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# TRACKING EMPOWERMENT ALONG THE VALUE CHAIN: TESTING A MODIFIED WEAI IN THE FEED THE FUTURE ZONE OF INFLUENCE IN BANGLADESH

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## List of Acronyms

5DE	Five domains of empowerment
A-WEAI	Abbreviated Women’s Empowerment in Agriculture Index
BIHS	Bangladesh Integrated Household Survey
CAPI	Computer-assisted personal interviewing
DATA	Data Analysis and Technical Assistance
DHH	Dual-headed household
FHH	Female-headed household
FTF	Feed the Future
GAAP2	Gender, Agriculture, and Assets Project – Second Phase
GI	Group interview
GOB	Government of Bangladesh
GPI	Gender Parity Index
IFPRI	International Food Policy Research Institute
KII	Key informant interview
OPHI	Oxford Poverty & Human Development Initiative
PPS	Probability proportional to size
Pro-WEAI	Project Women’s Empowerment in Agriculture Index
PRSSP	Policy Research and Strategy Support Program
PSU	Primary sampling unit
RAI	Relative Autonomy Index
USAID	U.S. Agency for International Development
WEAI	Women’s Empowerment in Agriculture Index
WEAI4VC	Women’s Empowerment in Agriculture Index for Value Chain
ZOI	Zone of Influence

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## Executive Summary

Upon request of the U.S. Agency for International Development (USAID), the International Food Policy Research Institute (IFPRI) conducted this study to support USAID in assessing the state of empowerment and gender parity of men and women along the agricultural value chain in the Feed the Future (FTF) Zone of Influence (ZOI) in Bangladesh. Specifically, IFPRI's Policy Research and Strategy Support Program (PRSSP), funded by USAID, piloted the modified Women's Empowerment in Agriculture Index (WEAI) survey instruments in 10 *upazilas* (sub-districts) within the FTF ZOI across 1,200 households, which broadly belong to three economic activities of interest: (1) agricultural production, (2) agricultural entrepreneurship, and (3) agricultural sector employment. The quantitative survey was complemented by qualitative research to glean further insights into the facilitators and constraints of empowerment among various actors in the agricultural value chain. The data and analysis generated from this WEAI for Value Chain (WEAI4VC) study may inform USAID's selection and design of interventions that may, in turn, maximize its programmatic impact on women and men's empowerment as producers, entrepreneurs, and wage employees.

Overall, study results show that empowerment varies based on livelihood activity and gender. Women's empowerment differs based on the primary economic activity, with greater empowerment among women in producer households than entrepreneur or wage-work households. Qualitative interviews suggest that this may be because female entrepreneurs and wage workers are more susceptible to loss of social respect than female producers since working away from home as a woman deviates from social conventions. Conversely, men's empowerment is relatively consistent across livelihood activities.

The WEAI4VC study finds lack of group membership as a key driver to disempowerment for both men and women, which is consistent with findings from IFPRI's previous household surveys in the FTF ZOI (Ahmed et al. 2015, IFPRI 2018). Also, group membership and input in livelihood activities were among the top three contributors to disempowerment for both women and men in entrepreneur and wage-work households.

The WEAI4VC study suggests two approaches of identifying areas of focus for future programming: (1) the first approach is to identify the indicators with low achievements, which would, therefore, have more potential for substantial improvement; and (2) the second approach is to look at the differences between the male achievements and the female achievements to see which indicators have the largest achievement gaps by gender.

Using the first approach, the analysis identified that, workload and physical mobility are key constraints for both men and women in dual-headed households, regardless of livelihood activity. This suggests that interventions will need to consider the time burden required to participate in a particular livelihood activity or to adopt a specific practice or technology. Second, the analysis shows that women remain disadvantaged in terms of mutual respect, attitudes toward domestic violence, and mobility; thus, programming should address these issues. Third, both women and men in entrepreneur and wage-work households have constraints in accessing information, which may represent an opportunity to provide specific livelihood-related training that goes beyond agricultural production.

For the second approach—exploring indicators that show gender disparities in achievements—unsurprisingly, we find that men's empowerment surpasses women's in most areas. Women in

entrepreneur households, for instance, have low adequacy scores for autonomy, which may suggest that they do not have many options to choose the type of product, location, and size of their enterprise. There are notable exceptions in which women's empowerment is greater than men's: group membership, which favors women across all value chain activities; and workload, which favors women in producer households and in dual-headed entrepreneurial households.

Despite challenges in identifying empowerment pathways, the WEAI4VC study has generated evidence on the unique challenges facing value chain actors in Bangladesh, and formulated recommendations for effective targeting of interventions. For producers, increasing participation in groups, decreasing workload, and improving physical mobility are important to close empowerment gaps. It is also important to address the low autonomy that women report in many aspects of agricultural production, and to change attitudes toward domestic violence. For entrepreneurs, increasing autonomy, rights over assets, access to credit, and increasing mutual respect among household members are key to women's empowerment. For wage workers, increasing autonomy, strengthening rights over assets and control over income, and addressing norms surrounding domestic violence may help close empowerment gaps.

Evidence on empowerment generated from high quality data is imperative to guide the design and implementation of gender-sensitive policies and programs. While the WEAI4VC study has assessed empowerment for specific types of livelihood activities, our initial analysis does not fully capture other aspects of livelihoods decisions in diversified households. Further analysis on the multiple roles undertaken by households and individuals to establish a more comprehensive assessment of empowerment that accounts for diversification will sharpen our diagnosis of empowerment gaps along the agricultural value chain in Bangladesh.

## **1. Background**

### **1.1 Context of Women’s Empowerment in Agricultural Value Chains in Bangladesh**

Despite the recognition of both the agricultural sector as an engine of growth and development and the role of women in rural transformation, it is only recently that robust tools for measuring the impact of agricultural interventions on women’s empowerment have been developed. One of these tools, the Women’s Empowerment in Agriculture Index (WEAI), is a survey-based index developed specifically to measure the empowerment, agency, and inclusion of women in the agricultural sector (Alkire et al. 2012). The WEAI, originally developed as a monitoring indicator for the US Feed the Future (FTF) Initiative, has been applied or modified in more than 49 countries by 69 organizations as of the end of 2017.

Bangladesh, one of the countries in which the WEAI was piloted, is also the first to have WEAI data that are representative of the FTF Zone of Influence (ZOI) supported by USAID as well as the entire rural areas of the country. IFPRI’s Policy Research and Strategy Support Program (PRSSP) specifically designed the Bangladesh Integrated Household Survey (BIHS), the most comprehensive, nationally representative household survey conducted to date in Bangladesh, to measure the WEAI. In 2015, Bangladesh became the first country to generate panel data on WEAI. Analysis of the panel data revealed remarkable improvements in women’s empowerment status from the 2011/12 baseline to the 2015 midline in the FTF ZOI. In 2011/12, only 27.4 percent of women were empowered in the FTF ZOI. In 2015, the headcount rate increased 13.9 percentage points to 41.2 percent of all women being empowered. Women who are not yet empowered experienced a 9.1-percentage-point increase in the percentage of domains where they have adequate achievements, from 54.1 percent to 63.2 percent of the domains. At baseline, 40.2 percent of women had gender parity with the primary male in their household; the rate increased 10.5 percentage points to 50.7 percent. The empowerment gap between female and the primary male in their household reduced 10.6 percentage points from 31.6 percent at baseline to 21.0 percent at midline (Ahmed et al. 2015).

While these results show positive changes in women’s empowerment in the FTF ZOI over a three-year period, they are only relevant to agricultural production because other areas of empowerment were not measured. It is possible that FTF programming may have had spillover effects on women’s empowerment in agriculture-based rural enterprises as well as the nonfarm sector, but this would not have been captured by the existing WEAI. The need to develop a metric to enable a better understanding of empowerment in other nodes of the value chain, such as entrepreneurship and wage-earning activities, motivated the development of a new index, the WEAI for Value Chains (WEAI4VC).

### **1.2 WEAI Overview**

The WEAI was launched in February 2012 and was developed in collaboration between IFPRI, Oxford Poverty and Human Development Initiative (OPHI), and USAID. It is an innovative, survey-based tool for measuring, evaluating, and learning about women’s empowerment and inclusion in the agricultural sector. While originally designed as a monitoring and evaluation tool for USAID’s FTF Initiative, the index can also be used more generally to assess the general state of empowerment and gender parity in agriculture and to identify the key areas where empowerment gaps exist (Alkire et al. 2013).

The WEAI is an aggregate index that can be reported at the program-level (as well as other geographic areas) and is composed of two sub-indices: the five domains of empowerment (5DE) and the gender parity index (GPI). The 5DE assesses the degree to which women are empowered in five domains: (1) agricultural production decisions, (2) access to and decision-making power over productive resources, (3) control over use of income, (4) leadership roles within the community, and (5) time allocation. The 5DE is constructed from individual-level empowerment scores, which reflect each person’s achievements in the five domains as measured by 10 indicators with their corresponding weights (Table 1.1). Each indicator measures whether an individual has surpassed a given threshold, or has adequate achievement, with respect to each indicator. A woman or man is defined as empowered if he or she has adequate achievements in four out of the five domains, or has achieved adequacy in 80 percent or more of the weighted indicators.

**Table 1.1 Domains, indicators, and weights of the WEAI**

<b>Domain</b>	<b>Indicator</b>	<b>Definition of Indicator</b>	<b>Weight</b>
1. Production	1.1 Input in productive decisions	Sole or joint decision making over food and cash-crop farming, livestock, and fisheries	1/10
	1.2 Autonomy in production	Autonomy in agricultural production reflects the extent to which the respondent’s motivation for decision making reflects own values rather than a desire to please others or avoid harm	1/10
2. Resources	2.1 Ownership of assets	Sole or joint ownership of major household assets	1/15
	2.2 Purchase, sale, or transfer of assets	Whether respondent participates in decision to buy, sell, or transfer assets	1/15
	2.3 Access to and decisions about credit	Access to and participation in decision making concerning credit	1/15
3. Income	3.1 Control over use of income	Sole or joint control over income and expenditures	1/5
4. Leadership	4.1 Group member	Whether respondent is an active member in at least one economic or social group	1/10
	4.2 Speaking in public	Whether the respondent is comfortable speaking in public concerning issues relevant to oneself or one’s community	1/10
5. Time	5.1 Workload	Allocation of time to productive and domestic tasks	1/10
	5.2 Leisure	Satisfaction with time for leisure activities	1/10

**Source:** Alkire et al. (2013).

Unlike other women’s empowerment measures based on interviews of a sole female respondent, WEAI uses survey data from the self-identified primary male and female adult decision makers, aged 18 and over, in the same household. Relative empowerment is captured in GPI, which reflects women’s achievements in the five domains relative to the men in their households. Households are classified as having gender parity if either the woman is empowered (her empowerment score is 80 percent or higher) or her score is greater than or equal to the empowerment score of the male decision maker in her household.

All of these indexes have values ranging from 0 to 1, where higher values reflect greater empowerment. The overall WEAI is a weighted average of 5DE and GPI, with weights 0.9 and 0.1, respectively. While the overall WEAI is useful as a headline indicator, similar to how poverty indexes are used to track overall trends in poverty, the WEAI is also decomposable, which allows us to disaggregate the 5DE achievements by domain and by indicator to see which specific areas contribute the most to both women's and men's disempowerment. More details about the methodology, piloting, and validation of WEAI are available in Alkire et al. (2012, 2013).

### **1.3 Rationale for WEAI extension: Modified WEAI for Value Chains (WEAI4VC)**

The original form of the WEAI has limitations, as recognized by Alkire et al. (2013). These include:

- Women who are engaged in decision-making on nonagricultural activities may appear disempowered if they are not also involved in agricultural decisions.
- Questions about control over resources and income do not capture many of the nuances behind these domains.
- Female-only households are likely to be identified as empowered, even if there are others such as parents, in-laws, or children with whom such women also need to negotiate.
- Group membership alone is an inadequate indicator of active participation.
- Satisfaction with leisure is subjective and may reflect women's lower expectations of what is possible in their circumstances.
- The focus on agriculture may not capture other domains of empowerment that may be more relevant to specific outcomes.

As the rural economies diversify and households become more involved in nonfarm and off-farm economic activities, it is likely that the original WEAI will miss key aspects of empowerment among target beneficiaries who are engaged in rural nonfarm wage earning activities and rural entrepreneurship, which are important livelihood activities in rural Bangladesh.

## **2. Research Questions**

In this study, we seek to answer the following research questions:

- How empowered are women and men in their roles as producers, wage earners, and entrepreneurs in the FTF ZOI?
- What are the sources of disempowerment of women and men as producers, wage earners, and entrepreneurs? What gender-based constraints do they face?
- What types of interventions, technologies, or practices can be targeted to women and men producers, wage earners, and entrepreneurs to address sources of disempowerment?

## **3. Study Design and Implementation**

The WEAI4VC study combined a quantitative survey and qualitative semi-structured key informant interviews and group interviews. This mixed methods approach to data collection provided opportunities to analyze a rich pool of data that would not have been available with any of these methods on their own. Because of the focus on women's empowerment and gender equality, sex-disaggregated information was collected covering a wide range of topics.

### 3.1 Quantitative Survey

The quantitative data came from a household survey, which was carried out from May–July 2017. This section describes the sampling and fieldwork for the quantitative survey.

#### 3.1.1 Sampling Design

We used a sample size of 400 households for each of the three economic activities of interest—(1) agricultural production, (2) agricultural entrepreneurship, and (3) agricultural-sector wage employment—to be able to construct and compare the overall indexes: 5DE, GPI, and A-WEAI—as well as the specialized modules relevant to value chains. We define these economic activities as follows:

- (1) Agricultural production—A household is classified as a **production household** if any member has participated in crop farming/fishing/livestock raising in the past 12 months.
- (2) Agricultural entrepreneurship—A household is classified as an **entrepreneur household** if any member owns/operates an agriculture-driven business for commercial purposes in the past 12 months.
- (3) Agricultural-sector wage employment—A household is classified as a **wage worker household** if any member worked for someone outside the household in exchange of money, food, or goods in the agriculture sector in the past 12 months. This work can be work for agriculture production (crop production, livestock, or fish production), agri-business, or non-agri-business.

Livelihoods in rural Bangladesh are diverse: the income source portfolio for rural households is such that many households are likely to be engaged in more than one type of economic activity during the year. It is challenging to identify households that exclusively draw income from one type of economic activity, and is especially difficult to select households that earn their living exclusively from wage employment due to the intermittent nature of the stated activity. Agricultural wage employment is usually short-term, seasonal, and primarily on an as needed basis.

Since households are likely to be engaged in more than one kind of economic activity over a 12-month period, instead of categorizing households into only one of the three economic activities before administering the modified WEAI modules, we surveyed 1,200 households in total. This increased our chances of screening and identifying at least 400 households for each category to compare empowerment among the groups.

First, from the list of all upazilas (sub-districts) in the FTF ZOI in southeastern Bangladesh, we purposively selected five upazilas for producer and entrepreneur groups, considering diversified agriculture with rice, vegetables, pulses, maize, cut flowers, livestock and poultry, fisheries, and availability of agriculture-based enterprises. Table 3.1 shows the list of selected upazilas and districts, and considerations for their selection in this study.

Once five upazilas were selected, four villages were randomly selected with probability proportional to size (PPS) sampling from the list of all villages in the five selected upazilas using village-level population as the basis for size. Thus, 20 villages or primary sampling units (PSUs) were selected, in which a village census was administered using computer assisted personal interviews (CAPI).

From the village census lists, we randomly selected 400 producer households (farm households) and 200 agriculture-sector wage-worker households (those who depended mostly on wage earnings).

**Table 3.1 List of selected upazilas and districts for the WEAI4VC study**

<b>District</b>	<b>Upazila</b>	<b>Consideration</b>
Barisal	Gouronadi	Diversified agriculture includes betel leaves and agricultural base enterprises
Jessore	Jhikargacha	Diversified agriculture includes cut flowers and agricultural base enterprises
Chuadanga	Sadar	Diversified agriculture includes cut flowers and agricultural base enterprises
Jhenaidah	Kaliganj	Diversified agriculture includes cut flowers and agricultural base enterprises
Satkhira	Kaliganj	Diversified agriculture includes cut flowers and agricultural base enterprises

**Source:** Constructed by authors.

Once the producer and the wage-worker samples of households were selected, a detailed household survey was implemented on the selected households. The individual questionnaire was meant to be administered separately and privately to the primary male and primary female decision makers, usually husband and wife, consistent with the original WEAI protocol, which was possible in all producer households. Less than 4 percent of women in entrepreneur households and wage-worker households were interviewed in the presence of another female adult or children. Less than 3 percent of men in entrepreneur households and wage-worker households were interviewed in the presence of another adult or children.

Third, since enterprises are mostly located in urban centers, we decided to use upazila and union centers as PSUs for entrepreneur households and wage employees working for entrepreneur households. We followed the following steps for sampling of entrepreneurs and for agriculture-sector wage employees working for entrepreneurs: using CAPI, we conducted a census of entrepreneurs and agriculture-sector employees working for entrepreneurs in the five selected upazila centers and their union centers.

From the census lists, we randomly selected 400 entrepreneur households and 200 wage earner households working for the entrepreneur households. Unlike the producer households, sampling for post-harvest agricultural entrepreneurs was more difficult because these types of entrepreneurs are diverse but not equally prevalent. For example, the field teams identified many irrigation water suppliers and input dealers but not as many agricultural produce transporters or rice/flour mill operators. It was also rare to find female entrepreneurs so any female entrepreneur household identified in the census was automatically selected. In some cases, households with more unusual types of enterprise or wage work activities were also automatically selected, such as those engaged in the cut flower value chain. Highly seasonal activities such as production of GUR (molasses/treacle) are also likely to be missed during the census despite the field team's best efforts to locate them.

Once the entrepreneur and wage employee samples of households were selected, a detailed household survey was administered to the primary male and female respondents in selected households.

All three categories of households with both adult male and female accounted for 80 percent of sampled households, whereas households with female adults only accounted for 20 percent of the sample. For agricultural producer/farm households, in which the village is the PSU, there were 16 households with both male and female adults and four households with female adults only in each village. For wage-earner households, there were eight households with both male and female adults and two households with female adults only in each village.

For entrepreneur households, since upazila centers were the PSUs, there were 64 households with both male and female adults and 16 households with female adults only in each upazila center. For wage-earner households working for entrepreneurs, there were 32 households with both male and female adults and 8 households with female adults only in each upazila center. Table 3.2 shows the sample distribution of households per economic category by upazila and Table 3.3 shows the number of adult male and female households, as well as the number of female-only households (no adult male present) per PSU.

**Table 3.2 Sample distribution of selected households**

Division	District	Upazila	Number of households				Total
			Producer	Producer		Entrepreneur	
				Labor	Entrepreneur		
Barisal	Barisal	Guarnadi	80	40	80	40	240
Khulna	Chuadanga	Chuadanga Sadar	80	40	80	40	240
Khulna	Jessore	Jhikargachha	80	40	80	40	240
Khulna	Jhenaidah	Jhenaidah-Kaligan	80	40	80	40	240
Khulna	Satkhira	Satkhira-Kaliganj	80	40	80	40	240
<b>Total</b>			400	200	400	200	1,200

Source: Constructed by authors.

**Table 3.3 Description of selection of households by PSU**

Sample household type	Households	Upazila	Number of PSUs	Households per PSU	Households per village with adult male and female	Female-headed households per village
Producers	400	5	20 villages	20	16	4
Wage labor under production	200	5	20 villages	10	6	2
Entrepreneurs	400	5	1 upazila	80	12	4
Wage labor beyond production	200	5	1 upazila	40	6	2

Source: Constructed by authors.

### 3.1.2 Survey Questionnaires

The WEAI4VC survey was composed of a household-level questionnaire administered to the household head or other knowledgeable person in the household, and an individual-level questionnaire



administered to the self-identified male and female decision makers regarding the relevant economic activity.

The household questionnaire included eight modules on various topics at the household level, including demographics, agricultural production, employment, entrepreneurship, assets, transfers, and shocks. The individual questionnaire included 19 modules covering key dimensions of empowerment such as livelihoods, resources, income, leadership, time use, and intrahousehold relationships and access to information and extension, as well as specific modules for individuals engaged in particular economic activities. Table 3.4 lists the modules of the household and individual questionnaires.

**Table 3.4 Household and Individual Questionnaire Modules**

<b>Household-Level Questionnaire</b>	<b>Individual Questionnaire</b>
Household identification	Individual Identification
Household listing and demographics	Role in household decision making (Producers)
Livelihoods and employment	Role in household decision making (Entrepreneurs)
Dwelling characteristics	Role in household decision making (Wage earners)
Land and agriculture	Access to productive capital
Institutional transfers & program operations – cash	Access to financial services
Institutional transfers & program operations – in kind	Time allocation
Household shocks	Group membership
	Autonomy in decision making (Producers)
	Autonomy in decision making (Entrepreneurs)
	Autonomy in decision making (Wage earners)
	Intrahousehold relationships
	Attitudes about domestic violence
	Physical mobility
	Parda information
	Messaging
	Food insecurity experience scale
	Wife’s assets that had been brought to marriage
	Personal information

**Source:** Constructed by authors.

The survey instrument used was a modified version of the WEAI called the Women’s Empowerment in Agriculture for Value Chain (WEAI4VC), which was designed to measure the extent of empowerment of women involved in rural agricultural wage employment and entrepreneurship, in addition to agricultural production. These survey modules drew on lessons learned from piloting project-level WEAI (pro-WEAI) under the Gender, Agriculture, and Assets Project–Second Phase (GAAP2), as well as inputs from IFPRI’s ongoing work on women’s empowerment in agricultural value chains and rural nonfarm employment.

