.212	0.143	0.282	162	0.443	0.337	0.549	122	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A12.4/5. FTF ZOI La Paz, Honduras: WEAI Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.797	0.746	0.847	327	0.576	0.515	0.637	564	0.000	*
Autonomy in production	0.879	0.833	0.924	333	0.728	0.669	0.786	598	0.000	*
Ownership of assets	0.826	0.783	0.870	425	0.422	0.340	0.504	614	0.000	*
Purchase, sale or transfer of assets	0.351	0.278	0.425	425	0.222	0.166	0.278	613	0.000	*
Access to and decisions on credit	0.088	0.051	0.125	417	0.063	0.042	0.084	668	0.183	
Control over use of income	0.638	0.564	0.712	360	0.809	0.764	0.854	596	0.000	*
Group member	0.526	0.446	0.605	319	0.744	0.698	0.789	612	0.000	*
Speaking in public	0.830	0.784	0.877	424	0.795	0.752	0.837	668	0.230	
Workload	0.432	0.383	0.482	531	0.729	0.688	0.770	668	0.000	*
Leisure	0.671	0.615	0.728	424	0.969	0.953	0.984	668	0.000	*

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.836	0.795	0.877	226	0.660	0.628	0.692	668	0.000	*
Autonomy in production	0.929	0.893	0.966	226	0.813	0.774	0.852	668	0.000	*
Ownership of assets	0.894	0.848	0.940	226	0.522	0.431	0.614	668	0.000	*
Purchase, sale or transfer of assets	0.580	0.502	0.657	226	0.367	0.291	0.442	668	0.000	*
Access to and decisions on credit	0.363	0.316	0.409	226	0.257	0.208	0.307	668	0.008	*
Control over use of income	0.730	0.677	0.783	226	0.841	0.815	0.868	668	0.001	*
Group member	0.655	0.586	0.723	226	0.759	0.721	0.797	668	0.013	*
Speaking in public	0.810	0.757	0.862	226	0.769	0.730	0.808	668	0.185	
Workload	0.584	0.525	0.643	226	0.756	0.731	0.781	668	0.000	*
Leisure	0.770	0.726	0.814	226	0.970	0.957	0.983	668	0.000	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Department 13 - Lempira