The IFPRI team designed the WEAI4VC survey to collect data on key dimensions of empowerment across multiple activities in the agricultural value chain. The household and individual questionnaires were conducted using CAPI. Skip patterns and consistency checks were included in the survey program to ensure data quality.

### 3.1.3 Survey implementation and data capture

#### ***Training***

For implementing the WEAI4VC household survey, IFPRI contracted Data Analysis and Technical Assistance (DATA), a Bangladeshi consulting firm with expertise in conducting complex surveys and data analysis. DATA worked under the supervision and guidance of senior IFPRI researchers. DATA's capacity to conduct surveys that collect high quality data was largely built by IFPRI over the past two decades.<sup>1</sup>

DATA provided experienced survey enumerators and supervisors to administer the household survey. Most of the enumerators and supervisors hold master's degrees in social science, nutrition, or home economics.

From March 20–May 6, 2017, IFPRI researchers and DATA experts trained 40 experienced enumerators (20 females and 20 males), 10 supervisors (5 females and 5 males), and 2 male field monitors. The survey enumerators' training was approximately fifty days in duration (33 actual training days), and consisted of a formal classroom component as well as closely monitored practice fieldwork. During the formal training, IFPRI researchers and DATA experts briefed the enumerators and supervisors on the objectives and methods of the survey, the sampling design, and the responsibilities of the enumerators. They were trained on how to carry out the interviews using CAPI tablets, issues related to using tablets and troubleshooting of problems with tablets, line-by-line explanation and interpretation of the questions, the flow and skip-patterns, definitions, and explanations of how to handle unusual cases and when to contact the supervisor for assistance.

Field supervisors received additional training related to their supervisory and editing role. In particular, they were trained on the quality control process, cross checking, editing and coding of the questions, and security and confidentiality issues.

On April 2, 2017, the questionnaires were field tested in five villages within three unions of Saturia Upazila in Manikganj District. A subsequent field test was conducted on April 20, 2017, in the same set of villages. The field testing determined the appropriate distribution of questionnaire modules among the male and female questionnaires, identified problems with the questionnaires, or additional rules that were needed to address difficult cases. The field testing aimed to approximate the actual implementation of the survey in order to test the full range of survey activities, including questionnaire completion, delivery, and data entry. An additional function of the field testing was to provide practical training to the enumerators in administering the questionnaire. After pre-testing in the field, feedback was incorporated and the survey questionnaire was finalized.

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<sup>1</sup> DATA carried out all IFPRI surveys in Bangladesh, including more than 50 household surveys and several market, school, and other institutional surveys. In addition, DATA has conducted numerous surveys for various international organizations, such as the World Food Programme (WFP)-Bangladesh, the World Bank, the European Union, the US Department of Agriculture, CARE-Bangladesh, World Vision-Bangladesh, the Population Council–New York, Save the Children (USA), Tufts University School of Nutrition Science and Policy, and the IRIS Center at the University of Maryland.

### ***Survey Administration***

DATA carried out the household survey from May 7–July 16, 2017, under the supervision and guidance of IFPRI researchers in five districts: Jessore, Jhenaidah, Chuadanga, Satkhira, and Barisal, all of which are located within the USAID-supported FTF ZOI in southern Bangladesh.

The survey was conducted in two phases: the first phase was conducted from May 7-26, 2017, prior to the fasting month of Ramadan; the second phase was conducted from July 3-11, 2017, after Ramadan. On July 3, 2017, IFPRI and DATA jointly organized a one-day enumerators' refresher training to ensure the survey team's retention of knowledge between the two phases.

Going into the field, the teams of enumerators were equipped with various materials, such as CAPI tablets, survey manuals, identification cards, and letters of authorization to conduct the survey issued by the Ministry of Agriculture, Government of Bangladesh.

The enumerators conducted the interviews one-by-one and face-to-face with the respondents assigned to him or her. The enumerators were supervised by the field supervisors who accompanied them to the village. Each field supervisor was responsible with his/her defined region. All field staff reported their activities to their supervisors using a standard progress report form.

### ***Quality Control***

IFPRI and DATA worked diligently to ensure the quality of the household survey data. In the field, survey supervisors routinely oversaw interviews conducted by enumerators, and verified all data collected by enumerators on a daily basis. If inconsistencies in responses were detected in collected data, then the supervisors visited the relevant respondents to find out the reasons and corrected the responses as needed. IFPRI researchers made frequent field visits to supervise the fieldwork.

### ***Data Entry and Cleaning***

The use of CAPI on programmed tablets minimized data processing time after fieldwork and improved data integrity. Collected data were transferred to the DATA central office in Dhaka on a daily basis for further quality control and validation. After cleaning and labeling by variable and value, DATA delivered the entrepreneurs and wage employees dataset to IFPRI on August 20, 2017, followed by the producer dataset on August 31, 2017.

## **3.2 Qualitative Research**

### **3.2.1 Sample Selection**

For the Bangladesh qualitative study (Rubin 2018), the team sought to cover the three categories of respondents that the quantitative survey was focusing on—producers, entrepreneurs, and wage workers—and drew from a subset of the interviewees in the quantitative survey sample described above. The qualitative sample also included interviews with a small set of market traders. Representatives of these categories were interviewed, either in key informant interviews or in group interviews of four to five people. As described above, these categories are not mutually exclusive (Table 3.5). Most of the interviewees in the subsample were also engaged in farming for both home consumption and for sale, even when their main source of income was derived from their occupations

as entrepreneurs or traders. In these areas, a smart livelihood strategy is a multifaceted one, and the qualitative interviews illustrated the many ways that households seek to maintain themselves.

Interviewees were drawn as much as possible from the list of respondents in the quantitative survey. In some cases, either because that list did not include enough traders or entrepreneurs in the field site, or because the original quantitative respondents were not available, community members were asked to suggest suitable candidates. In total, 102 people were interviewed, including four interviews with government officials or community leaders.

**Table 3.5 Type and number of interviews conducted**

<b>Tool</b>	<b>Types of respondents</b>	<b>Respondents: Minimum number</b>	<b>Total</b>
Activity (i) Community profile	KII w/district or upazila officer, gender focal point, or leading community member	1 person per upazila	1 X 4 = 4
Activity (ii) Group interviews: Local understanding of empowerment	Group interviews with: a. Agricultural producers b. Agricultural entrepreneurs c. Wage workers	In each upazila, one group of 4-5 men and one group of 4-5 women for each of the three categories	30 X 2 = 60
Activity (iii) Semi-structured interviews	Semi-structured interviews with: a. Agricultural Producers b. Agricultural entrepreneurs c. Wage workers	In each upazila, for each of the three economic categories, 2 women and 2 men will be chosen by their empowerment status (one empowered; one disempowered. If these data are not available in time, other variables (e.g., age—1 older women and 1 younger woman; 1 older man and 1 younger man) drawn from the quantitative survey list.	4 X 3 X 2 = 24
Activity (iv) Key informant interview: Market traders	KII with formal-sector traders and with informal-sector traders dealing with main commodities of the community	In each upazila, 2 interviewees for each—formal- and informal-sector traders dealing with key commodities in the locality (ideally, 1 man and 1 woman)	4 X 2 X 2 = 16
<b>Total</b>			<b>102</b>

Source: Constructed by authors.

### 3.2.2 Qualitative Protocol Design

Qualitative research methods are particularly useful at exploring perceptions and local understandings of the meanings that people give to their behaviors and beliefs. In this study, the qualitative study sought to clarify respondents' attitudes toward women's and men's involvement in different agricultural value chains and at different nodes along the chain. The study adapted the qualitative protocols developed by IFPRI's GAAP2 that is constructing another version of the WEAI for use by projects, the pro-WEAI.<sup>2</sup> The team reviewed the GAAP2 qualitative data collection instruments and determined which modules would be most useful for exploring the themes of WEAI4VC and that could be done in the time

<sup>2</sup> For more information on the pro-WEAI, see <http://weai.ifpri.info/>.

available for the fieldwork. The focus was on collecting information about respondents' different types of engagement with agricultural value chains and their understanding of concepts of empowerment.

### 3.2.3 Enumeration Team and Training

To learn more about the gender dynamics of agricultural value chains, five IFPRI qualitative Field Officers<sup>3</sup> and their qualitative team coordinator<sup>4</sup> participated in a training workshop in Dhaka and selected field sites on August 21-29, 2017. The training covered basic concepts related to gender, an overview of gender issues in agricultural value chains, the definition of empowerment and its expression in the Bangladesh context, as well as a range of qualitative data collection and analysis approaches (e.g., coding, categorizing, clustering, and building relationships). The team identified the sample for the qualitative study and practiced techniques of interviewing and analysis. In addition, the group traveled to two different areas to practice interviews and to pilot the interview guides. The revised questions were translated into Bangla.

### 3.2.4 Fieldwork and Quality Control

The Key Informant Interviews (KII) and group interviews were conducted in September and October 2017. Respondents of each category of value chain actor were identified based on the lists of quantitative survey respondents in Gaurnadi Upazila, Barisal District, and Jhikargacha Upazila, Jessore District. The questions used in each interview were tailored to the respondent's main activity, e.g., as an entrepreneur or an agricultural wage laborer. However, if during the interview, it emerged that the respondent was engaged in more than one income-earning activity, such as farming and daily labor, then the interviewer asked questions about both activities.

### 3.2.5 Data Entry and Cleaning

Following the completion of the fieldwork, the audio recordings were sent to a local firm in Dhaka for transcription. The transcripts were reviewed by the field team multiple times. The final versions were uploaded into NVivo Pro 11 and coded according to a code list prepared by the field officers. Additional analysis was completed in collaboration with the qualitative study team leader.

## 4. Findings

### 4.1 Household Characteristics

The analysis was conducted on observations with complete data. The quantitative sample consists of 329 dual-headed households (DHH) and 71 female-headed households (FHH) classified as producers, 398 DHH entrepreneur households, and 344 DHH and 56 FHH wage-worker households (Table 4.1). There were only two female-headed entrepreneur households, which were excluded from the analysis due to small sample size.<sup>5</sup> Note that respondents—the primary male or female adult in the household—may not always participate in the livelihood activity where their household is assigned, particularly for entrepreneur and wage-work households. The selection criteria for households in each category require that at least one of the respondents participate in production, entrepreneurship, or wage work, respectively. In Bangladesh, households may choose to diversify their livelihood strategies to minimize

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<sup>3</sup> Waziha Rahman, Shammi Sultana Ferdousi, Shuchita Rahman, Md. Redoy, and S.M. Tahsin Rahaman.

<sup>4</sup> Aklima Parvin.

<sup>5</sup> The mean age of respondents in the entrepreneur FHH was 32.5 years, and both respondents were secondary school graduates. One of the two women reported that her household was involved in processing.

risk, so it is highly unusual to find both male and female respondents engaged in entrepreneurship or doing wage work.

Households are equally distributed across the five districts of Barisal, Chuadanga, Jessore, Jhenaidah, and Satkhira. Across all types of actors and household types, most households were Muslim, ranging from 86 percent to 93 percent, followed by approximately 6 percent to 15 percent Hindu. Less than 2 percent of all households were Christian. On average, DHHs were larger than FHHs (3 members vs 2 members).

**Table 4.1 Household characteristics, by actor and household type**

	Producers		Entrepreneurs		Wage Workers	
	DHH	FHH	DHH	FHH	DHH	FHH
Number of households	Male 329	71	Male 397		Male 344	56
	Female 329		Female 398		Female 344	
<b>District (%)</b>						
Barisal	19.45	22.54	20.00		21.22	12.50
Chuadanga	19.76	21.13	20.13		20.64	16.07
Jessore	19.45	22.54	20.13		20.93	14.29
Jhenaidah	20.36	18.31	19.87		20.35	17.86
Satkhira	20.97	15.49	19.87		16.86	39.29
<b>Religion (%)</b>						
Muslim	87.54	92.96	91.95		91.86	85.71
Hindu	11.55	5.63	8.05		7.27	14.29
Christian	0.91	1.41			0.87	
<b>Average household size</b>	3.06	2.07	3.45		2.91	1.84

**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Notes: DHH: Dual-headed households; FHH: Female-only households. FHH among entrepreneurs was excluded due to small sample size (N=2).

Male respondents were older than female respondents in DHHs (46 years versus 38 years among producers; 44 years versus 37 years among entrepreneur households; and 41 years versus 34 years among wage-worker households), which is typical of marriage patterns in Bangladesh (Table 4.2). Average age of respondents in female-only wage-worker households (45 years) was higher than that for producer (37 years) and entrepreneur households (33 years). Most respondents had at least some primary school education or were primary school graduates, except male and female respondents in wage worker FHH, who had no schooling. Respondents in entrepreneur households had the highest, and respondents in wage-worker households, the lowest, mean years of schooling. Women in wage-worker FHH had the lowest mean years of schooling at 1.38 years.

DHHs owned more land than FHHs for all actors. Entrepreneur DHHs owned the most land (136 decimals<sup>6</sup>), followed by wage workers (125 decimals) and producers (112 decimals). Producer FHHs owned 50 decimals of land, while wage-worker FHHs owned 40 decimals of land.

<sup>6</sup> 1 decimal ~ 1/100 acre (40.46m<sup>2</sup>).

**Table 4.2 Individual and household characteristics of respondents, by actor and household type**

	Producers			Entrepreneurs		Wage Workers		
	Male (DHH)	Female (DHH)	Female (FHH)	Male (DHH)	Female (DHH)	Male (DHH)	Female (DHH)	Female (FHH)
Number of respondents	329	329	71	397	398	344	344	56
Mean age of respondent (years)	46.17	38.28	36.75	44.36	36.58	41.21	34.38	45.07
Education (%)								
No schooling	29.18	25.84	19.72	16.62	13.60	37.79	25.87	66.07
Some schooling	2.13	0.91		0.76	0.50	2.03	1.16	
Some primary school	17.93	14.29	16.90	18.39	15.37	23.55	23.26	21.43
Primary graduate	15.20	19.15	14.08	11.84	13.85	14.83	15.99	5.36
Some secondary school	23.71	30.70	39.44	25.44	38.04	15.70	30.23	7.14
Secondary school graduate	5.78	6.69	7.04	10.58	8.56	4.07	1.74	
Completed higher secondary	3.34	1.82	2.82	9.07	6.80	1.74	1.16	
College graduate or higher	2.74	0.61		7.30	3.02	0.29	0.58	
Madrasa					0.25			
Mean years of schooling	4.51	4.71	5.21	6.41	6.24	3.28	4.08	1.38
Mean area of land owned by household (in decimals) <sup>†</sup>		112.41	50.37		136.02		124.97	40.42

**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Notes: DHH: Dual-headed households; FHH: Female-only households.

<sup>†</sup> Includes agricultural and nonagricultural land. 1 decimal ~ 1/100 acre (40.46m<sup>2</sup>).

Table 4.3 presents the sub-indicators that make up the A-WEAI, as well as potential additional indicators and domains of empowerment that are included in the WEAI4VC, such as intrahousehold relationships, attitudes about domestic violence, and physical mobility. Additional indicators included in the Bangladesh WEAI4VC survey include *parda* information, awareness of key messages, food insecurity in the household, and women's assets brought to marriage (female respondents only). The definition of adequacy for each sub-indicator specifies the conditions required for a respondent to be empowered in that sub-indicator. For example, a respondent who participates in at least one community group is adequate in group membership, meaning that s/he is empowered in group membership.

**Table 4.3 Domains and sub-indicators of the WEAI4VC**

<b>Domain</b>	<b>Sub-indicators</b>	<b>Definition of adequacy</b>
Livelihoods	Input in livelihood activity decisions <sup>†</sup>	Respondent has some input in decisions about livelihood activity or feels they can make decisions in at least two areas of livelihood activities.
	Access to information	Respondent can access information about at least one livelihood activity.
	Autonomy in livelihood activity	Respondent has autonomy (RAI>1) <sup>a</sup> in at least one livelihood activity.
	Using income from agricultural and non-agricultural activities	Respondent has autonomy (RAI>1) in using income from agricultural and non-agricultural activities
<b>Autonomy in</b>		
<i>Producers</i>	Types of crops to grow	Respondent has autonomy (RAI>1) in for types of crops to grow.
	Livestock raising	Respondent has autonomy (RAI>1) in livestock raising.
	Fish production/farming	Respondent has autonomy (RAI>1) in fish production/farming.
	Taking crops/livestock/fish to market	Respondent has autonomy (RAI>1) in taking crops/livestock/fish to market.
<i>Entrepreneurs</i>	Types of products to make and/or sell in the market	Respondent has autonomy (RAI>1) in types of products to make and/or sell in the market.
	Location of the enterprise	Respondent has autonomy (RAI>1) in location of the enterprise.
	Size of the enterprise	Respondent has autonomy (RAI>1) in size of the enterprise.
	Whether to work for someone else for pay	Respondent has autonomy (RAI>1) in whether to work for someone else for pay
<i>Wage workers</i>	Type of work	Respondent has autonomy (RAI>1) in type of work
	Working conditions	Respondent has autonomy (RAI>1) in working conditions
Resources	Ownership of assets <sup>†</sup>	Respondent solely or jointly owns at least one large or two small assets.
	Rights over assets	Respondent solely or jointly has at least one right to at least one agricultural asset that their household owns.
	Access to and decisions on credit <sup>†</sup>	Respondent solely or jointly makes at least one decision about at least one source of credit that their household used.
	Access to financial account	Respondent has sole or joint access to a financial account.
Income	Control over use of income <sup>†</sup>	Respondent has at least some input in decisions about income or feels they can make decisions about income, not including minor household purchases.
	Control over use of agricultural income	Respondent has input in decisions related to how to use agricultural income.
Leadership	Group membership <sup>†</sup>	Respondent participates in at least one community group.
Time	Workload <sup>†</sup>	Respondent worked less than 10.5 of the last 24 hours.
	Access to childcare	Respondent has someone to care for their child(ren) in their absence.



Domain	Sub-indicators	Definition of adequacy
Intrahousehold relationships	Mutual respect among household members	Respondent has mutual respect with the other respondent in their household, and respondent trusts and is comfortable disagreeing with the other respondent in their household.
	Attitudes about domestic violence from husband	Respondent believes that a husband is never justified in hitting their wife.
Mobility	Physical mobility	Respondent can visit at least two locations once per week.

Source: Constructed by authors.

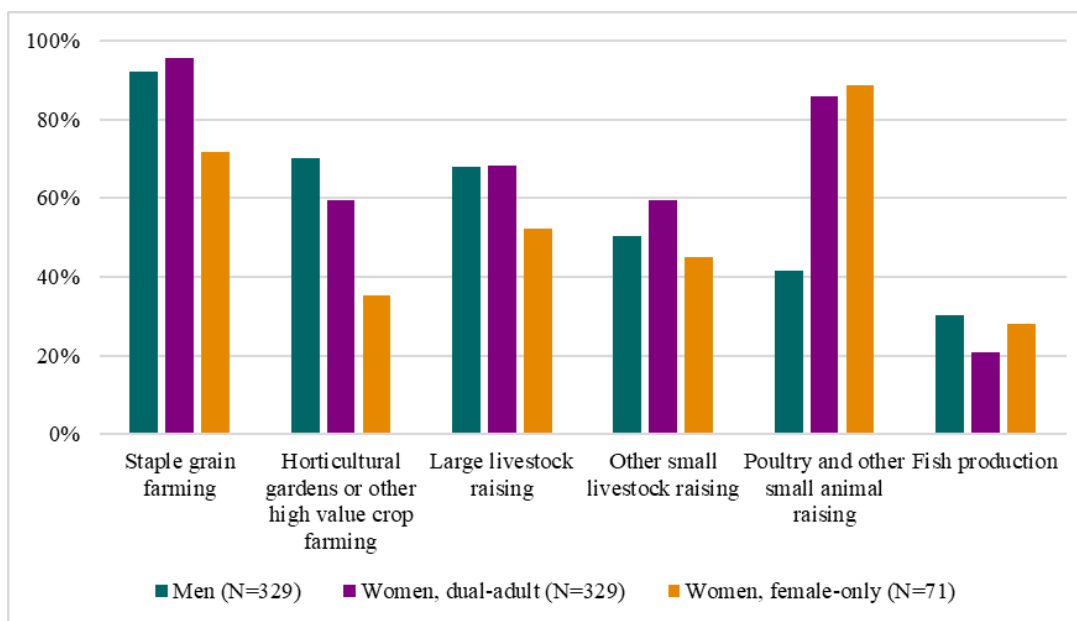
<sup>†</sup> Included in A-WEAI calculation <sup>a</sup>RAI=relative autonomy index.

## 4.2 Livelihoods

### Livelihood activities<sup>7</sup>

*Producers:* Most households reported participating in staple grain farming, although participation among FHHs was lower than that of DHHs (**Figure 4.1**). In producer households, all women (in DHH and FHH) who were interviewed were involved in at least one production activity. A larger proportion of female respondents (in DHHs and FHHs) reported participating in poultry and other small animal raising compared to male respondents, reflecting the common pattern of women’s heavy involvement in livestock production in Bangladesh. Less than 30 percent of households reported participating in fish production.

**Figure 4.1 Producers: Respondent participation in production activities, by household type**



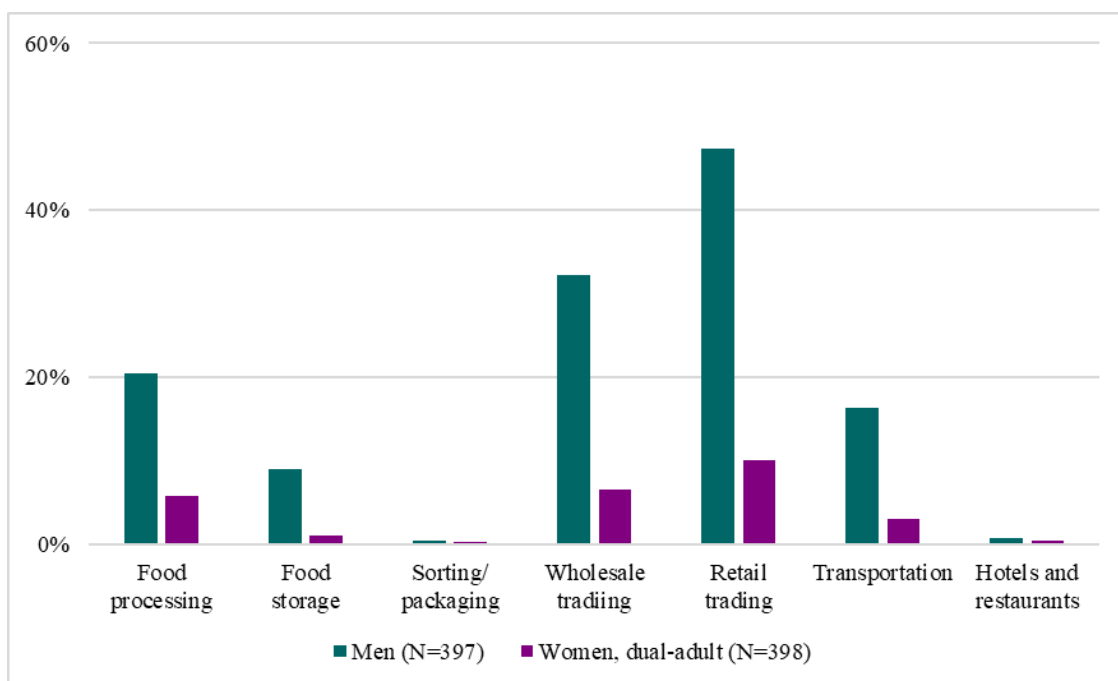
Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

<sup>7</sup> Included in A-WEAI calculation.

Respondents in the qualitative study agreed that production tasks typically differed for men and women as well as by region. Women do not generally work in the rice fields but carry out other agricultural work in home gardens or perform tasks within the confines of their home compounds, including crop sorting, cleaning, and grading, or jute fiber extraction.

*Entrepreneurs:* Approximately 47 percent of male respondents reported participation in retail trading, while 32 percent reported participating in wholesale trading, and 20 percent in food processing (Figure 4.2). However, only 89 out of 398 women in entrepreneur DHHs (22 percent) participated in entrepreneurial activities, consistent with the very low participation rates for female respondents in DHHs. Only 10 percent of women in DHHs participated in retail trading, 7 percent in food processing, and 6 percent in wholesale trading.

**Figure 4.2 Entrepreneurs: Respondent participation in entrepreneurship activities, by household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

*Wage workers:* Among wage-work households, crop farming was the main reported activity among male respondents in DHHs and female respondents in FHHs (Figure 4.3). Wage work is a relatively uncommon type of livelihood for women in DHHs, with only 37 out of 344 female respondents (11 percent) involved in these activities. A large proportion of female respondents in FHH also reported participating in processing activities, while male respondents reported participating in wholesale service. Female respondents in DHH had very low participation among wage-work activities, with the highest participation (8 percent) in crop farming. This may reflect the social desirability of female seclusion, or purdah, which may constrain women from working outside the homestead for employers who are not family members.

**Figure 4.3 Wage workers: Respondent participation in wage-work activities, by household type**

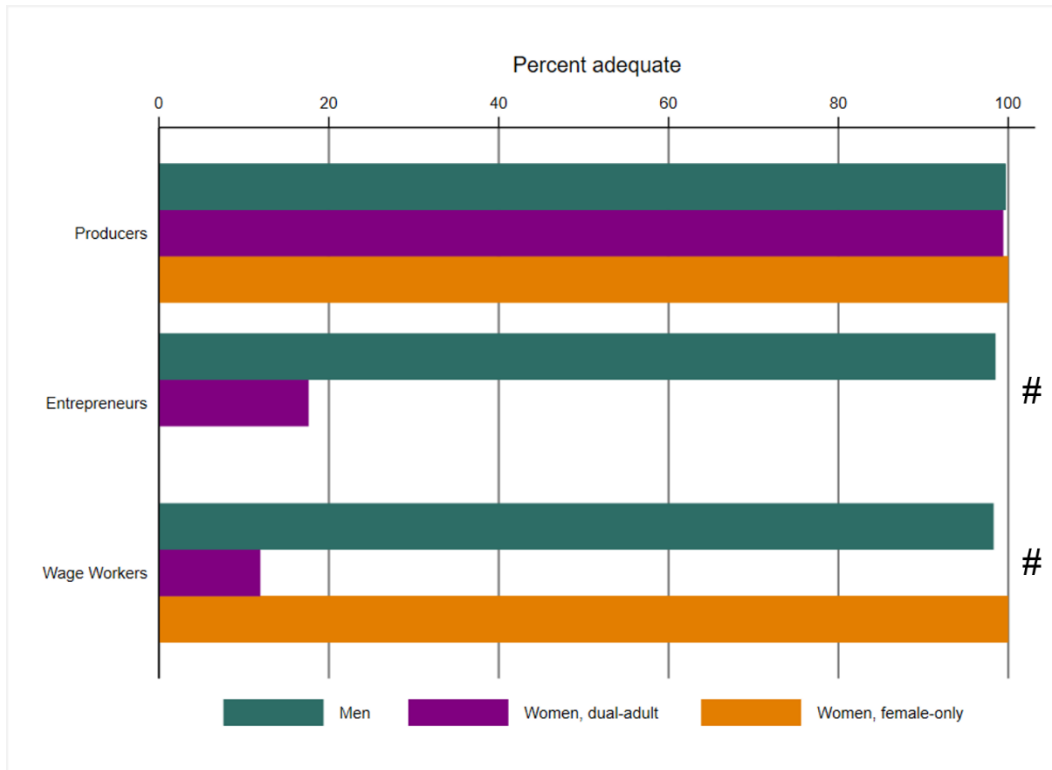


Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

The A-WEAI measure for the production domain is the input in productive decisions sub-indicator. In the WEAI4VC, this domain will be called “livelihoods” to reflect the broader set of activities conducted by different types of actors. Additional sub-indicators of access to information about livelihood activities, and autonomy in livelihood activities, are included in the results, but excluded from the A-WEAI calculation.

Nearly all respondents had adequate input in livelihood decisions, except for female respondents in entrepreneur and wage worker DHHs, where less than 20 percent had adequacy (Figure 4.4). (In the following bar charts, a # is used to indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level.) If we restrict this indicator to women in DHHs who are themselves participating in entrepreneurship and wage work, adequacy increases to 60 percent for entrepreneurs (n=89) and 95 percent for wage workers (n=37). Table 4.7, presented in Section 4.9 with the A-WEAI results, shows the percent of respondents, by actor and household type, who are adequate in each sub-indicator.

**Figure 4.4 Percent of respondents who are adequate in input in livelihood activity decisions, by actor and household type**

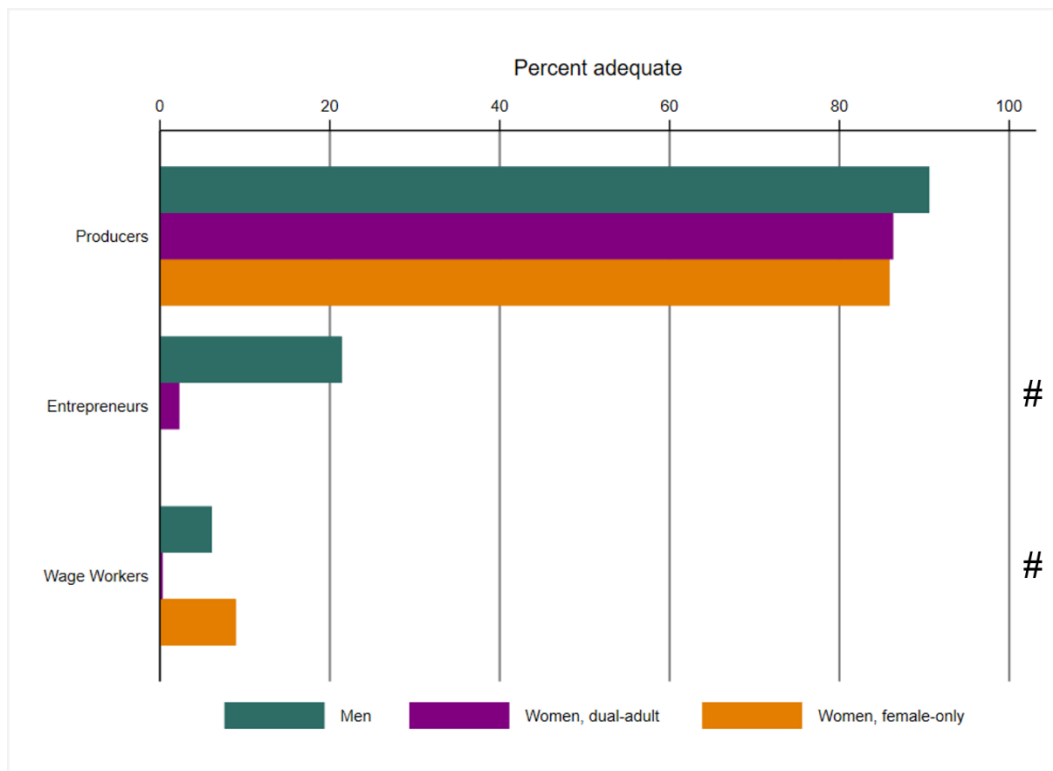


**Source:** Constructed by authors.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

Most respondents in producer households are also adequate in accessing information about livelihood activities (Figure 4.5). While approximately 20 percent of men in entrepreneur households are adequate, less than 10 percent of female respondents in entrepreneur and wage-work DHHs are adequate in this sub-indicator. If we restrict this sample to women participants only, these estimates do not change. This large gap in adequacy achievements regarding information access across value chain actors indicates gaps in the extension system, which reaches agricultural producers better than entrepreneurs and wage workers.

**Figure 4.5 Percent of respondents who are adequate in access to information about livelihood activities, by actor and household type**



**Source:** Constructed by authors.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

## Autonomy

Autonomy was measured using a short story (or vignette) followed by a series of questions asking respondents if they were similar to hypothetical people who had different motivations for their decisions about the topic. For example, the questions about autonomy in working conditions asked respondents if they were similar to a person who works in unsafe working conditions because s/he has no other choice, because s/he does what s/he is told to do by family members, because s/he does what the family or community expects, or because s/he does what s/he thinks is the best option. Based on these questions, the relative autonomy index (RAI) in working conditions was calculated. Respondents with an RAI greater than one—indicating that their actions were relatively more motivated by their own values than by coercion or fear of others’ disapproval—were considered empowered.

Figure 4.6 shows the percent of respondents in producer households who perceive themselves to be like the people described in the stories. Most respondents in production households stated that they are most similar to people in the stories who “do what they think is best” across all the different production decisions, including types of crops to grow, livestock raising, fish production, taking crops or livestock to

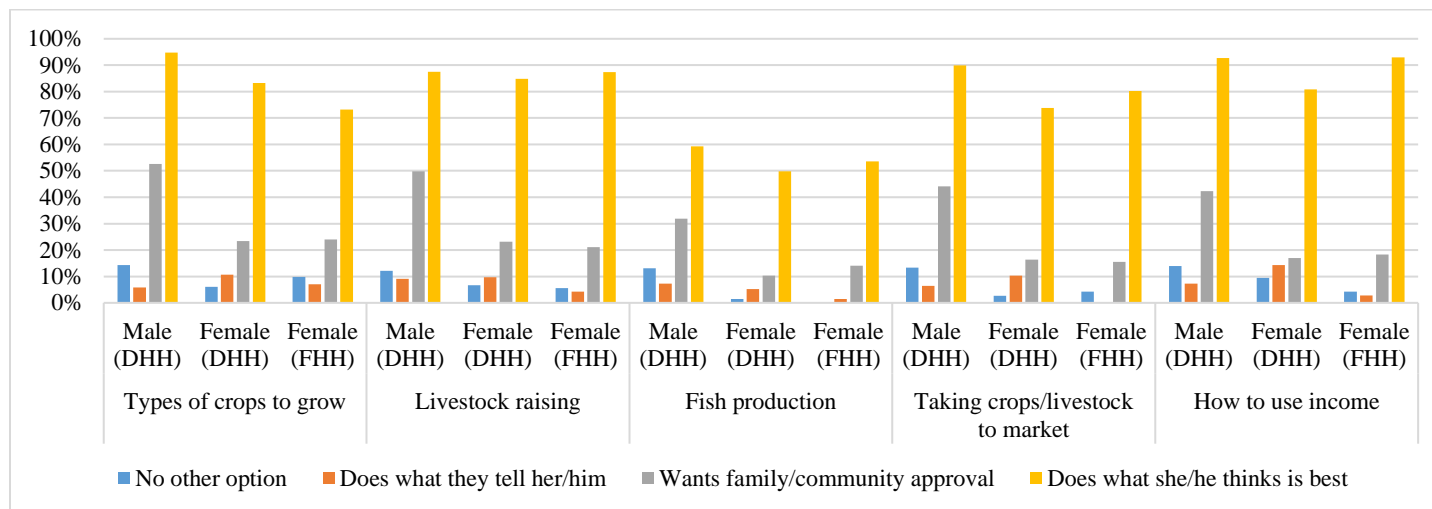
the market, and how to use income. However, respondents report being least similar to stories of people “doing what they think is best” regarding fish production.

Similar to the pattern in production households, most entrepreneur households report being most similar to people in stories that “do what they think is best” across all the different business decisions, including the types of products to make/sell in market, location of enterprise, size of enterprise, and how to use income (Figure 4.7). Respondents in wage-worker households report being most similar to people in stories that “do what they think is best” across all the different employment decisions, including whether to work for someone else for pay, type of work, working conditions, and how to use income.

However, women respondents in dual-headed entrepreneur and wage-worker households were less likely to report being similar to people “doing what they think is best” regarding the types of products to make/sell in market, location of enterprise, and size of enterprise in entrepreneur households, and regarding whether to work for someone else for pay, type of work, working conditions in wage-worker households (Figure 4.8). This may reflect the fact that only 22 percent of women in entrepreneur DHHs and 24 percent of women in wage-worker DHHs are themselves engaged in this specific activity.

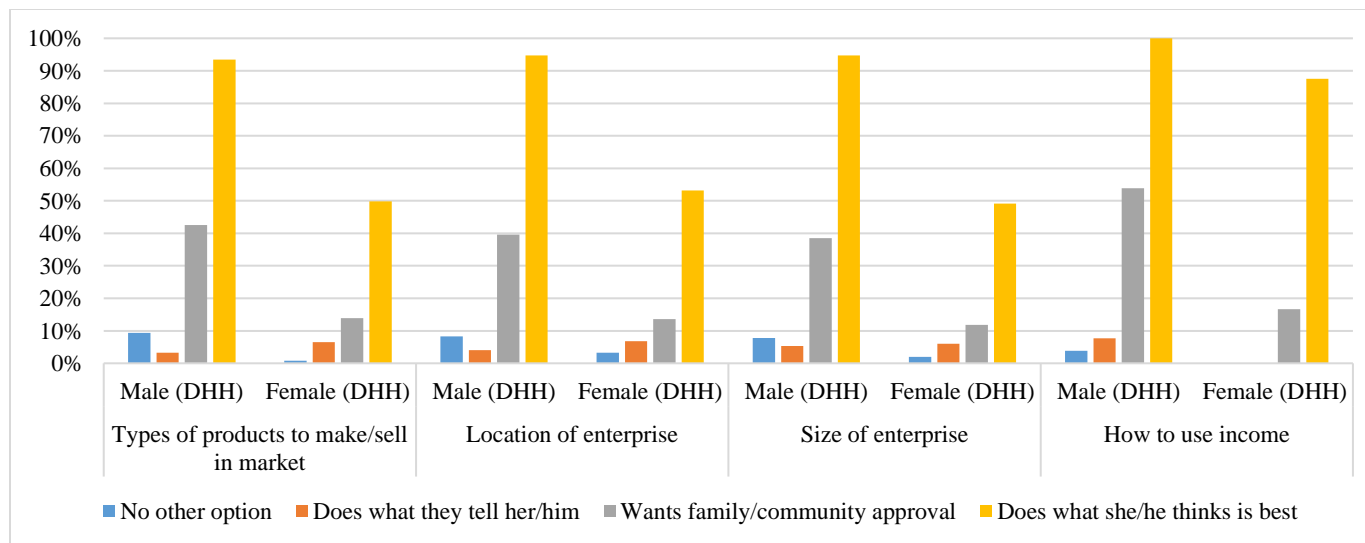
In the qualitative study, most respondents did not view the ability to take their own decisions and to act on them as a positive quality for women. One man, an entrepreneur and a farmer, reflected this widely-held perspective stating “If she takes her own decision without her husband’s consent then other women of this area will not find her to be a good woman even if she is doing good work..... Men will also not find them good.” Although men were seen as responsible for taking decisions independently and on behalf of the family, the idea that women would act similarly was characterized as disobeying their husbands.

**Figure 4.6 Producers: Percent of respondents who are like the people in the stories**



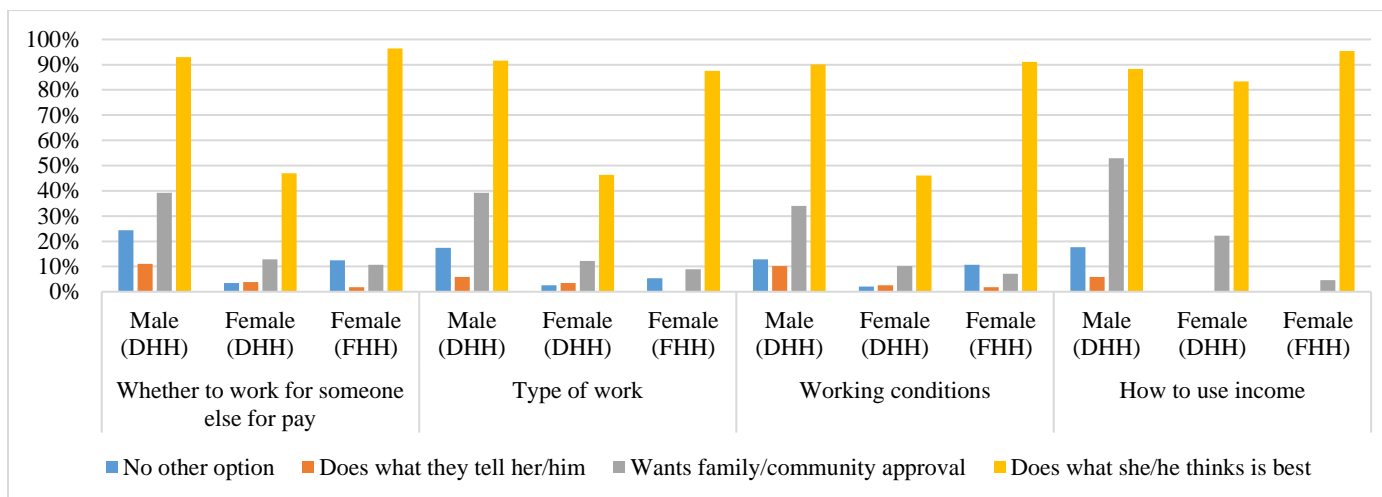
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71).

**Figure 4.7 Entrepreneurs: Percent of respondents who are like the people in the stories**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Entrepreneurs – men (N=397); women, dual-adult (N=398).