Table ES-A13.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	1.69	1.51	1.86	556	1.85	1.72	1.99	968	0.062	
Male and female adults	1.64	1.44	1.83	465	1.73	1.60	1.86	853	0.363	
Female adult(s) only	1.65	1.42	1.89	63	2.36	1.88	2.84	80	0.009	*
Male adult(s) only^	2.57	1.76	3.38	28	3.28	2.41	4.15	35	0.151	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.594	0.526	0.662	556	0.570	0.519	0.620	968	0.427	
Male and female adults	0.612	0.540	0.685	465	0.581	0.529	0.633	853	0.339	
Female adult(s) only	0.491	0.307	0.676	63	0.507	0.333	0.681	80	0.909	
Male adult(s) only^	0.375	0.105	0.645	28	0.187	-0.005	0.379	35	0.230	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.485	0.423	0.547	556	0.468	0.418	0.518	968	0.594	
Male and female adults	0.517	0.446	0.588	465	0.497	0.446	0.548	853	0.551	
Female adult(s) only	0.398	0.246	0.550	63	0.371	0.217	0.525	80	0.808	
Male adult(s) only^	0.210	0.026	0.393	28	0.097	-0.019	0.213	35	0.267	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	22.0	18.5	25.6	556	18.4	15.8	20.9	968	0.024	*
Male and female adults	22.8	18.9	26.6	465	18.7	16.0	21.4	853	0.019	*
Female adult(s) only	19.0	11.3	26.7	63	17.3	9.1	25.6	80	0.771	
Male adult(s) only^	8.1	0.1	16.1	28	4.8	-2.9	12.5	35	0.524	
Prevalence of households with moderate or severe hunger										
All households	0.03	0.01	0.05	513	0.02	0.01	0.04	955	0.704	
Male and female adults	0.03	0.01	0.05	386	0.02	0.00	0.03	841	0.453	
Female adult(s) only	0.03	-0.01	0.06	118	0.06	-0.01	0.14	79	0.340	
Male adult(s) only^	-	-	-	-	-	-	-	-	-	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A13.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.108	0.081	0.136	480	0.085	0.064	0.106	869	0.142	
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.130	0.091	0.169	517	0.168	0.137	0.199	891	0.115	
Non-Pregnant women15-49	0.127	0.086	0.168	482	0.164	0.133	0.195	846	0.135	
Pregnant women age 15-49	0.170	0.000	0.339	35	0.241	0.061	0.421	45	0.565	
Women's Dietary Diversity: Women of reproductive age 15- 49										
Mean number of food groups consumed (9 Food)	3.10	2.96	3.24	455	3.35	3.21	3.49	1,132	0.007	*
Minimum Dietary Diversity (10 Food>=5)	0.26	0.21	0.32	455	0.41	0.35	0.47	1,132	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A13.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.891	0.736	1.047	21	0.872	0.769	0.975	57	0.794	
Male children^	0.909	0.734	1.084	12	0.838	0.605	1.072	20	0.613	
Female children	0.870	0.561	1.180	9	0.890	0.775	1.004	37	0.850	
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.089	0.007	0.170	88	0.177	0.099	0.255	187	0.061	
Male children	0.100	-0.018	0.217	42	0.195	0.074	0.317	91	0.172	
Female children	0.077	-0.027	0.182	46	0.162	0.054	0.270	96	0.254	
by Household type										
Male and female adults	0.073	-0.006	0.152	79	0.187	0.106	0.267	177	0.042	*
Female adult(s) only^	-	-	-	-	-	-	-	-	-	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.404	0.318	0.490	250	0.346	0.273	0.420	468	0.190	
Male children	0.457	0.346	0.568	115	0.371	0.272	0.470	230	0.181	
Female children	0.353	0.245	0.460	135	0.323	0.231	0.414	238	0.589	
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.027	0.005	0.049	250	0.026	0.009	0.042	468	0.894	
Male children	0.020	-0.002	0.042	115	0.014	0.002	0.026	230	0.566	
Female children	0.034	-0.001	0.069	135	0.037	0.006	0.067	238	0.899	
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.155	0.103	0.207	250	0.167	0.118	0.216	468	0.711	
Male children	0.142	0.067	0.217	115	0.145	0.078	0.212	230	0.949	
Female children	0.167	0.096	0.238	135	0.188	0.131	0.245	238	0.610	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.102	0.033	0.170	101	0.139	0.065	0.212	171	0.450	
Male children	0.142	0.015	0.270	44	0.117	0.023	0.211	81	0.754	
Female children	0.066	0.006	0.126	57	0.155	0.043	0.267	90	0.126	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.283	0.213	0.354	272	0.526	0.471	0.581	472	0.000	*
Male children	0.269	0.175	0.363	128	0.549	0.469	0.628	239	0.000	*
Female children	0.297	0.203	0.392	144	0.503	0.436	0.571	233	0.001	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A13.4/5. FTF ZOI Lempira, Honduras: WEAI, Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.833	0.785	0.880	360	0.549	0.501	0.597	754	0.000	*
Autonomy in production	0.935	0.906	0.963	377	0.848	0.815	0.881	820	0.000	*
Ownership of assets	0.802	0.752	0.851	495	0.415	0.343	0.487	854	0.000	*
Purchase, sale or transfer of assets	0.297	0.236	0.358	495	0.198	0.156	0.239	853	0.000	*
Access to and decisions on credit	0.083	0.055	0.112	489	0.121	0.092	0.150	873	0.085	
Control over use of income	0.546	0.494	0.598	424	0.629	0.585	0.674	794	0.017	*
Group member	0.670	0.616	0.724	432	0.581	0.536	0.626	750	0.007	*
Speaking in public	0.637	0.591	0.683	494	0.558	0.514	0.602	872	0.023	*
Workload	0.681	0.628	0.734	527	0.884	0.858	0.911	873	0.000	*
Leisure	0.938	0.913	0.964	488	0.974	0.956	0.992	870	0.028	*

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.865	0.829	0.901	274	0.557	0.509	0.605	873	0.000	*
Autonomy in production	0.931	0.899	0.962	274	0.873	0.854	0.892	873	0.005	*
Ownership of assets	0.818	0.771	0.864	274	0.439	0.380	0.497	873	0.000	*
Purchase, sale or transfer of assets	0.416	0.356	0.476	274	0.263	0.222	0.305	873	0.000	*
Access to and decisions on credit	0.303	0.242	0.364	274	0.225	0.190	0.259	873	0.035	*
Control over use of income	0.562	0.507	0.617	274	0.615	0.575	0.656	873	0.127	
Group member	0.693	0.642	0.745	274	0.667	0.633	0.700	873	0.430	
Speaking in public	0.755	0.711	0.800	274	0.536	0.496	0.576	873	0.000	*
Workload	0.763	0.710	0.816	274	0.889	0.869	0.908	873	0.000	*
Leisure	0.945	0.920	0.970	274	0.973	0.953	0.992	873	0.073	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Department 14 - Ocotepeque

Table ES-A14.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)									
All households	2.72	2.47	2.97	536	2.65	2.44	2.86	914	0.488
Male and female adults	2.52	2.30	2.74	468	2.47	2.28	2.66	785	0.609
Female adult(s) only	3.37	2.15	4.59	53	3.18	2.59	3.78	98	0.717
Male adult(s) only^	5.99	3.99	7.99	15	5.64	3.27	8.01	31	0.802
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)									
All households	0.287	0.230	0.344	536	0.292	0.227	0.357	914	0.896
Male and female adults	0.291	0.231	0.350	468	0.304	0.235	0.372	785	0.753
Female adult(s) only	0.268	0.076	0.460	53	0.157	0.042	0.273	98	0.157
Male adult(s) only^	0.146	-0.165	0.456	15	0.124	-0.029	0.277	31	0.892
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)									
All households	0.227	0.180	0.273	536	0.228	0.179	0.277	914	0.966
Male and female adults	0.239	0.190	0.288	468	0.249	0.194	0.303	785	0.773
Female adult(s) only	0.173	0.041	0.304	53	0.111	0.036	0.187	98	0.300
Male adult(s) only^	0.057	-0.076	0.191	15	0.058	-0.014	0.130	31	0.995
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)									
All households	9.9	7.1	12.6	536	8.7	6.2	11.2	914	0.449
Male and female adults	10.1	7.2	13.0	468	8.8	6.1	11.4	785	0.415
Female adult(s) only	7.8	-0.7	16.2	53	7.7	-0.5	16.0	98	0.988
Male adult(s) only^	0.6	-0.7	2.0	15	7.0	-4.7	18.7	31	0.270
Prevalence of households with moderate or severe hunger									
All households	0.04	0.01	0.06	496	0.02	0.01	0.04	903	0.286
Male and female adults	0.02	0.00	0.04	364	0.02	0.01	0.04	778	0.933
Female adult(s) only	0.08	0.01	0.14	115	0.04	-0.02	0.10	95	0.224
Male adult(s) only^	0.01	-0.02	0.04	17	0.06	-0.07	0.19	30	0.423

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A14.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.058	0.027	0.090	304	0.086	0.055	0.116	603	0.216	
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.061	0.030	0.092	309	0.198	0.151	0.246	543	0.000	*
Non-Pregnant women15-49	0.054	0.026	0.081	285	0.202	0.151	0.252	518	0.000	*
Pregnant women age 15-49	0.163	-0.076	0.403	24	0.131	-0.047	0.309	25	0.814	
Women's Dietary Diversity: Women of reproductive age 15- 49										
Mean number of food groups consumed (9 Food)	3.33	3.16	3.49	430	3.67	3.51	3.82	1,016	0.002	*
Minimum Dietary Diversity (10 Food>=5)	0.43	0.37	0.49	430	0.51	0.45	0.56	1,016	0.051	