**Figure 4.8 Wage Workers: Percent of respondents who are like the people in the stories**



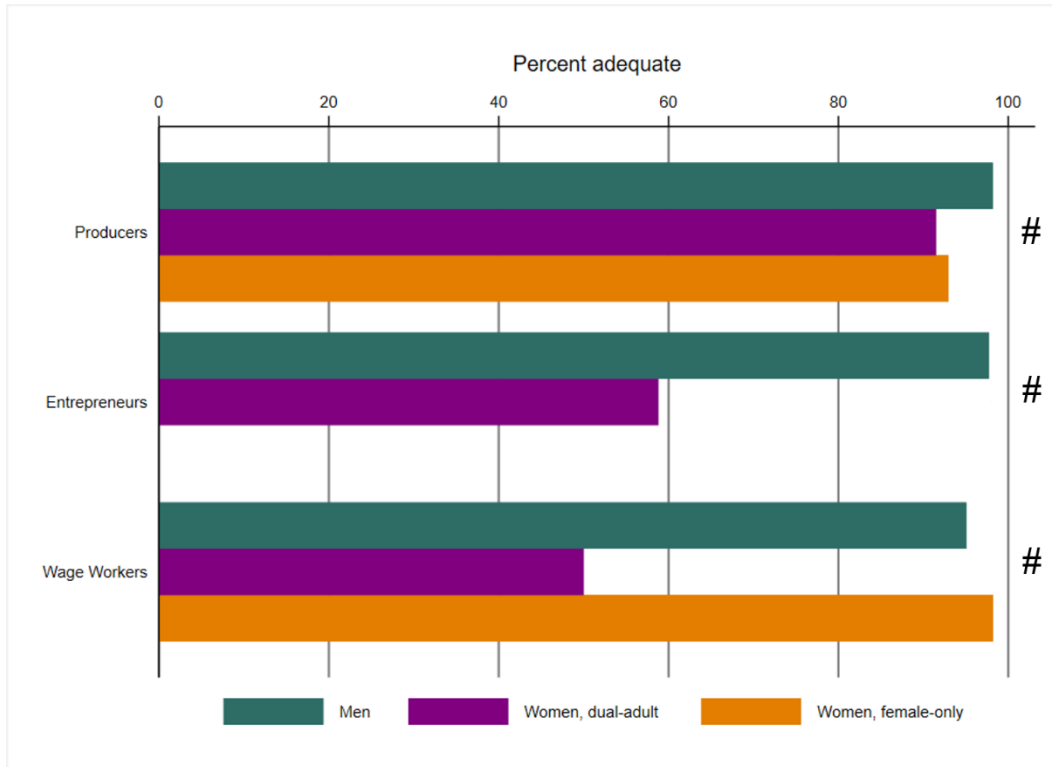
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Number of observations: Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).



Adequacy in autonomy was defined as having a RAI>1 in at least one livelihood activity. Nearly all respondents in producer households achieved adequacy in autonomy, although there was a significant difference by household type (Figure 4.9). Most male respondents in entrepreneur and wage-worker households, and female respondents in FHH in wage-worker households were also adequate. Female respondents in DHH in entrepreneur and wage-worker households were those with the least adequacy in autonomy.

**Figure 4.9 Percent of respondents who are adequate in autonomy in livelihood activities, by actor and household type**



**Source:** Constructed by authors.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

Responses in the qualitative study interviews provide insight on issues of autonomy. Most of the interviews stress the importance of a married couple agreeing about the decisions they take as well as in their understanding of who makes which decisions. The interviews reflect that both men and women have areas in which each could legitimately take decisions and act on them either independently or together, for example, where the husband managed the farm and the wife managed the household. However, these gendered areas of decision making were not uniform. In some cases, wives also made decisions around agricultural production or agri-business. Household circumstances influenced these patterns, especially if the husband was working abroad or had died. One informant described this situation as follows, “The woman who has her husband living abroad runs her home according to her wish, takes all the decisions of her children and looks after the family. Such women have no one

controlling their movement. They just inform their husbands over the phone.” What was repeatedly noted as important was that the couple in DHHs should agree together on who could decide about what and that women who were heads of households needed to take responsibility for their own decisions.

### 4.3 Resources

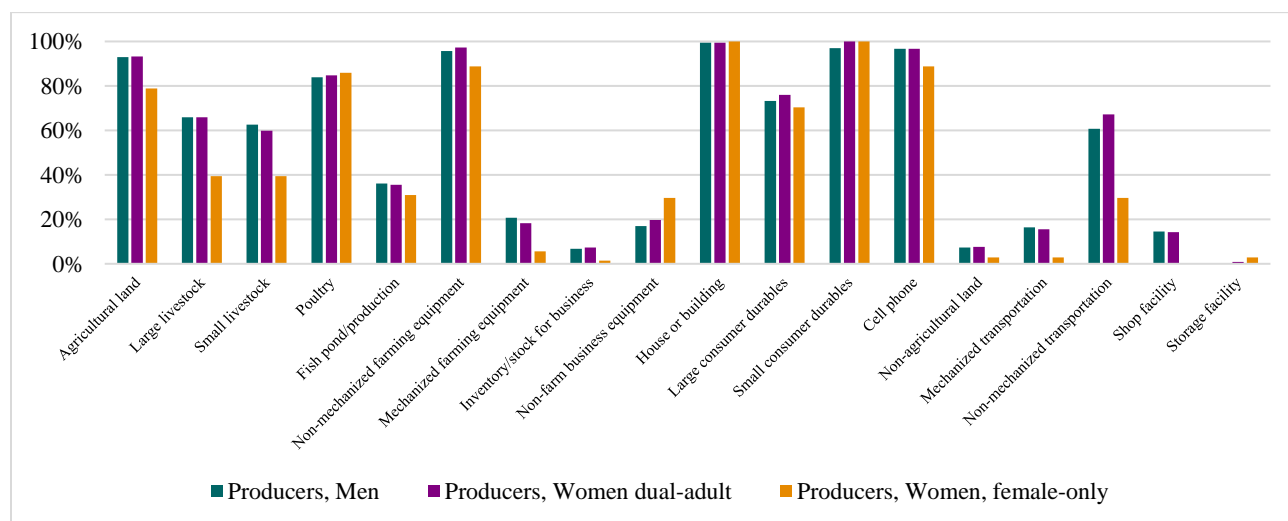
#### Asset ownership<sup>8</sup>

Across all types of actors, most households own agricultural land or a house or building (Figure 4.10). Agricultural landownership is the lowest for FHHs involved in wage work. Households are also more likely to own poultry, consumer durables, and cell phones than mechanized farming equipment or mechanized transportation. FHHs are less likely to own large or small livestock, or poultry compared to their counterparts.

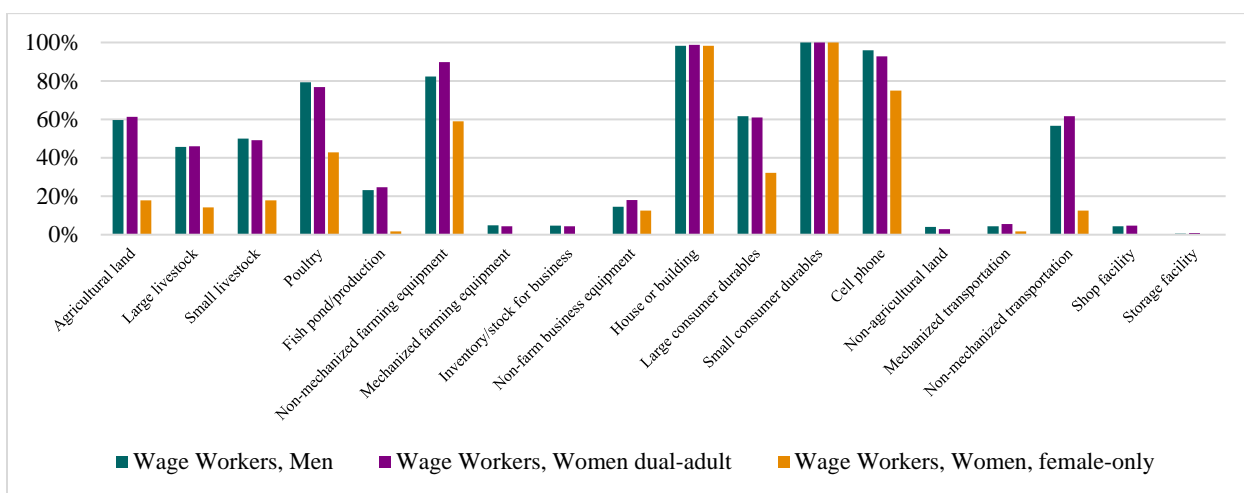
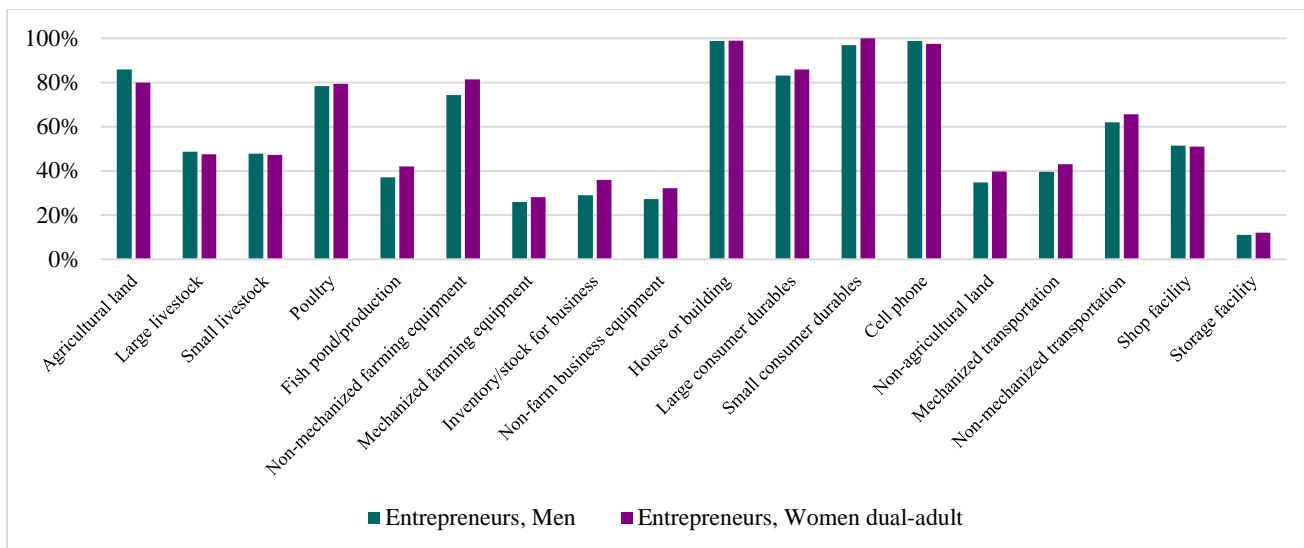
Of respondents who reported that someone in their household owned these assets, more male respondents were likely to solely or jointly own the asset compared to female respondents, except for small livestock, poultry, non-mechanized farming equipment (except female respondents in wage-work DHHs), and consumer durables (Figure 4.11). Rights over assets, including buying and selling the asset, follow similar patterns as sole or joint ownership (Figure 4.12 and Figure 4.13). Female respondents were more likely to have more rights over small livestock, poultry, and consumer durables, but not non-mechanized farming equipment, than male respondents.

Among producer households, more female respondents owned storage facilities, and female respondents in FHHs were as likely to own inventory/stock and cell phones compared to men. Among wage workers, female respondents in DHHs were less likely to own any assets compared to at least one of their counterparts.

**Figure 4.10 Percent of respondents from asset-owning households, by actor and household type**

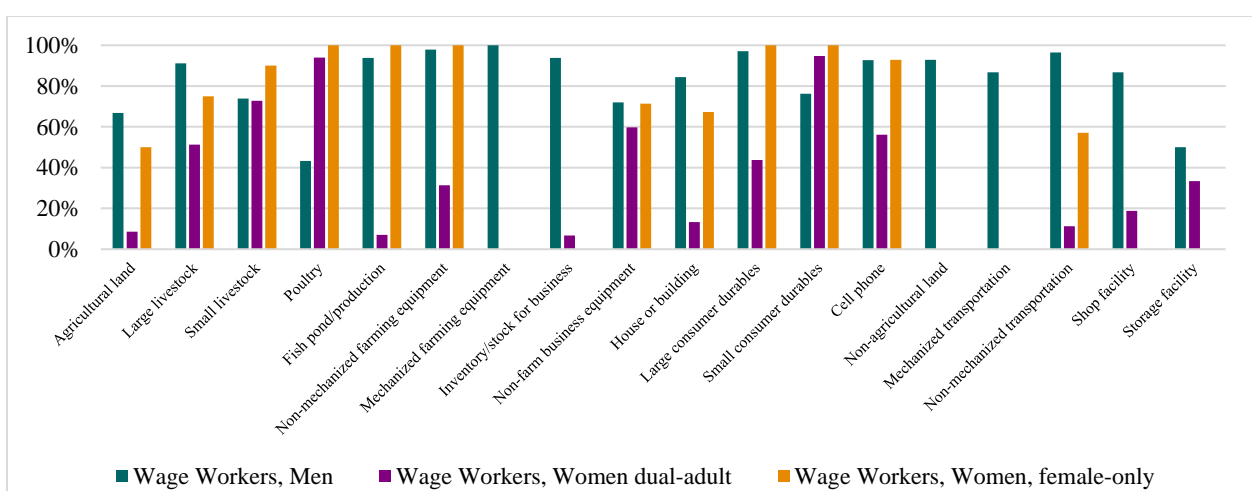
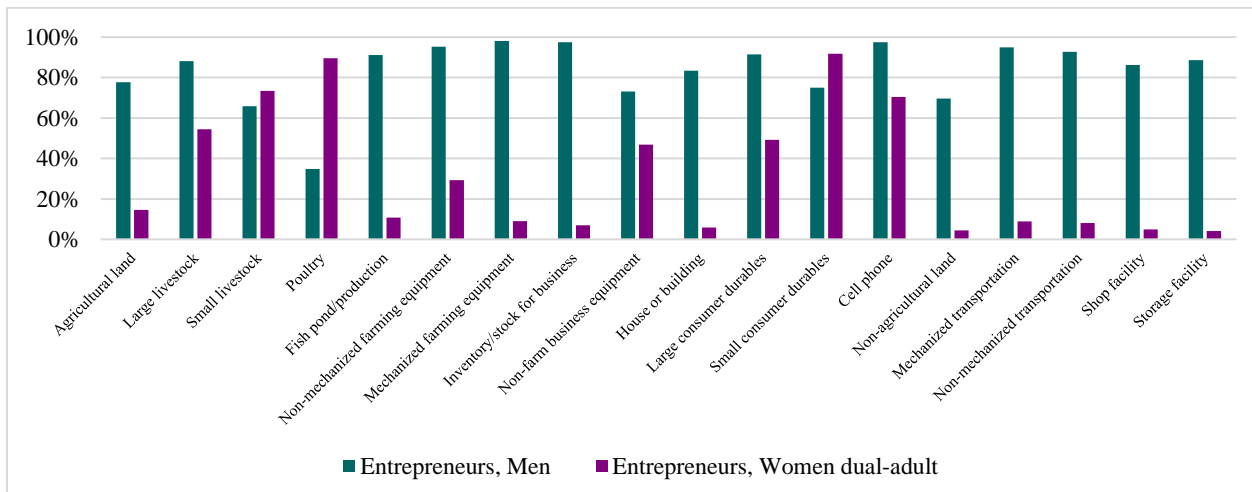
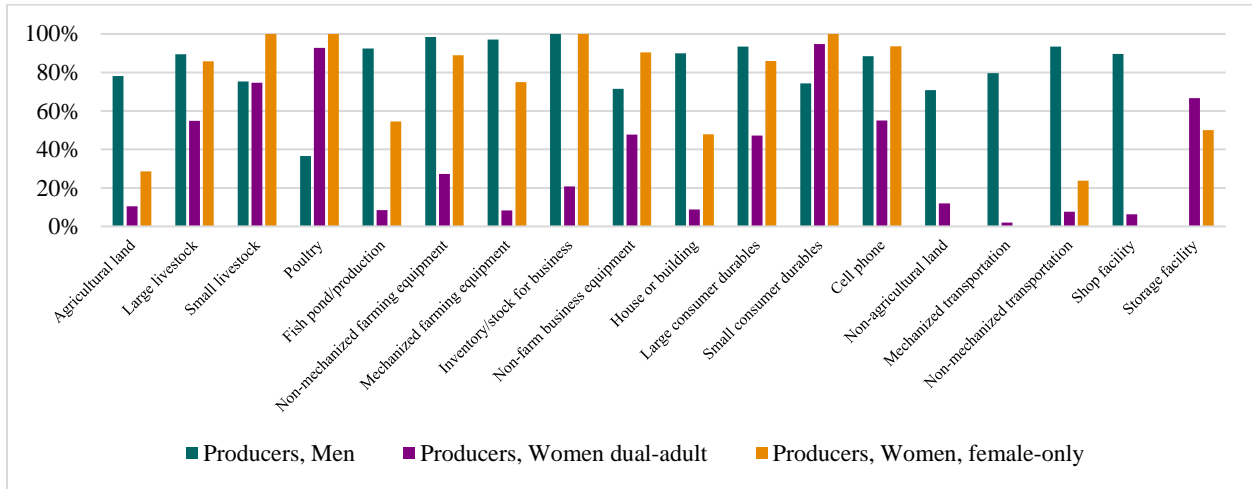


<sup>8</sup> Included in A-WEAI calculation.



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71);  
 Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women,  
 female-only (N=56).

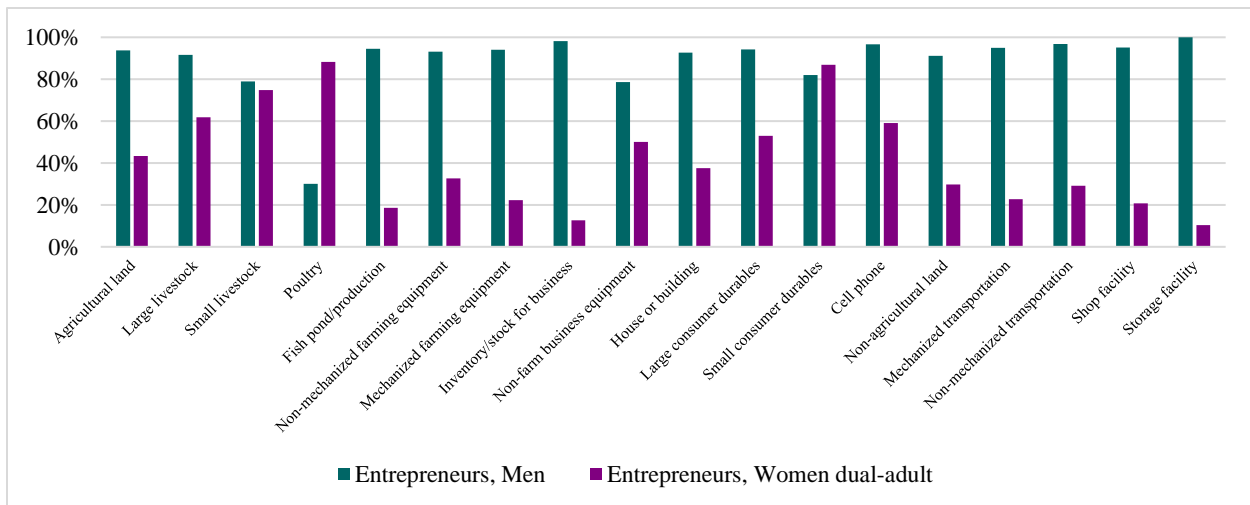
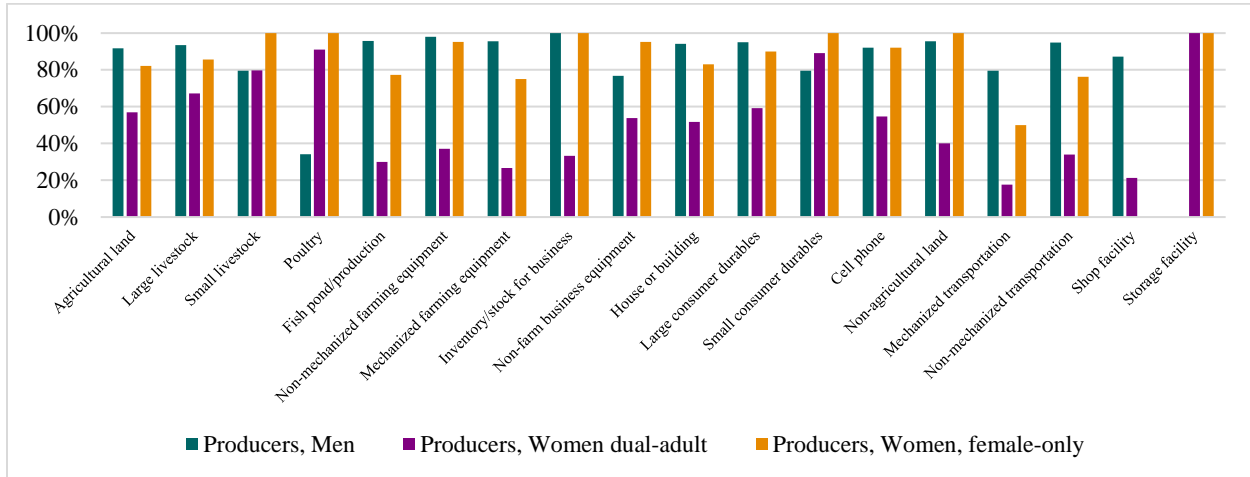
**Figure 4.11 Percent of respondents from households who solely or jointly own assets owned by their households, by actor and household type**



Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

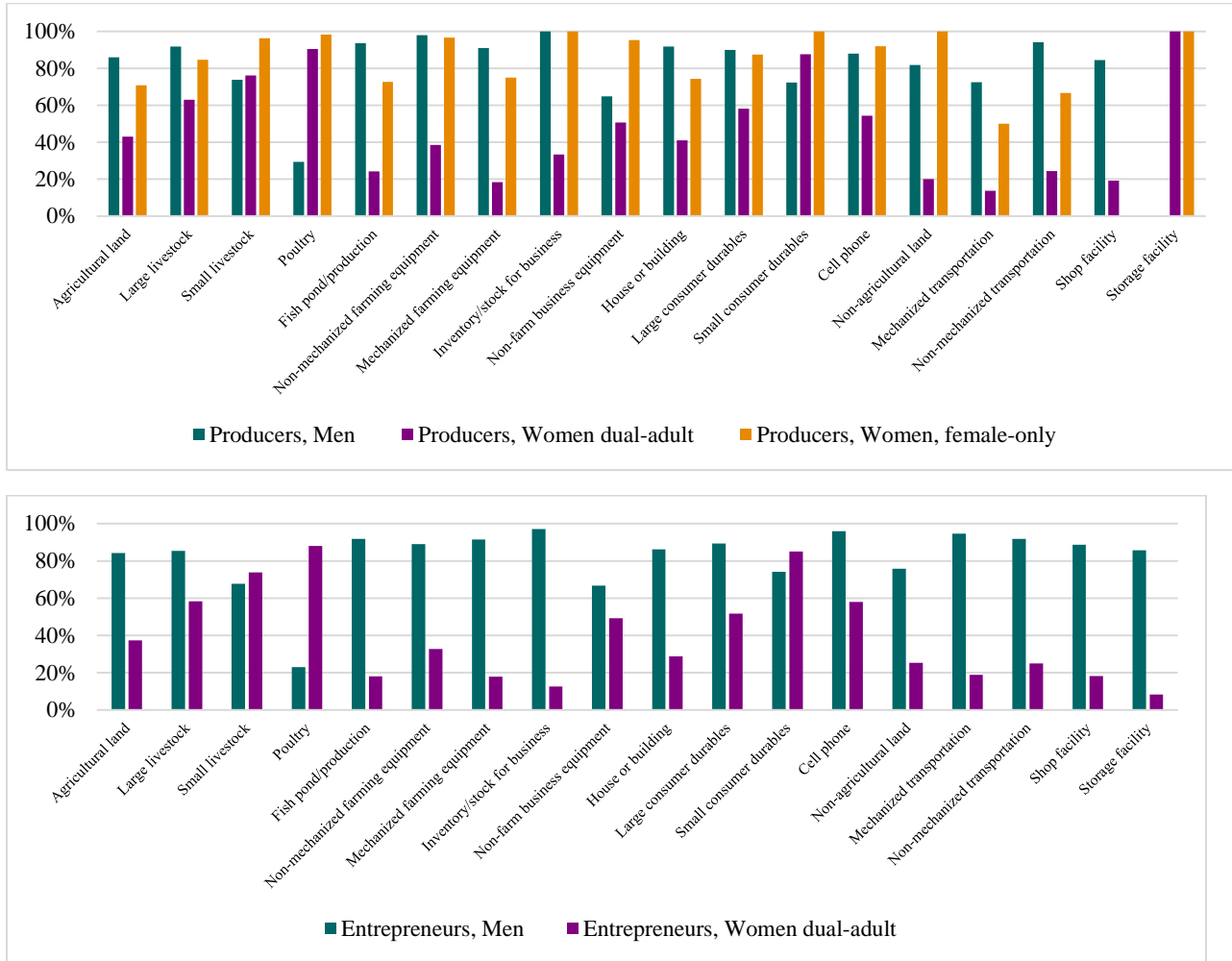
Note: Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

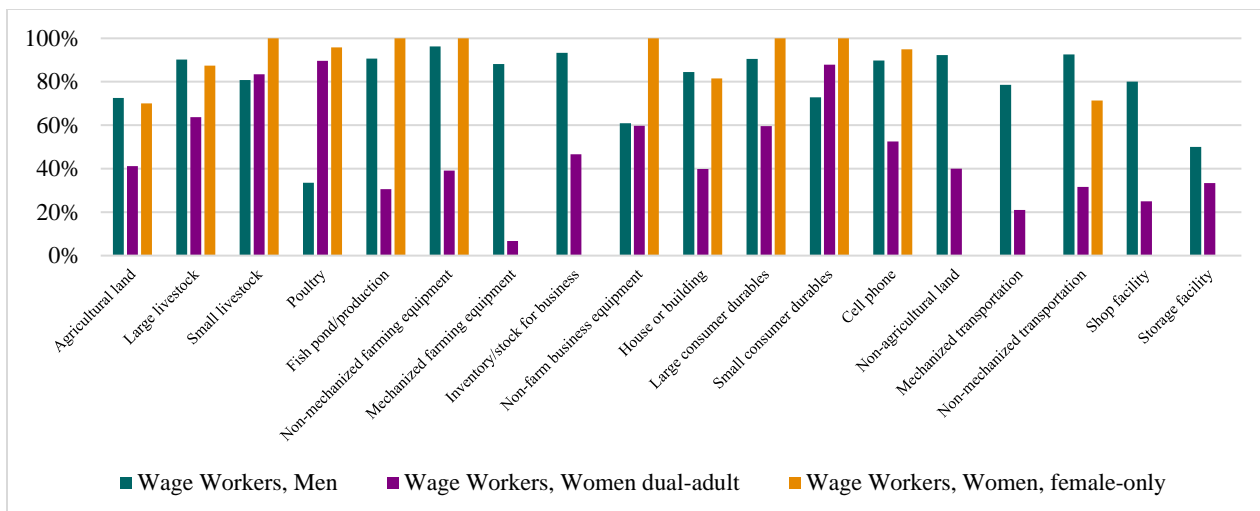
**Figure 4.12 Percent of respondents from asset-owning households who can purchase assets, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71);  
 Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women,  
 female-only (N=56).

**Figure 4.13 Percent of respondents from asset-owning households who can rent, sell, give away, or mortgage those assets, by actor and household type**



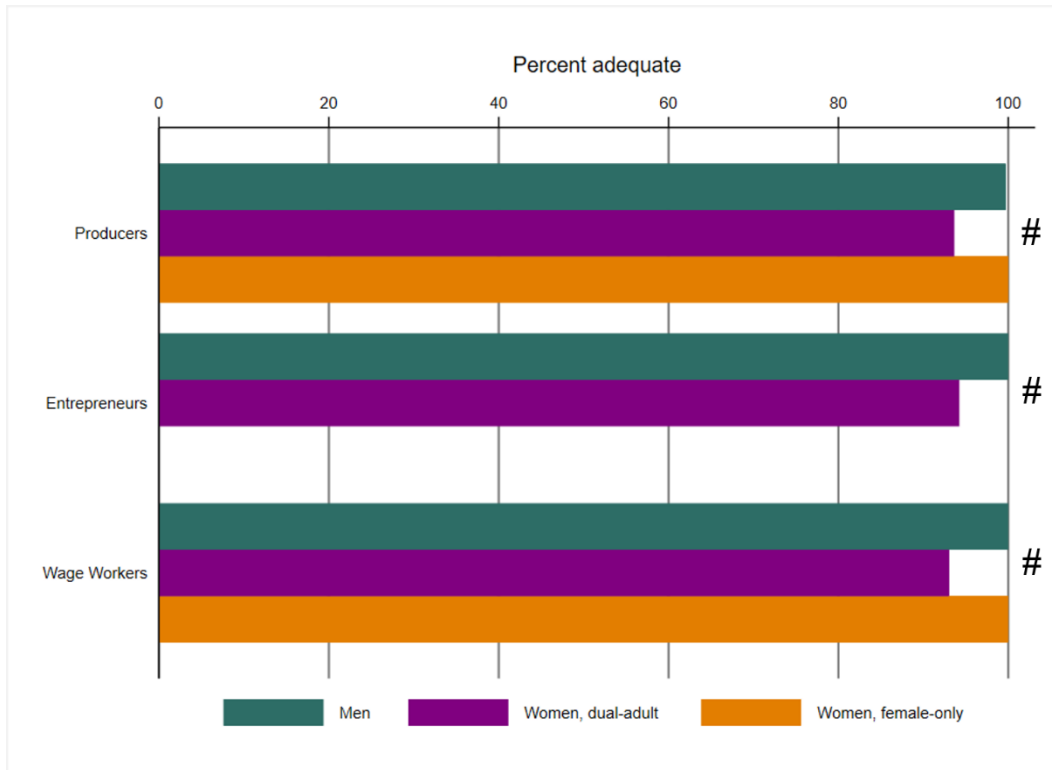


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

Adequacy in asset ownership was defined as owning at least one large asset or two small assets (poultry and small consumer durables). Most respondents achieved adequacy in this category, with female respondents in FHH achieving similar adequacy as male respondents. Female respondents in DHHs achieved the least adequacy (Figure 4.14).

**Figure 4.14 Percent of respondents in households who are adequate in ownership of assets, by actor and household type**

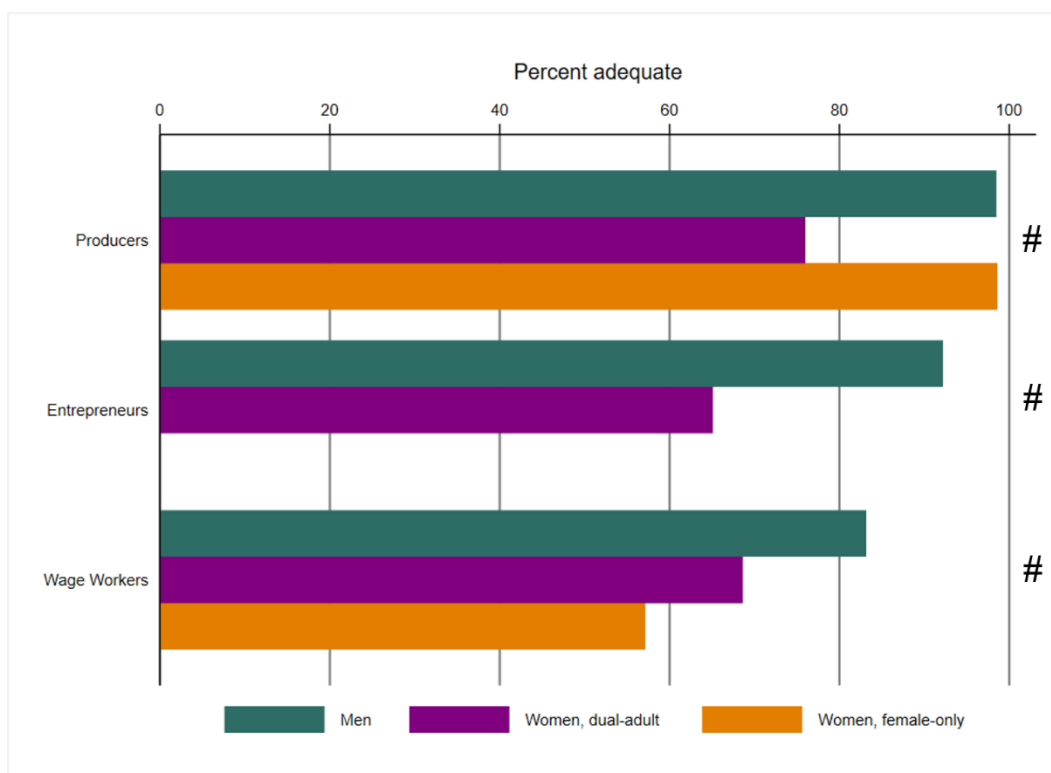


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI. Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

A smaller percentage of respondents were adequate in rights over assets (Figure 4.15). Male respondents and female respondents in FHH among producer households achieved similar adequacy rates. However, male respondents in entrepreneur and wage-worker households were more likely to be adequate in the sub-indicator compared to female respondents. Female respondents in FHHs involved in wage work were the least likely to achieve adequacy in rights over assets.



**Figure 4.15 Percent of respondents who are adequate in rights over assets, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

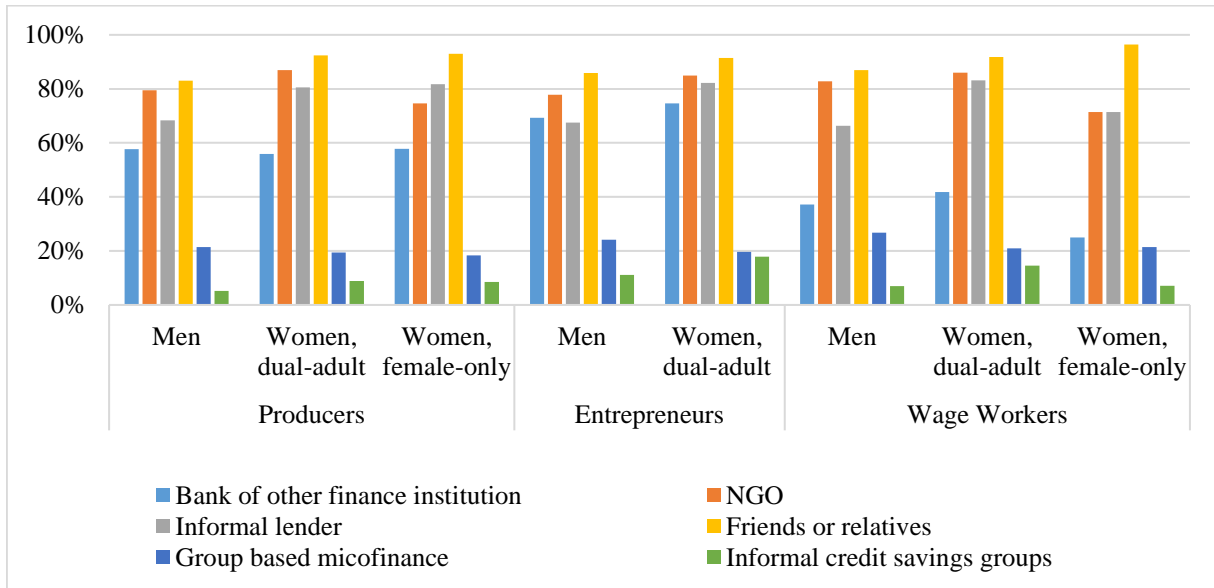
Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

### Access to and decisions on credit<sup>9</sup>

Most respondents reported that NGOs and banks were the most commonly available formal sources of credit in the community (Figure 4.16). Approximately 20 percent of all respondents said that group-based microfinance was also available. Among informal sources of credit, most respondents reported that they would be able to take a loan or borrow cash/in kind from friends or relatives or informal lenders if they wanted to. Women tended to report higher access to loans from NGOs than men, reflecting the long history of targeting credit to women through NGOs in Bangladesh.

<sup>9</sup> Included in A-WEAI calculation.

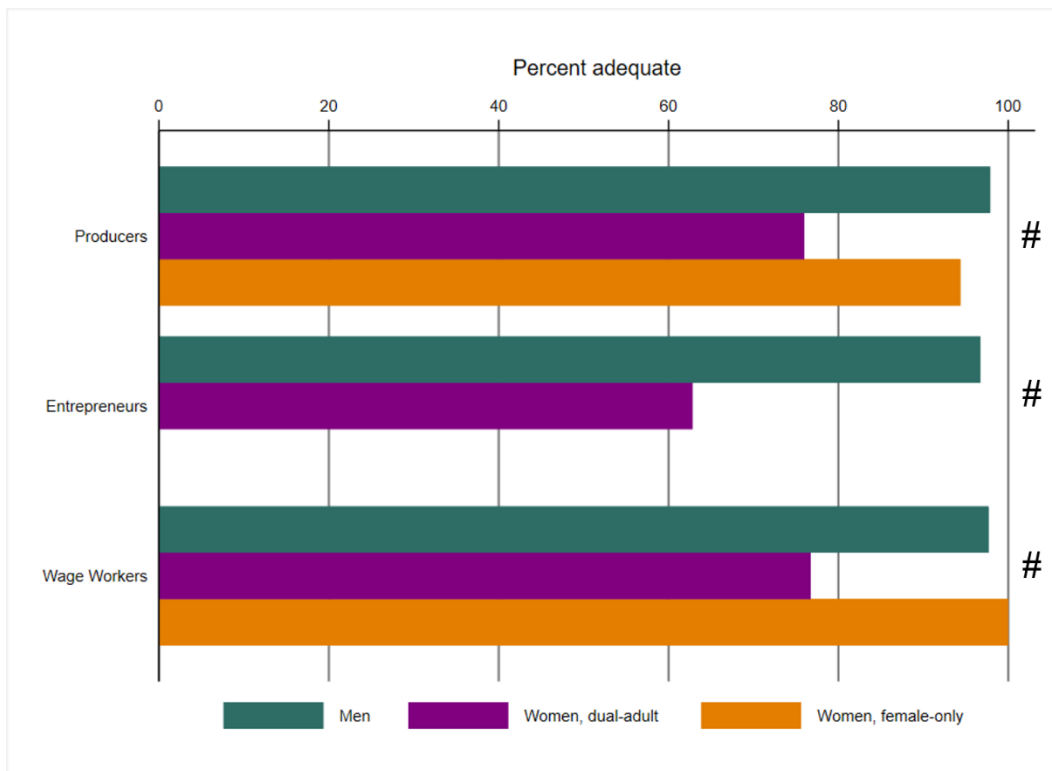
**Figure 4.16 Percent of respondents from households whose households have access to loans, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71);  
 Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344);  
 women, female-only (N=56).

Most respondents were adequate in access to and decisions on credit (Figure 4.17). Female respondents in FHHs were as likely to be adequate as male respondents, and female respondents in DHHs were least likely to be adequate in this sub-indicator.

**Figure 4.17 Percent of respondents who are adequate in access to and decisions on credit, by actor and household type**



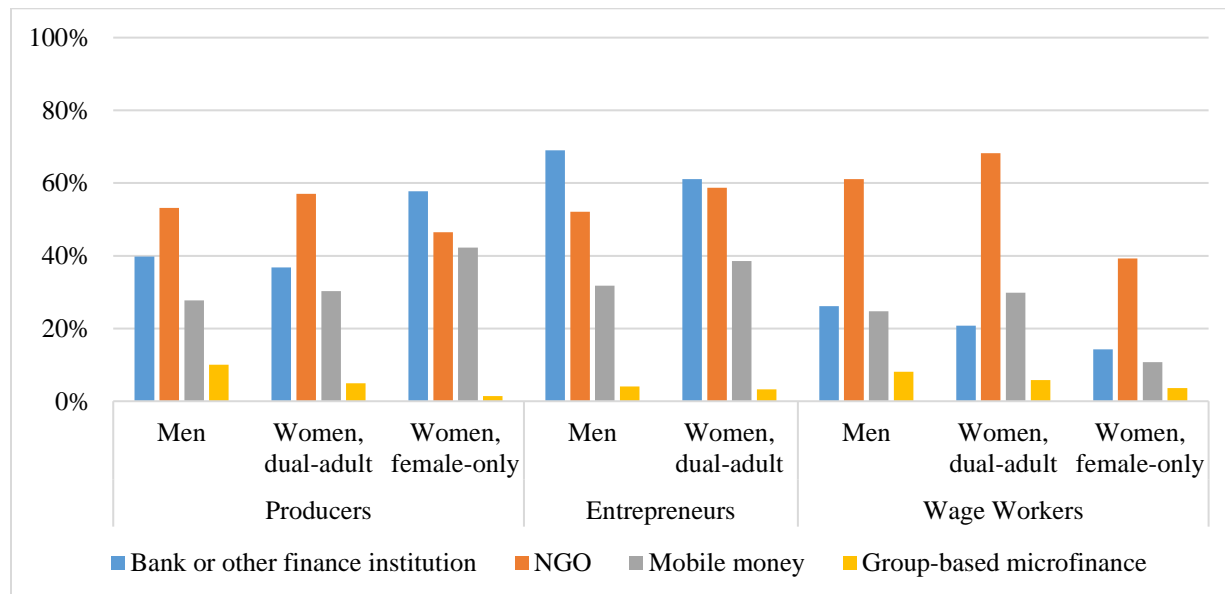
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

### Financial accounts

Female respondents in DHHs were more likely to solely or jointly have financial accounts with NGOs than male respondents and female respondents in FHHs (Figure 4.18). While female respondents in FHHs were more likely to have financial accounts at banks than males in producer households, the reverse was true for wage-worker households. A larger percentage of female respondents had mobile money financial accounts compared to male respondents, excluding female respondents in FHHs among wage-worker households.