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A14.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.873	0.710	1.035	21	0.621	0.406	0.836	34	0.054	
Male children^	0.907	0.719	1.094	12	0.677	0.406	0.948	22	0.144	
Female children	0.814	0.414	1.215	9	0.473	-0.019	0.965	12	0.204	
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.029	-0.011	0.068	83	0.185	0.092	0.277	122	0.003	*
Male children	0.036	-0.013	0.085	47	0.236	0.086	0.385	64	0.013	*
Female children	0.019	-0.021	0.059	36	0.131	0.022	0.241	58	0.058	
by Household type										
Male and female adults	0.031	-0.013	0.074	78	0.202	0.102	0.302	111	0.003	*
Female adult(s) only^	-	-	-	-	-	-	-	-	-	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.324	0.229	0.419	157	0.349	0.256	0.442	198	0.599	
Male children	0.301	0.175	0.428	80	0.398	0.268	0.528	119	0.119	
Female children	0.352	0.225	0.478	77	0.274	0.153	0.396	79	0.354	
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.029	-0.002	0.059	157	0.078	0.029	0.128	198	0.092	
Male children	0.035	-0.016	0.087	80	0.117	0.037	0.197	119	0.081	
Female children	0.020	-0.014	0.054	77	0.020	-0.010	0.049	79	0.988	
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.116	0.061	0.171	157	0.121	0.065	0.178	198	0.874	
Male children	0.103	0.032	0.174	80	0.125	0.049	0.201	119	0.636	
Female children	0.132	0.024	0.240	77	0.115	0.039	0.190	79	0.786	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.114	0.028	0.200	67	0.071	0.001	0.140	65	0.418	
Male children	0.103	0.000	0.207	38	0.040	-0.021	0.101	37	0.281	
Female children	0.129	-0.061	0.319	29	0.110	-0.027	0.247	28	0.860	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.153	0.079	0.227	136	0.381	0.284	0.478	181	0.000	*
Male children	0.185	0.076	0.293	69	0.388	0.268	0.508	100	0.015	*
Female children	0.116	0.031	0.202	67	0.370	0.225	0.515	81	0.004	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A14.4/5. FTF ZOI Ocotepeque, Honduras: WEAI, Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.908	0.874	0.942	290	0.625	0.564	0.685	673	0.000	*
Autonomy in production	0.859	0.812	0.906	294	0.724	0.678	0.771	749	0.000	*
Ownership of assets	0.928	0.897	0.960	364	0.385	0.298	0.473	694	0.000	*
Purchase, sale or transfer of assets	0.326	0.273	0.378	364	0.152	0.109	0.194	694	0.000	*
Access to and decisions on credit	0.065	0.036	0.093	355	0.096	0.066	0.126	788	0.127	
Control over use of income	0.666	0.609	0.724	309	0.749	0.701	0.797	737	0.038	*
Group member	0.468	0.391	0.544	308	0.622	0.580	0.664	717	0.001	*
Speaking in public	0.638	0.579	0.698	361	0.681	0.634	0.729	791	0.278	
Workload	0.530	0.473	0.587	519	0.823	0.792	0.853	791	0.000	*
Leisure	0.966	0.943	0.988	358	0.939	0.911	0.966	790	0.121	

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.903	0.869	0.938	217	0.652	0.595	0.710	791	0.000	*
Autonomy in production	0.880	0.834	0.926	217	0.802	0.750	0.853	791	0.070	*
Ownership of assets	0.940	0.914	0.967	217	0.488	0.422	0.554	791	0.000	*
Purchase, sale or transfer of assets	0.502	0.433	0.572	217	0.322	0.277	0.368	791	0.000	*
Access to and decisions on credit	0.318	0.260	0.376	217	0.234	0.188	0.280	791	0.043	*
Control over use of income	0.677	0.618	0.737	217	0.714	0.639	0.790	791	0.533	
Group member	0.562	0.490	0.634	217	0.692	0.658	0.726	791	0.001	
Speaking in public	0.705	0.647	0.763	217	0.690	0.659	0.722	791	0.695	*
Workload	0.793	0.746	0.839	217	0.828	0.803	0.853	791	0.164	*
Leisure	0.959	0.934	0.983	217	0.937	0.917	0.957	791	0.201	

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.

Department 16 – Santa Bárbara

Table ES-A16.1.1. FTF ZOI Indicator Estimates, Honduras: Expenditures, Poverty and Hunger

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value[1]	
Daily per capita expenditures (as a proxy for income) in USG-assisted areas (2005 PPP inflated to 2010 USD)										
All households	2.43	2.17	2.69	568	2.28	2.10	2.47	997	0.250	
Male and female adults	2.28	2.05	2.50	487	2.14	1.98	2.31	879	0.252	
Female adult(s) only	2.90	2.23	3.56	53	3.30	2.66	3.94	74	0.288	
Male adult(s) only^	4.04	2.78	5.31	28	3.55	2.69	4.42	44	0.469	
Prevalence of Poverty: Percent of People living on less than $1.25 per day (2005 PPP)										
All households	0.369	0.295	0.443	568	0.383	0.331	0.436	997	0.711	
Male and female adults	0.385	0.306	0.464	487	0.392	0.340	0.445	879	0.852	
Female adult(s) only	0.207	0.033	0.381	53	0.234	0.090	0.379	74	0.747	
Male adult(s) only^	0.173	-0.016	0.362	28	0.292	0.040	0.543	44	0.420	
Prevalence of Poverty: Percent of Households living on less than $1.25 per day (2005 PPP)										
All households	0.299	0.232	0.367	568	0.308	0.260	0.355	997	0.813	
Male and female adults	0.326	0.252	0.400	487	0.325	0.276	0.374	879	0.977	
Female adult(s) only	0.155	0.010	0.299	53	0.158	0.049	0.267	74	0.957	
Male adult(s) only^	0.111	-0.002	0.224	28	0.197	0.037	0.357	44	0.336	
Depth of Poverty: Mean percent shortfall relative to the $1.25 per day poverty line (2005 PPP)										
All households	7.5	5.5	9.4	568	10.0	8.0	12.0	997	0.027	*
Male and female adults	7.9	5.8	10.0	487	10.3	8.3	12.4	879	0.043	*
Female adult(s) only	2.3	0.0	4.5	53	3.9	0.2	7.5	74	0.226	
Male adult(s) only^	4.4	-1.9	10.7	28	9.0	1.3	16.7	44	0.366	
Prevalence of households with moderate or severe hunger										
All households	0.05	0.03	0.08	554	0.06	0.04	0.08	990	0.537	
Male and female adults	0.04	0.02	0.07	439	0.04	0.03	0.06	873	0.990	
Female adult(s) only	0.08	0.02	0.15	91	0.18	0.05	0.31	73	0.154	
Male adult(s) only^	0.01	-0.01	0.03	24	0.18	0.05	0.32	44	0.017	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A14.1.2. FTF ZOI Indicator Estimates, Honduras: Maternal Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of underweight women										
All non-pregnant women age 15-49	0.060	0.036	0.084	389	0.137	0.105	0.169	822	0.000	*
Prevalence of Anemia in women age 15-49										
All women age 15-49	0.181	0.126	0.237	390	0.289	0.240	0.338	800	0.000	*
Non-Pregnant women15-49	0.173	0.115	0.231	364	0.286	0.238	0.334	756	0.000	*
Pregnant women age 15-49	0.306	0.060	0.553	26	0.350	0.163	0.538	44	0.749	
Women's Dietary Diversity: Women of reproductive age 15- 49										
Mean number of food groups consumed (9 Food)	3.27	3.10	3.44	430	3.88	3.73	4.03	1,081	0.000	*
Minimum Dietary Diversity (10 Food>=5)	0.40	0.34	0.47	430	0.58	0.54	0.63	1,081	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A14.1.3. FTF ZOI Indicator Estimates, Honduras: Child Health and Nutrition

Feed the Future Indicator	Baseline 2012				Interim 2015				2012 vs 2015 Difference	
	Estimate	95% CI		n	Estimate	95% CI		n	P-Value	
Prevalence of exclusive breastfeeding among children under 6 months of age										
All children	0.626	0.403	0.849	29	0.411	0.179	0.644	43	0.169	
Male children^	0.626	0.265	0.987	12	0.516	0.241	0.791	24	0.602	
Female children	0.626	0.308	0.944	17	0.272	-0.001	0.545	19	0.084	
Prevalence of children 6-23 months receiving a minimum acceptable diet										
All children	0.099	-0.023	0.221	78	0.076	0.022	0.130	152	0.709	
Male children	0.008	-0.005	0.021	42	0.036	-0.007	0.080	71	0.181	
Female children	0.230	-0.038	0.498	36	0.105	0.017	0.193	81	0.341	
by Household type										
Male and female adults	0.113	-0.027	0.252	66	0.069	0.017	0.122	140	0.534	
Female adult(s) only^	-	-	-	-	-	-	-	-	-	
Male adult(s) only	-	-	-	-	-	-	-	-	-	
Prevalence of stunted children under 5 years of age (H/A)										
All children	0.251	0.176	0.326	222	0.110	0.067	0.153	384	0.000	*
Male children	0.268	0.171	0.366	117	0.099	0.047	0.151	191	0.001	*
Female children	0.231	0.126	0.336	105	0.120	0.054	0.186	193	0.060	
Prevalence of wasted children under 5 years of age (W/H)										
All children	0.020	-0.004	0.045	222	0.096	0.057	0.135	384	0.002	*
Male children	0.020	-0.021	0.061	117	0.067	0.019	0.115	191	0.133	
Female children	0.021	-0.004	0.045	105	0.122	0.066	0.178	193	0.002	*
Prevalence of underweight children under 5 years of age (W/A)										
All children	0.100	0.032	0.169	222	0.072	0.038	0.106	384	0.439	
Male children	0.126	0.021	0.231	117	0.048	0.011	0.085	191	0.166	
Female children	0.070	0.004	0.136	105	0.093	0.038	0.148	193	0.584	
Prevalence of underweight children under 2 years of age (W/A)										
All children	0.094	0.005	0.183	80	0.057	0.007	0.107	146	0.482	
Male children	0.058	-0.030	0.146	44	0.054	-0.025	0.132	69	0.945	
Female children	0.144	-0.010	0.299	36	0.059	-0.009	0.128	77	0.314	
Prevalence of Anemia in children under 6-59 months of age										
All children	0.217	0.144	0.290	193	0.564	0.497	0.630	320	0.000	*
Male children	0.237	0.141	0.332	109	0.593	0.488	0.697	158	0.000	*
Female children	0.188	0.098	0.279	84	0.539	0.437	0.640	162	0.000	*