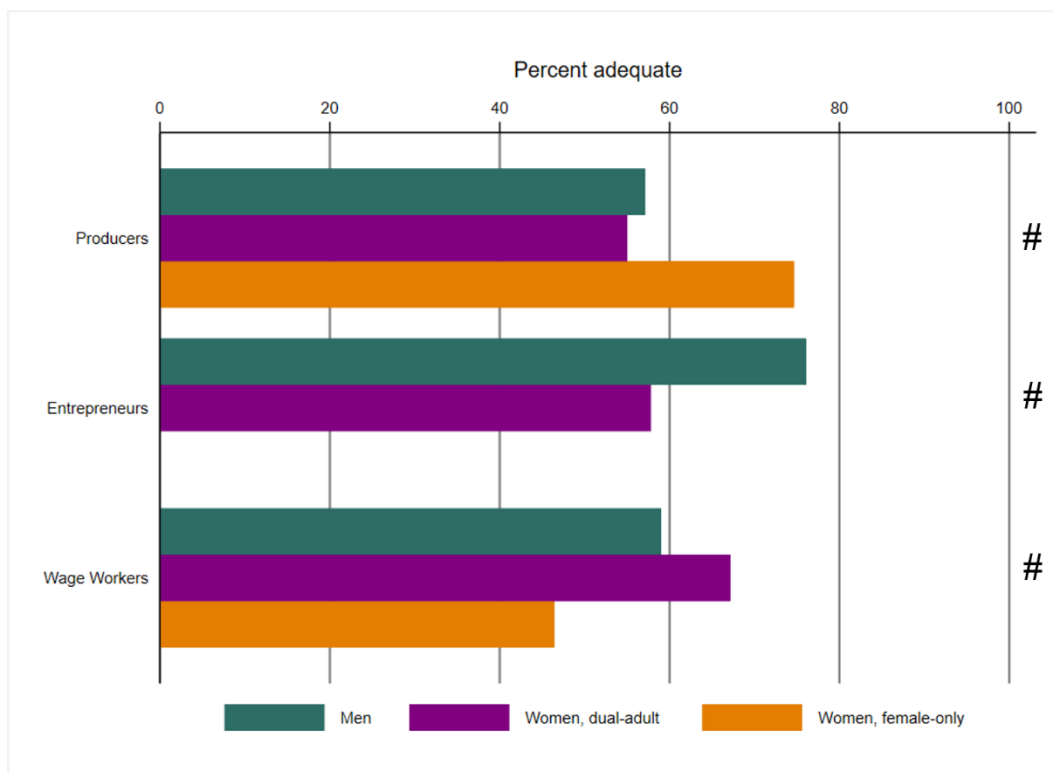
**Figure 4.18 Percent of respondents who solely or jointly have financial accounts, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71);  
 Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women,  
 female-only (N=56).

Female respondents in producer FHHs, male respondents in entrepreneur households, and female respondents in wage-work DHHs were most likely to achieve adequacy in access to a financial account (Figure 4.19). Among producer households, there were small differences between men and women in DHHs achieving adequacy. In entrepreneur households, however, this difference was much bigger. In wage-work households, women in DHHs were more likely to be adequate in accessing a financial account compared to men, while women in FHHs were the least likely to be adequate in this sub-indicator.

**Figure 4.19 Percent of respondents who are adequate in access to a financial account, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

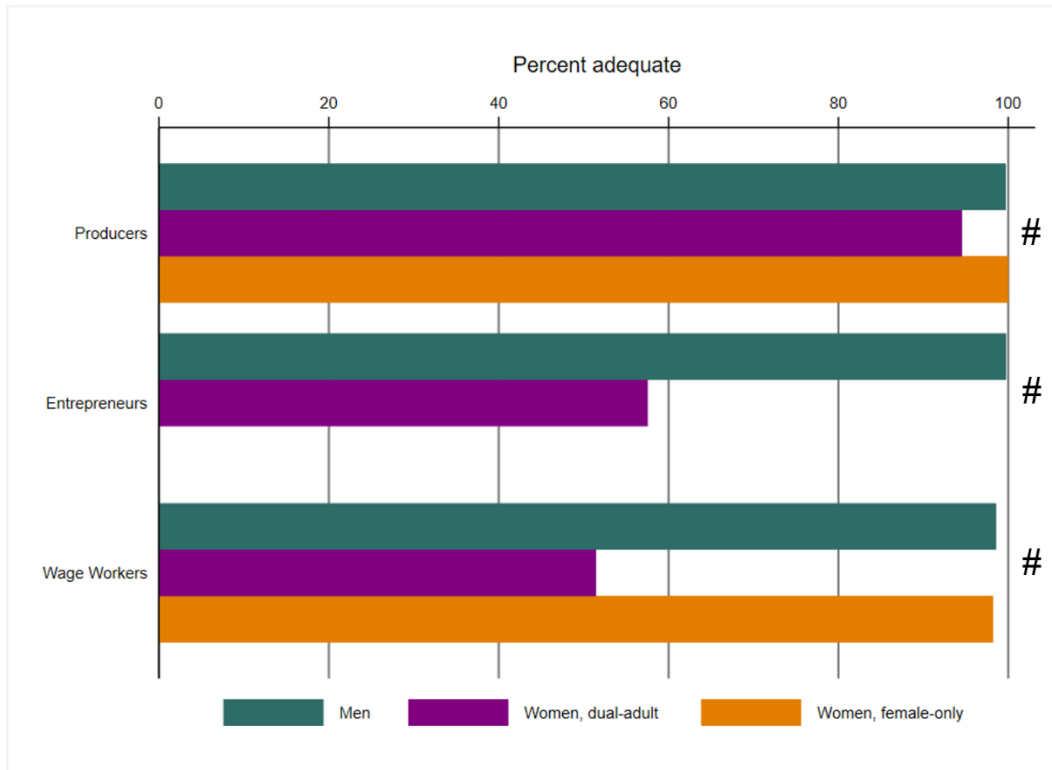
## 4.4 Income

### Control over use of income<sup>10</sup>

A respondent achieves adequacy in control over use of income if s/he has as at least some input in decisions about income or feels s/he can make decisions about income, not including minor household purchases. Overall, female respondents in DHHs were the least likely to be adequate in control over use of income (Figure 4.20). Most respondents in producer households achieved adequacy in this indicator, although significant differences ( $p < 0.05$ ) exist by respondent type. Male respondents were more likely to be adequate in control over use of income than female respondents in entrepreneur DHHs. Male respondents and female respondents in wage-work FHHs were equally likely to achieve adequacy in this sub-indicator.

<sup>10</sup> Included in A-WEAI calculation.

**Figure 4.20 Percent of respondents who are adequate in control over use of income, by actor and household type**

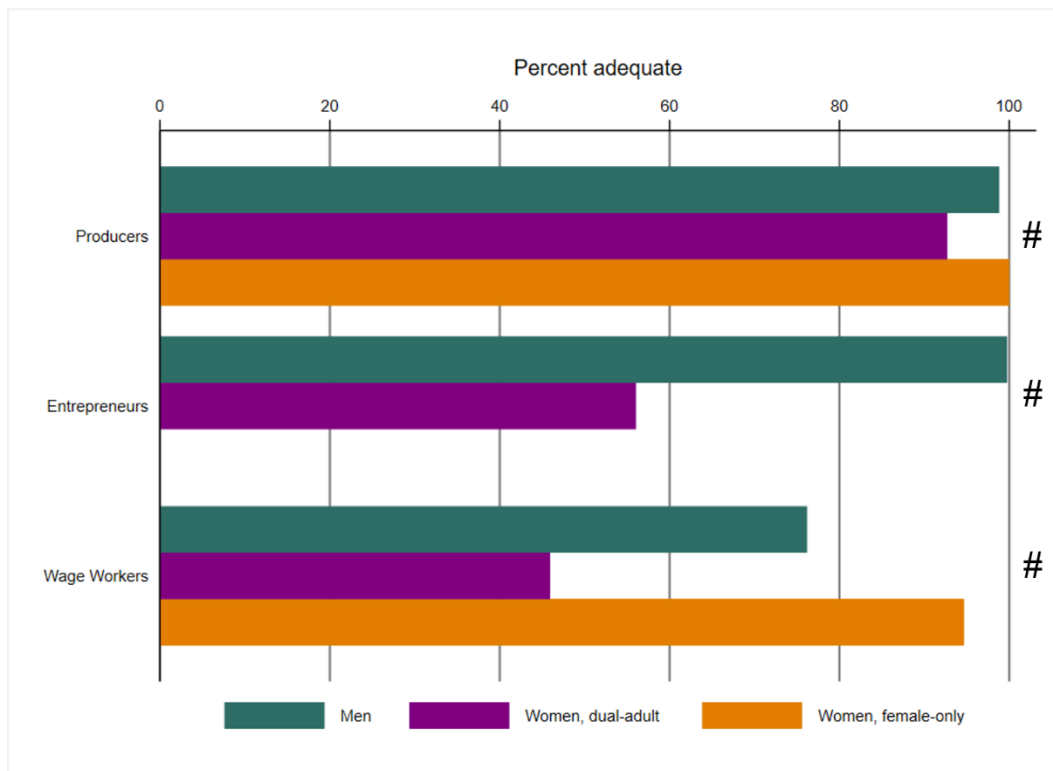


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

Figure 4.21 depicts the percent of respondents who are adequate in control over use of agricultural income. Female respondents in FHHs were the most likely to achieve adequacy in this sub-indicator, while female respondents in DHHs were the least likely to do so. Across value chain actors, adequacy in control over use of agricultural income was substantially high among producer households, a relatively small gap in adequacy between men and women in DHHs. There were large gender gaps in control over the use of income in entrepreneur and wage-worker, dual-adult households, with much smaller proportions of women in those households achieving adequacy compared to men.

**Figure 4.21 Percent of respondents who are adequate in control over use of agricultural income, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

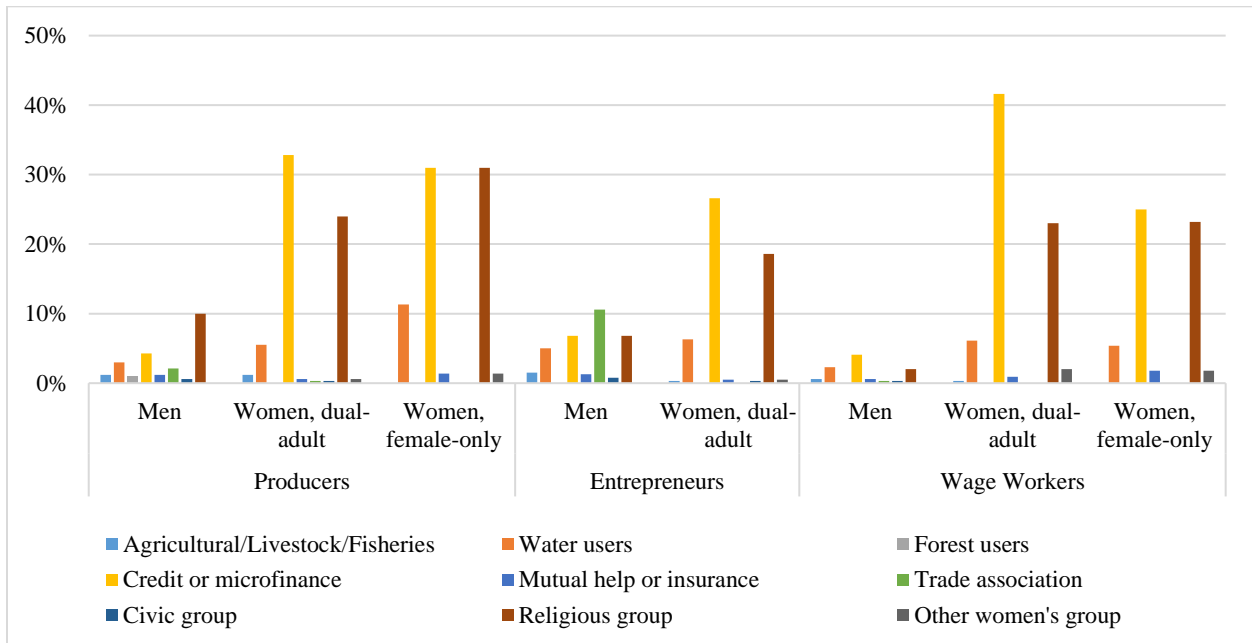
## 4.5 Leadership

### Group membership<sup>11</sup>

Respondents reported that very few groups were available in the community. Among groups available, female respondents were more likely than male respondents to be active members of credit or microfinance groups and religious groups, reflecting the women-oriented programming of Bangladeshi NGOs (Figure 4.22). Male respondents from entrepreneur households were more likely to be involved in trade associations than female respondents in DHHs.

<sup>11</sup> Included in A-WEAI calculation.

**Figure 4.22 Percent of respondents who are active members of community groups, among groups that are available in the community, by actor and household type**

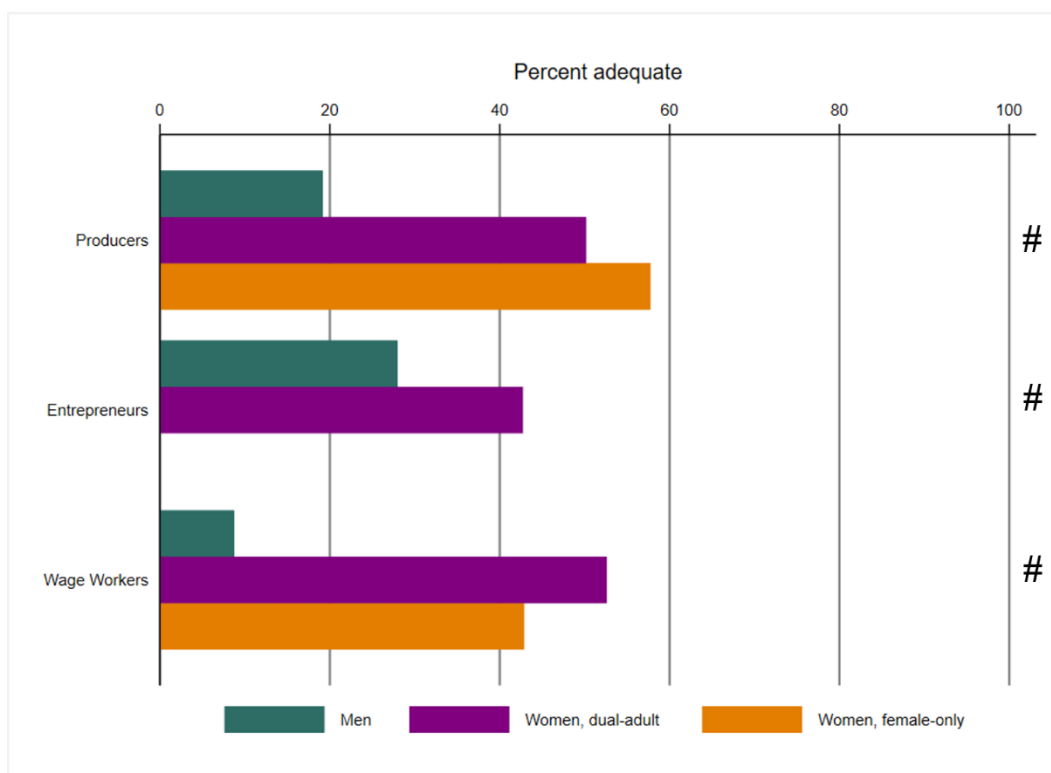


Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Adequacy in group membership is defined as being an active member of at least one group in the community. Female respondents were more likely than male respondents to achieve adequacy in this sub-indicator (Figure 4.23). Male respondents from wage-work households were the least likely to be adequate in group membership.



**Figure 4.23 Percent of respondents who are adequate in group membership, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

## 4.6 Time

### Workload<sup>12</sup>

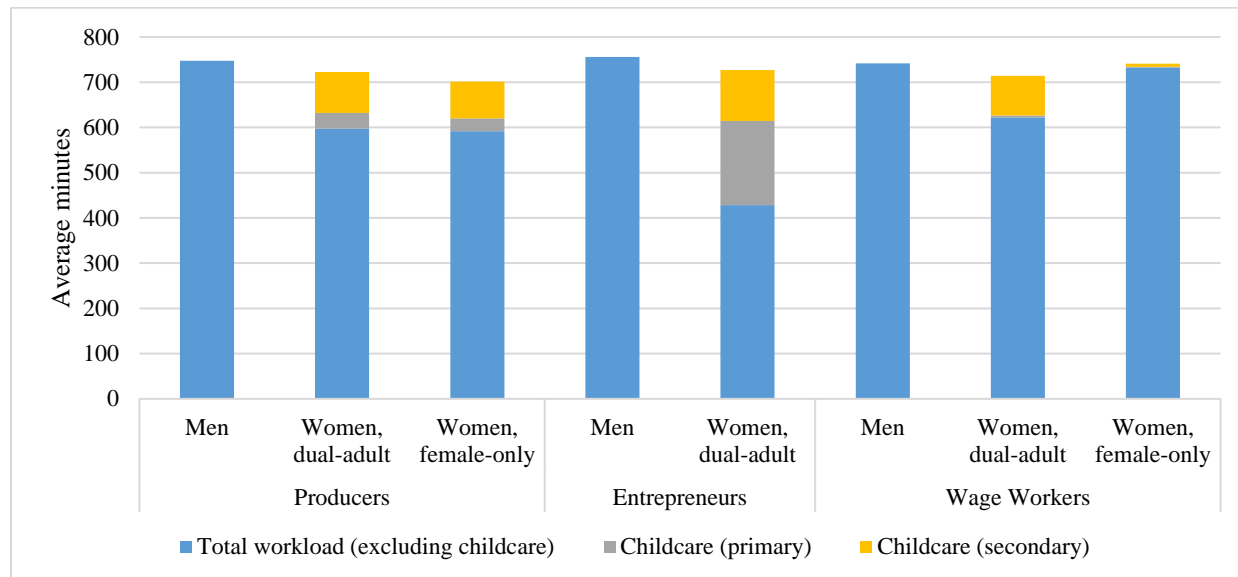
In this sub-indicator, workload was defined as time spent on cooking and food preparation; caring for children and adults, including the sick and elderly; household chores; shopping or receiving services such as health services; weaving, sewing, and textile care for home use; wage work; work for one’s own business; and work related to farming, processing, trading, and marketing of agricultural products and by-products. In the WEAI4VC, the time domain will also include access to childcare; this new domain will apply only to female respondents.

The average total time spent on workload, including childcare, does not vary significantly by respondent type or actor (Figure 4.24 and

<sup>12</sup> Included in A-WEAI calculation.

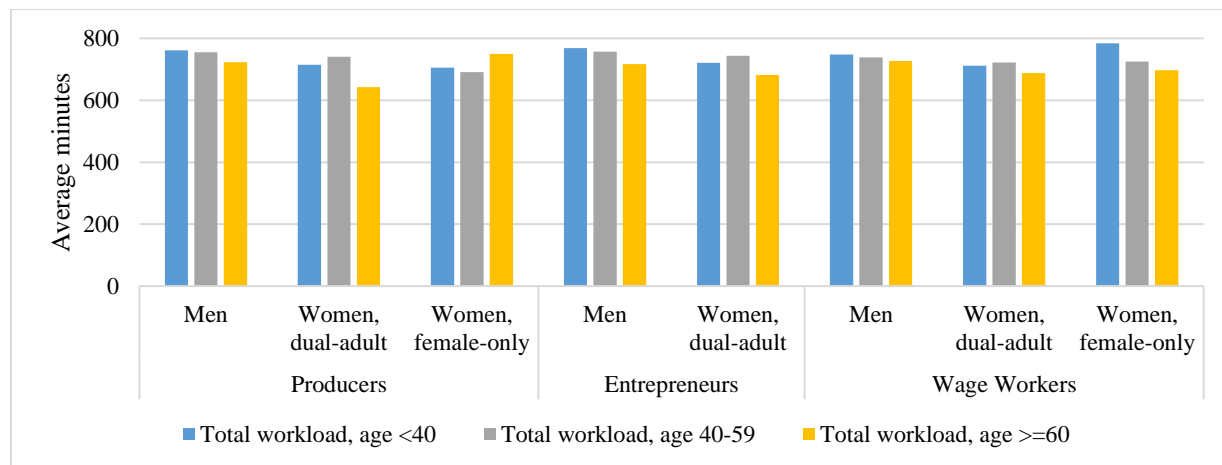
Figure 4.25). Female respondents in DHH among entrepreneur households reported spending more time on childcare, as both primary and secondary activities. Total workload time also does not vary, by age category, and those older than 60 years reported working the least.