Source: ZOI interim survey, Honduras 2015

– Not available

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates. When the test of the difference is significant the row shows an asterisk (*).

Table ES-A16.4/5. FTF ZOI Santa Bárbara, Honduras: WEAI, Uncensored Headcounts

	Estimate-2012 Uncensored	95% CI		n	Estimate-2015 Uncensored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.847	0.793	0.902	271	0.546	0.494	0.597	803	0.000	*
Autonomy in production	0.899	0.858	0.940	275	0.857	0.825	0.888	815	0.098	
Ownership of assets	0.843	0.798	0.889	417	0.412	0.333	0.491	836	0.000	*
Purchase, sale or transfer of assets	0.276	0.213	0.340	417	0.194	0.150	0.238	836	0.001	*
Access to and decisions on credit	0.030	0.010	0.051	416	0.121	0.092	0.150	915	0.000	*
Control over use of income	0.438	0.373	0.502	349	0.726	0.690	0.763	875	0.000	*
Group member	0.439	0.374	0.504	238	0.498	0.455	0.540	731	0.164	
Speaking in public	0.785	0.737	0.833	416	0.798	0.761	0.835	916	0.671	
Workload	0.571	0.507	0.636	535	0.759	0.725	0.793	916	0.000	*
Leisure	0.633	0.584	0.682	413	0.993	0.986	1.000	916	0.000	*

	Estimate-Censored	95% CI		n	Estimate-Censored	95% CI		n	P-Value	
Percent of women achieving adequacy on Women's Empowerment in Agriculture Index Indicators										
Input in productive decisions	0.810	0.739	0.881	137	0.616	0.582	0.649	916	0.000	*
Autonomy in production	0.949	0.916	0.982	137	0.885	0.866	0.905	916	0.003	*
Ownership of assets	0.898	0.850	0.946	137	0.503	0.431	0.576	916	0.000	*
Purchase, sale or transfer of assets	0.445	0.297	0.593	137	0.347	0.294	0.400	916	0.196	
Access to and decisions on credit	0.190	0.104	0.276	137	0.282	0.243	0.320	916	0.016	*
Control over use of income	0.511	0.382	0.640	137	0.740	0.709	0.771	916	0.000	*
Group member	0.540	0.452	0.628	137	0.652	0.616	0.687	916	0.022	*
Speaking in public	0.752	0.679	0.825	137	0.797	0.767	0.827	916	0.225	
Workload	0.774	0.701	0.846	137	0.794	0.763	0.825	916	0.555	
Leisure	0.752	0.696	0.807	137	0.990	0.982	0.998	916	0.000	*

Source: ZOI interim survey, Honduras 2015

[1] Confidence intervals (CIs) demonstrate the reliability of estimated values. While surveys were not designed to capture change over time, non-overlapping CIs do indicate significant differences between the two estimates. However, if CIs overlap, the reader cannot conclude whether there is or is not a significant difference between baseline and interim estimates.

[3] The baseline report presented censored headcounts of inadequate achievement for these empowerment indicators, while this interim report presents uncensored headcounts of adequate achievement and the censored headcounts for both baseline and interim reporting periods. Censored headcounts present the percent of women who are disempowered and achieve adequacy in each indicator, while uncensored headcounts present the percent of women who achieve adequacy in each indicator regardless of empowerment status.