**Figure 4.24 Average time spent on workload, by actor and household type**



Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

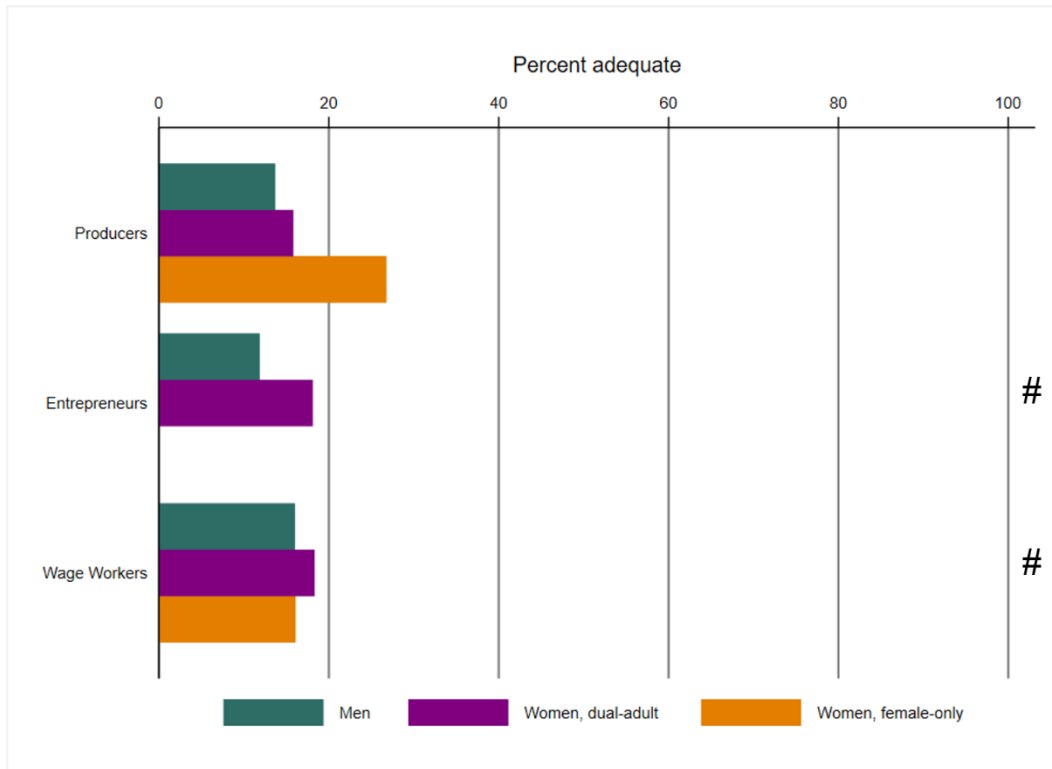
**Figure 4.25 Average time spent on workload by age category, by actor and household type**



Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

As a measure of the time domain of empowerment, an individual is defined as having an adequate achievement in the workload indicator if she has sufficient time to take care of herself and her family. Specifically, respondents were adequate in workload if they reported working less than 10.5 hours during the last 24 hours. Most respondents reported excessive workloads and were therefore inadequate in this sub-indicator (Figure 4.26). Female respondents in producer FHHs, and female respondents in entrepreneur and wage-work DHHs were the most likely to be adequate in workload. Male respondents had the lowest adequacy achievements.

**Figure 4.26 Percent of respondents who are adequate in workload, by actor and household type**



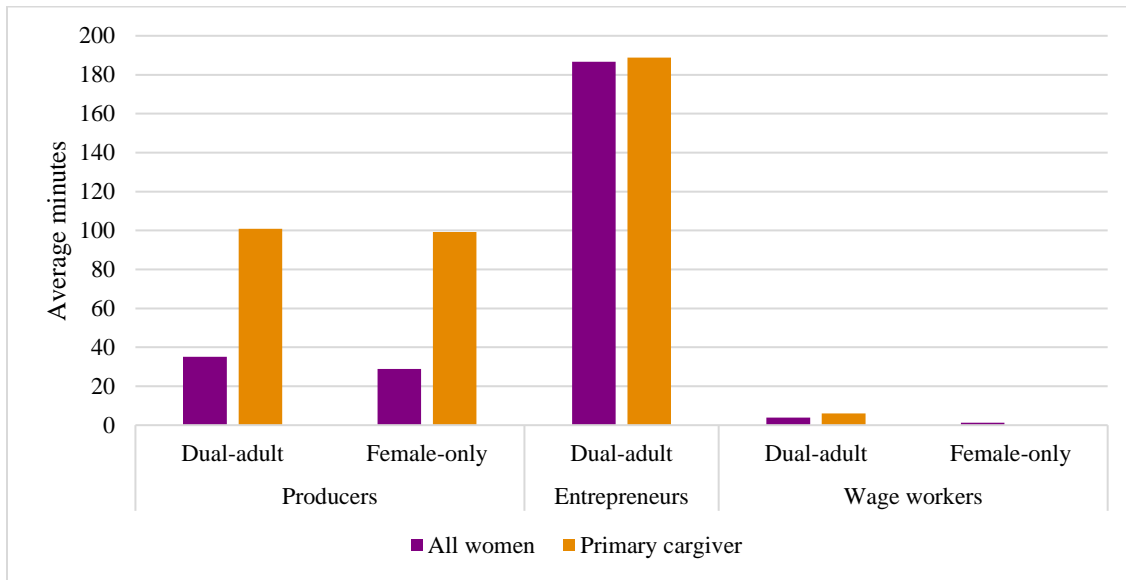
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

### Access to childcare

The average time spent on childcare was the highest for female respondents in entrepreneur DHHs, and the least in wage-work households (Figure 4.27). In producer households, women who were primary caregivers spent more time caring for children than all women.

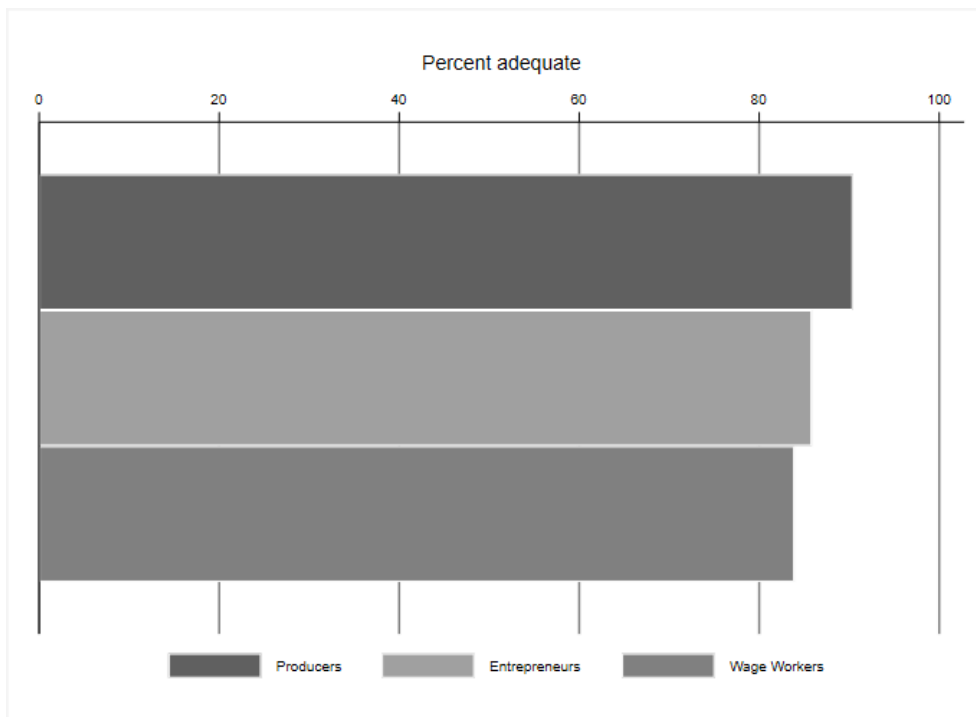
**Figure 4.27 Average minutes spent on childcare as a secondary activity, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Questions on access to childcare were asked only of the female respondent. Adequacy in access to childcare was defined as having someone to take care of their child(ren) in their absence. Respondents in FHHs were excluded from adequacy estimates for childcare access because too few women had children under five. Most female respondents in DHHs achieved adequacy in childcare access, with women in producer households having the highest, and women in wage-work households having the lowest, adequacy achievements (Figure 4.28). This may reflect flexibility in work location or the ability to work within the homestead for women entrepreneurs, and the lack of flexibility of work location (or working outside the home) for women wage workers.

**Figure 4.28 Percent of female respondents in DHHs who are adequate in access to childcare, by actor and household type**



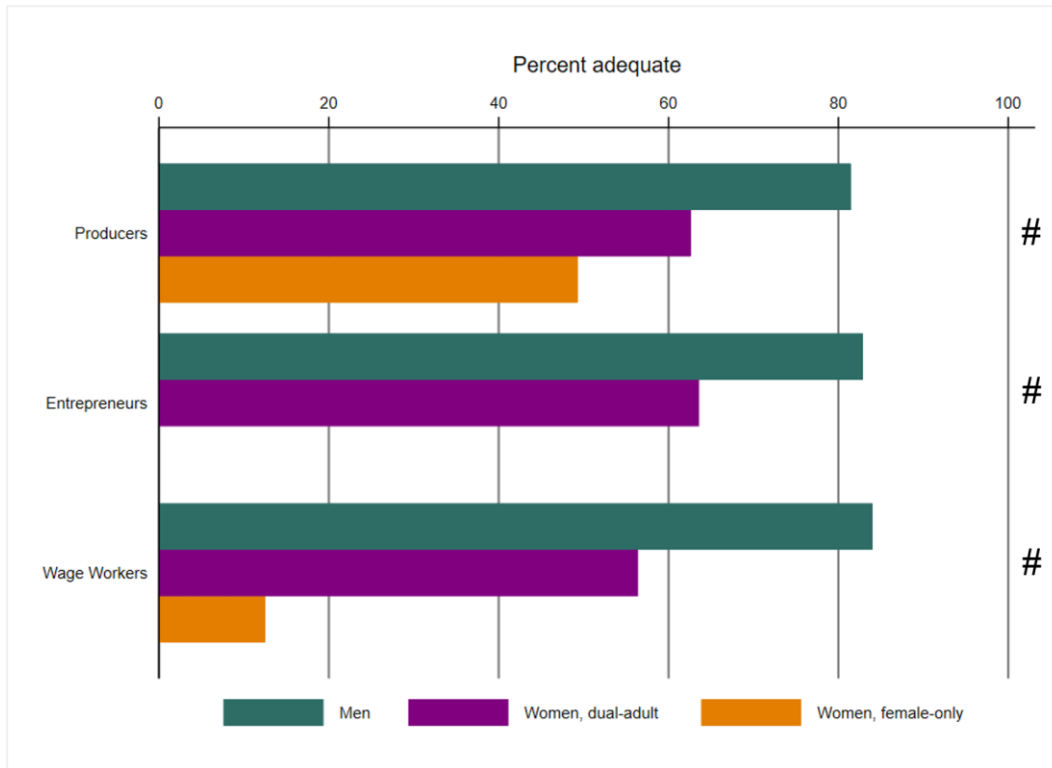
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5-percent level. Number of observations: Producers N=329; Entrepreneurs – N=398; Wage workers – N=344.

## 4.7 Intrahousehold Relationships

### Mutual respect among household members

Respondents achieved adequacy in mutual respect among household members if s/he has mutual respect with the other respondent in her/his household, and respondent trusts and is comfortable disagreeing with the other respondent in her/his household. Female respondents in FHHs were excluded from adequacy estimates due to small sample size. More male respondents were adequate in mutual respect among household members than female respondents (Figure 4.29).

**Figure 4.29 Percent of respondents who are adequate in mutual respect among household members, by actor and household type**

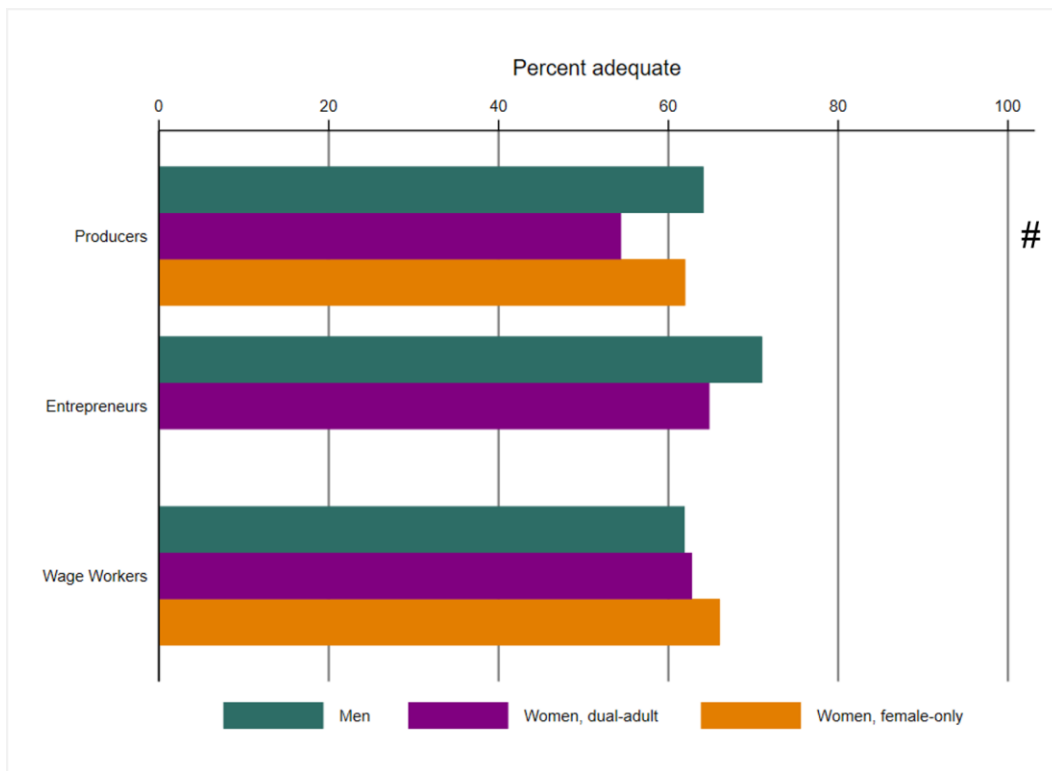


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5 percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344). Female respondents in FHHs were excluded due to small sample size.

### Attitudes toward domestic violence

Respondents achieved adequacy in attitudes toward domestic violence if they believe that a husband is never justified in beating his wife. More male respondents achieved adequacy in this sub-indicator than female respondents in producer and entrepreneur households (Figure 4.30). Among wage-worker households, the reverse was true. In producer and entrepreneur households, more male respondents believed that a husband is never justified in beating his wife compared to female respondents in DHHs.

**Figure 4.30 Percent of respondents who believe that a husband is never justified in hitting their wife, by actor and household type**



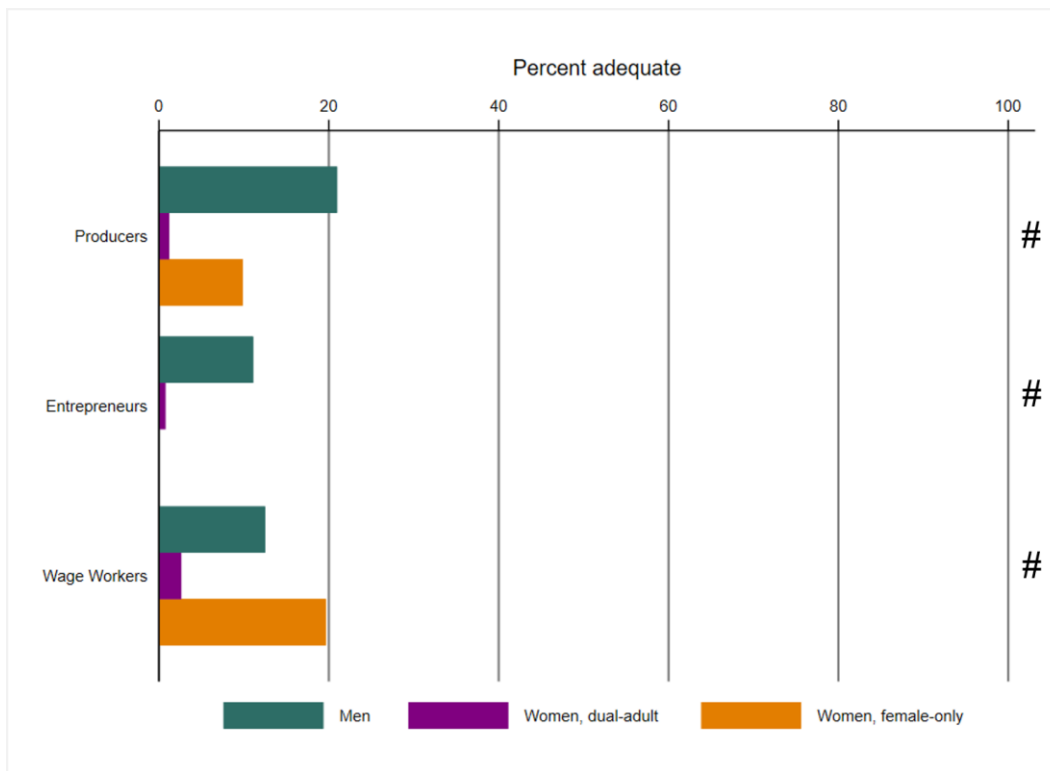
**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5-percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

## 4.8 Other Domains

### Physical mobility

Figure 4.31 shows the percent of respondents who achieve adequacy in physical mobility, by visiting at least two locations (market/haat/bazaar, family or relatives outside community, family or relatives inside community, natal family, hospital/clinic/doctor, public village gathering or community meeting, another village or city) at least once per week. Adequacy was low for men and women across all households, suggesting the both men and women face constraints to mobility, although women face more stringent constraints. Male respondents had the highest adequacy achievements among producer and entrepreneur households, while female respondents from FHHs attained the highest proportion of adequacy among wage-work households. Female respondents from DHHs had the lowest adequacy achievements for physical mobility.

**Figure 4.31 Percent of respondents who can visit two or more locations per week, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 Note: # indicate categories for which the values for men, women from DHHs, and women from FHHs are significantly different at the 5-percent level. Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

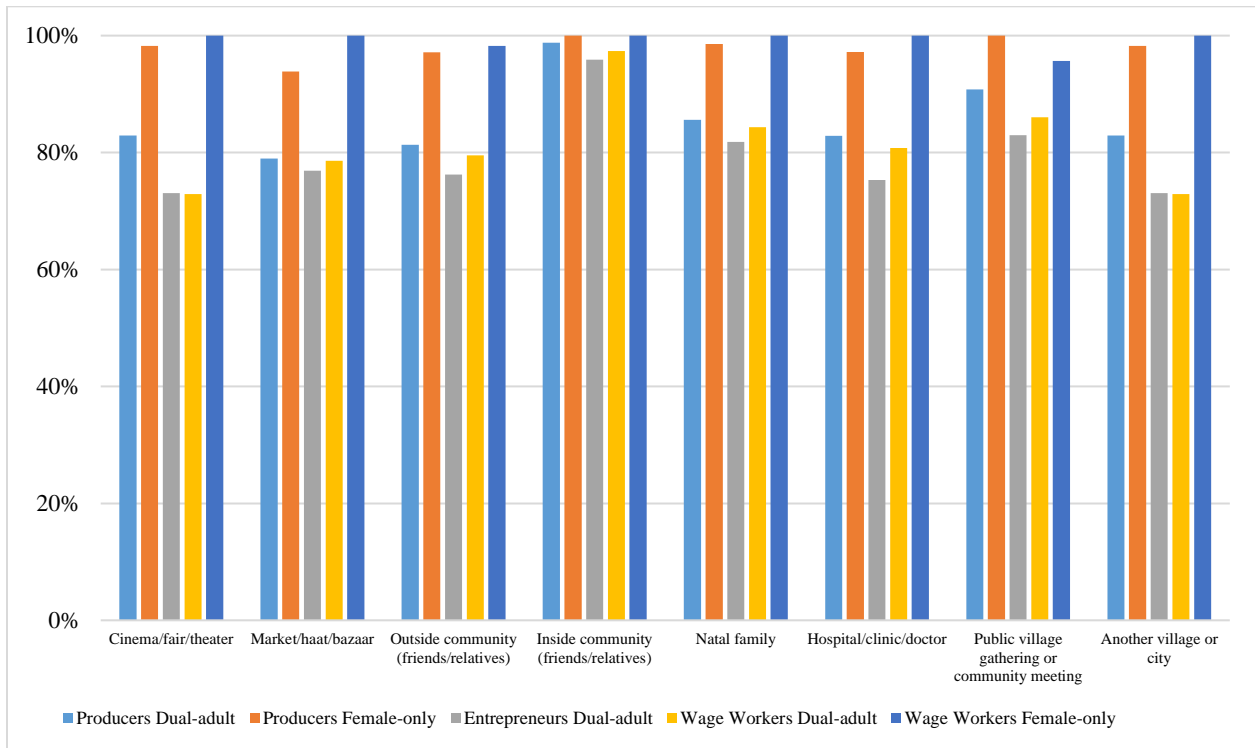
Despite low adequacy in physical mobility, most women reported participating in decisions about visiting important locations (Figure 4.32). Female respondents from FHHs were more likely to participate in decisions than their DHHs counterparts.

The qualitative interviews captured numerous views about men’s and women’s mobility. The dominant perception reported is consistent with the quantitative data that it was harder for women to travel outside their own villages, and that this was a constraint on their ability to perform some types of agricultural wage labor or to engage in buying and selling at markets. The primary reasons given were social disapproval about traveling alone as well as a lack of money to pay for travel by public transport.

Mobility constraints can be hard to disentangle from other social proscriptions on women’s behavior, particularly about the acceptability of visiting some locations at specific times or whether it can be by oneself or only with a group. One successful, married businesswoman explained that although she goes to the market by day with other women to shop, she does not feel that she can go alone to talk with and hire men who might want to work for her as daily labor. Nor would it be appropriate to talk with men she doesn’t know or to go alone to places where men congregate, especially in the evening.



**Figure 4.32 Percent of women respondents who participate in decisions about visiting important locations, by household type**

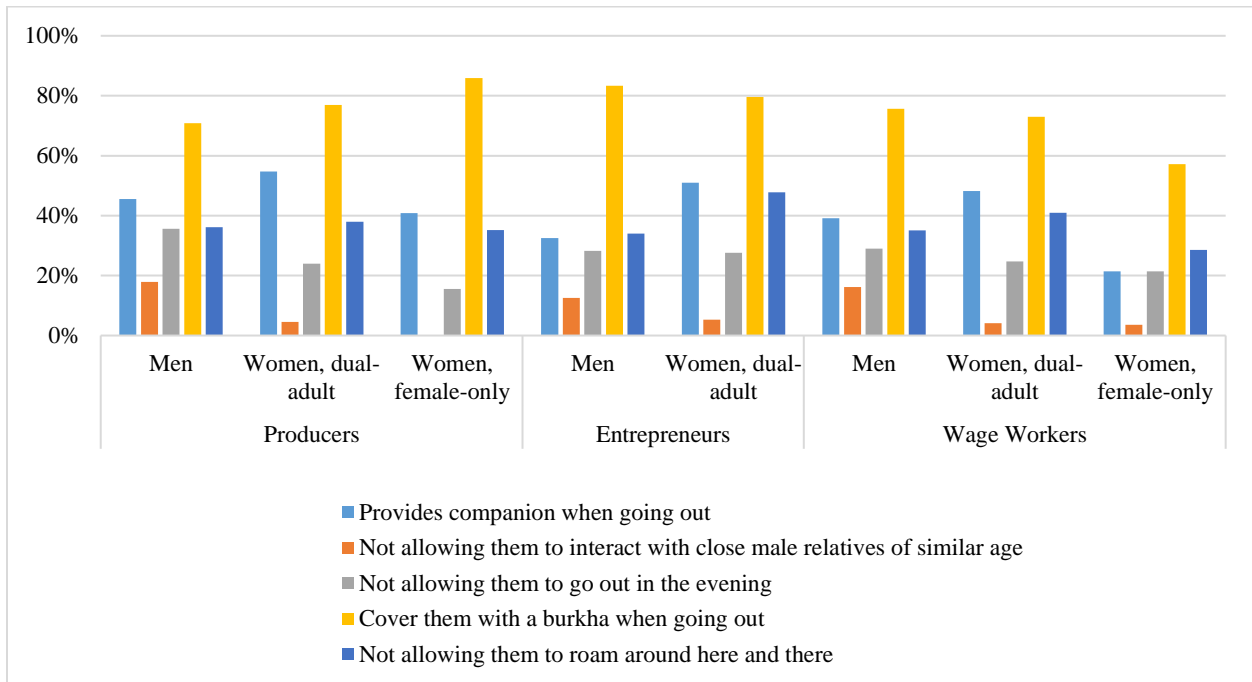


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

**Parida information**

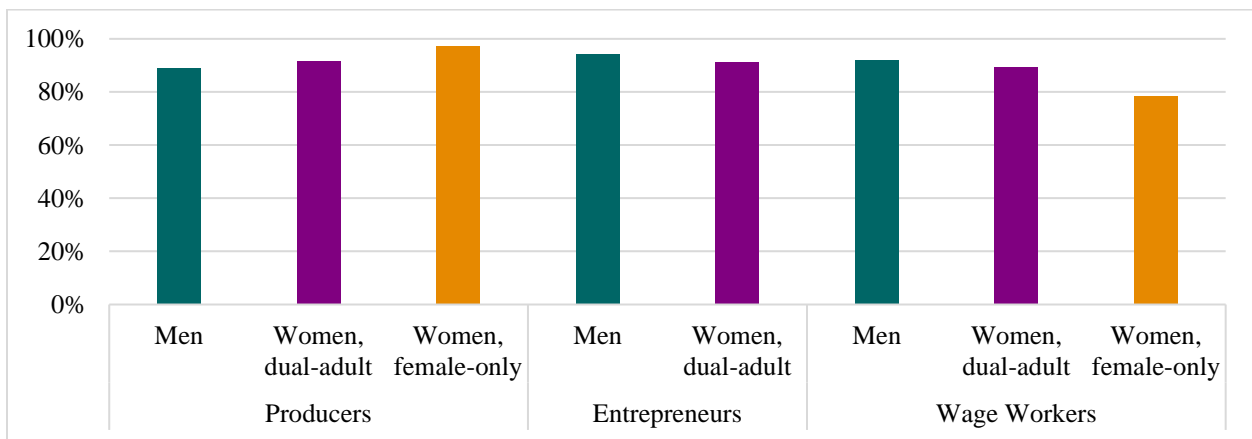
Most respondents reported that women in their households covered themselves with a burkha when going out, followed by providing a companion when going out, as the most common ways to protect women (Figure 4.33). No clear patterns emerged by actor. Most respondents also reported that women, both young and old, in their households are required to cover their heads when going out (Figure 4.34).

**Figure 4.33 Responses to how households protect women, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

**Figure 4.34 Responses to whether women (both young and old) are required to cover the head when going out, by actor and household type**

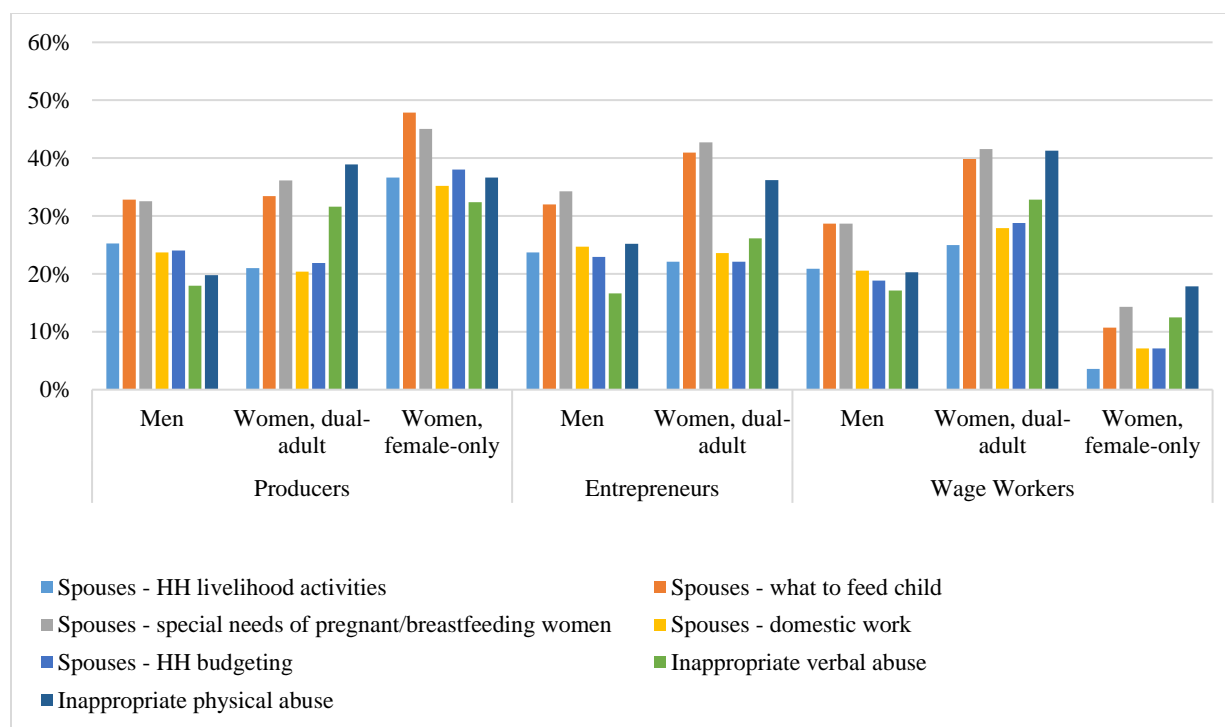


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

## Awareness of key messages

Figure 4.35 shows the percent of respondents who have ever heard specific messages or discussed these issues in a group, from the media, from an NGO worker. The issues mentioned include: the importance of spouses communicating about: decisions regarding household’s livelihood activities, what to feed a child, the special needs (diet, rest) of a pregnant or breastfeeding woman, what domestic work is needed and who should do it, and household budgeting and how resources should be spent. The survey also asked about what is considered inappropriate verbal abuse, and inappropriate physical abuse. Respondents were most likely to report that their heard messages about or discussed issues on spousal communication about to feed a child, spousal communication on the special needs or pregnant or breastfeeding women, and inappropriate physical abuse. Women in wage-work FHHs were the least likely to be aware of these key messages overall.

**Figure 4.35 Percent of respondents who have ever heard messages about (in a group, from the media, from an NGO worker) or discussed issues, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

## Food insecurity in the household

The Food Insecurity Experience Scale aggregates eight indicators of increasing food insecurity to develop a food insecurity score for the household. The individual indicators of food insecurity in the past 12 months, and 4 weeks, are shown in Figure 4.36 and Figure 4.37, respectively. In the past 12 months, female respondents in FHHs in producer and wage-worker households were more likely to report experiencing any of the food insecurity indicators, compared to other respondents. Respondents in

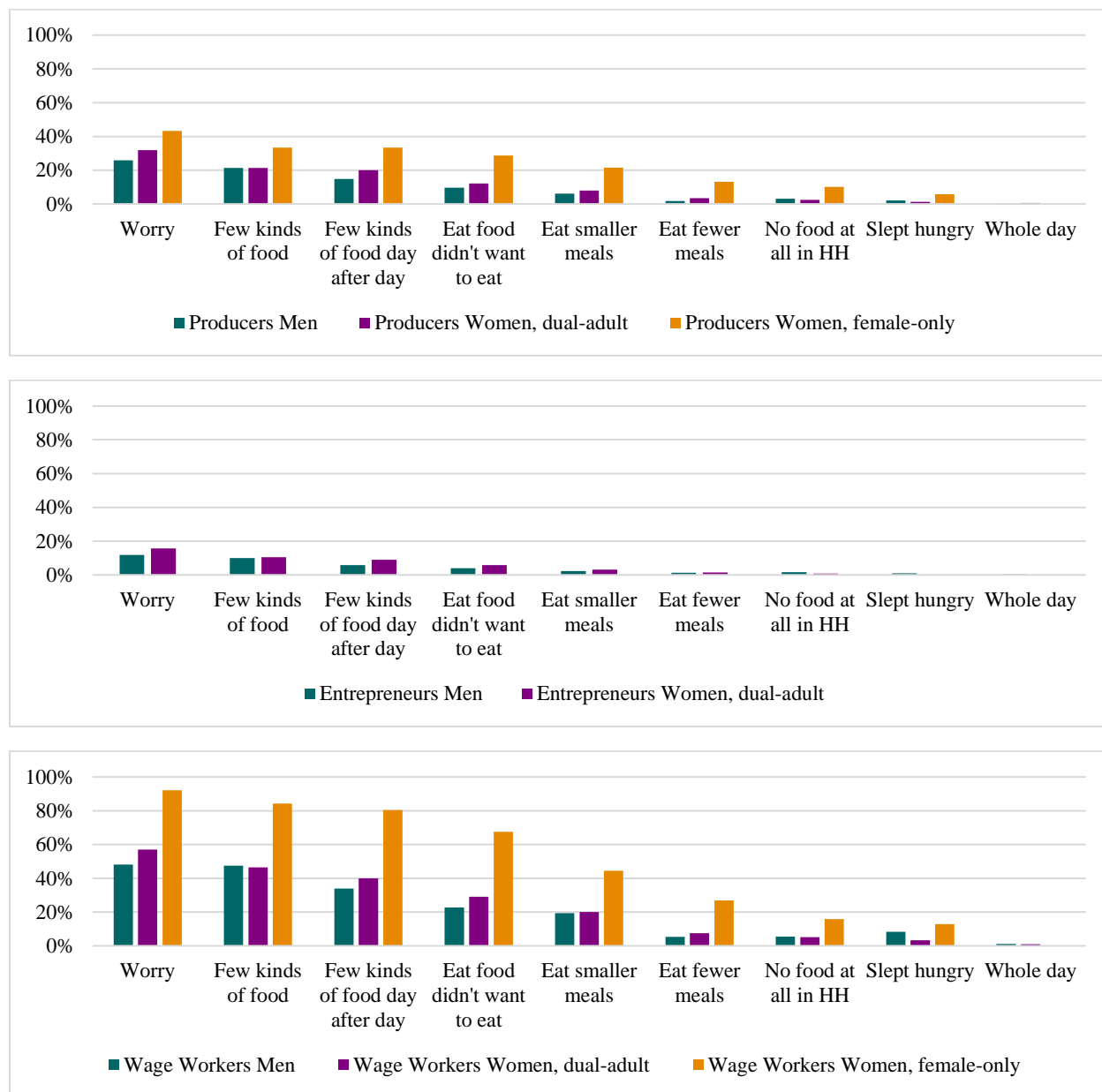
wage-work households also reported higher levels of food insecurity indicators than among those in producer or entrepreneur households. Entrepreneur households reported the lowest levels of food insecurity indicators. Similar patterns are found in the indicators with a four-week time recall.

**Figure 4.36 Food insecurity in past 12 months, by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
**Note:** Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women, female-only (N=56).

**Figure 4.37 Food insecurity in four weeks, by actor and household type**

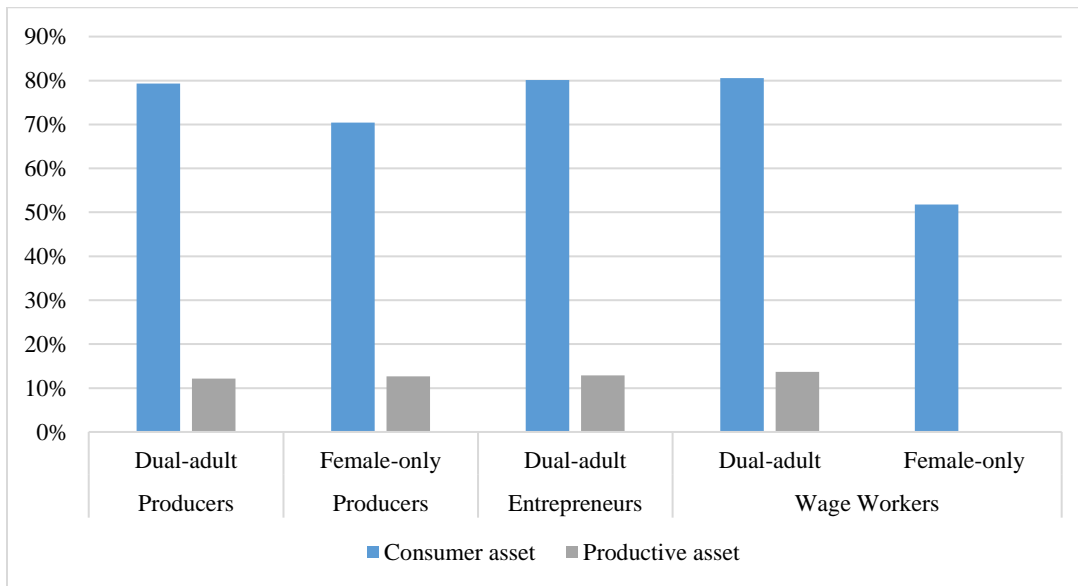


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 Note: Number of observations: Producers – men (N=329); women, dual-adult (N=329); women, female-only (N=71);  
 Entrepreneurs – men (N=397); women, dual-adult (N=398); Wage workers – men (N=344); women, dual-adult (N=344); women,  
 female-only (N=56).

### Assets brought to marriage (women only)

Most respondents report bringing consumer assets to marriage, with women in DHHs more likely to do so (Figure 4.38). The top three consumer assets brought to marriage by actor were: Producers – jewelry (gold/silver), pillows, quilts; Entrepreneurs – jewelry (gold/silver), metal cooking pots, quilts; Wage Workers – pillows, metal cooking pots, quilts (Table 4.4). Only 10 percent of women report bringing productive assets to marriage. Livestock was the most common productive asset brought to marriage among all types of value chain actors and is consistent with the high degree of involvement of women in livestock production.

**Figure 4.38 Assets brought to marriage (women respondents only), by actor and household type**



**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Number of observations: Producers –women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs –women, dual-adult (N=398); Wage workers – women, dual-adult (N=344); women, female-only (N=56).

**Table 4.4 Number of women who reported bringing assets to marriage, by asset type and actor**

	Producers	Entrepreneurs	Wage Workers
<b>Consumer assets</b>			
Homestead (excluding land)	2	1	1
Large tree		1	
Trunk/Suitcase	67	66	55
Bucket/Pots	32	47	37
Stove/Gas burner	1	3	
Metal cooking pots	168	175	177
Bed/Khat/Chowki	38	53	31
Armoire/Cabinet/Alna	29	52	25
Table/Chair	6	14	13
Fans/Iron	3	8	2
Radio/Cassette player	10	6	1
Wall clock/Watch	67	87	57
TV/VCR/CD	10	15	6
Refrigerator	3	8	
Jewelry (gold/silver)	180	235	143
Sewing machine	3	5	1
Bicycle	62	65	53
Rickshaw			1
Motorcycle	3	8	1
Mobile telephone / phone	5	8	11
Hand tube well		1	1
Livestock (for own consumption)	14	11	7
Poultry (for own consumption)	8	4	7
Cash	94	90	133
Mattress	109	133	107
Quilt	173	162	176
Pillow	174	158	180
Other consumption assets (for household)	18	4	7
<b>Productive assets</b>			
Sewing machine		1	
Rickshaw / van		1	1
Mobile phone / phone	3	2	4
Hand tube well		1	
Livestock	43	43	39
Poultry	9	5	4
Other production assets	2	1	
Land	1	1	1

**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Number of observations: Producers –women, dual-adult (N=329); women, female-only (N=71); Entrepreneurs – women, dual-adult (N=398); Wage workers – women, dual-adult (N=344); women, female-only (N=56).

## 4.9 WEAI Results

The A-WEAI calculations include 6 indicators that measure the five domains of empowerment: Livelihoods, Resources, Income, Leadership, and Time (see Table 4.3). Note that the livelihoods domain

is defined more broadly than the standard WEAI Production domain, including all activities related to agricultural production, entrepreneurship, and wage work.

The A-WEAI scores show that women in producer households fare better than those in entrepreneur and wage-work households. The A-WEAI score was 0.66 for producer households, 0.50 for entrepreneur households, and 0.51 for wage-work households. Among producer households, 77 percent of women and 86 percent of men achieved empowerment, compared to 25 percent of women and 88 percent of men in entrepreneur households, and 34 percent of women and 83 percent of men in wage-work households. Of the women who were not yet empowered, the mean 5DE score among producers was 0.63, compared to 0.48 for entrepreneurs and 0.49 for wage workers. Of the men who were not yet empowered, variation across value chain actors was minimal: the mean 5DE score was 0.61 among producers, 0.62 among entrepreneurs, and 0.60 among wage workers. The Gender Parity Index (GPI) was 0.95 among producer households, with 77 percent of women achieving parity. This value was 0.71 among entrepreneur households with 27 percent of women achieving parity, and 0.73 among wage work households with 29 percent of women achieving parity. The average empowerment gap between women who did not achieve gender parity and adult males in their household was the highest among entrepreneur households at 39 percent, followed by wage-work households at 38 percent, and producer households at 20 percent (Table 4.5).

**Table 4.5 A-WEAI score and women's empowerment status, by actor and household type**

Indicator	Producers		Entrepreneurs		Wage Workers	
	Women	Men	Women	Men	Women	Men
<b>N (number of observations)</b>	<b>400</b>	<b>329</b>	<b>396</b>	<b>397</b>	<b>379</b>	<b>342</b>
<b>5DE score</b>	0.63	0.61	0.48	0.62	0.49	0.60
<b>Disempowerment score (1 – 5DE)</b>	0.37	0.39	0.52	0.38	0.51	0.40
% achieving empowerment (empowered headcount)	0.77	0.86	0.25	0.88	0.34	0.83
% not achieving empowerment (disempowered headcount)	0.23	0.14	0.75	0.12	0.66	0.17
Mean 5DE score for not yet empowered (average adequacy score)	0.63	0.61	0.48	0.62	0.49	0.60
Mean disempowerment score (1-5DE) for not yet empowered (average inadequacy score)	0.37	0.39	0.52	0.38	0.51	0.40
<b>Gender Parity Index (GPI)</b>	<b>0.95</b>		<b>0.71</b>		<b>0.73</b>	
<b>N (number of dual-adult households)</b>	329		393		321	
% women achieving parity (1-HGPI)	0.77		0.27		0.29	
% women not achieving parity (HGPI)	0.23		0.73		0.71	
Average empowerment gap (IGPI)	0.20		0.39		0.38	
<b>A-WEAI score</b>	0.66		0.50		0.51	

Source: Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Among producer households, group membership contributed to 46 percent of the disempowerment for women, followed by 24 percent for work and 13 percent in access to and decisions on credit (Figure 4.39). While the top three contributors to disempowerment for men were the same, the contributions were 53 percent for group membership, 42 percent for work, and 4 percent for access to and decisions

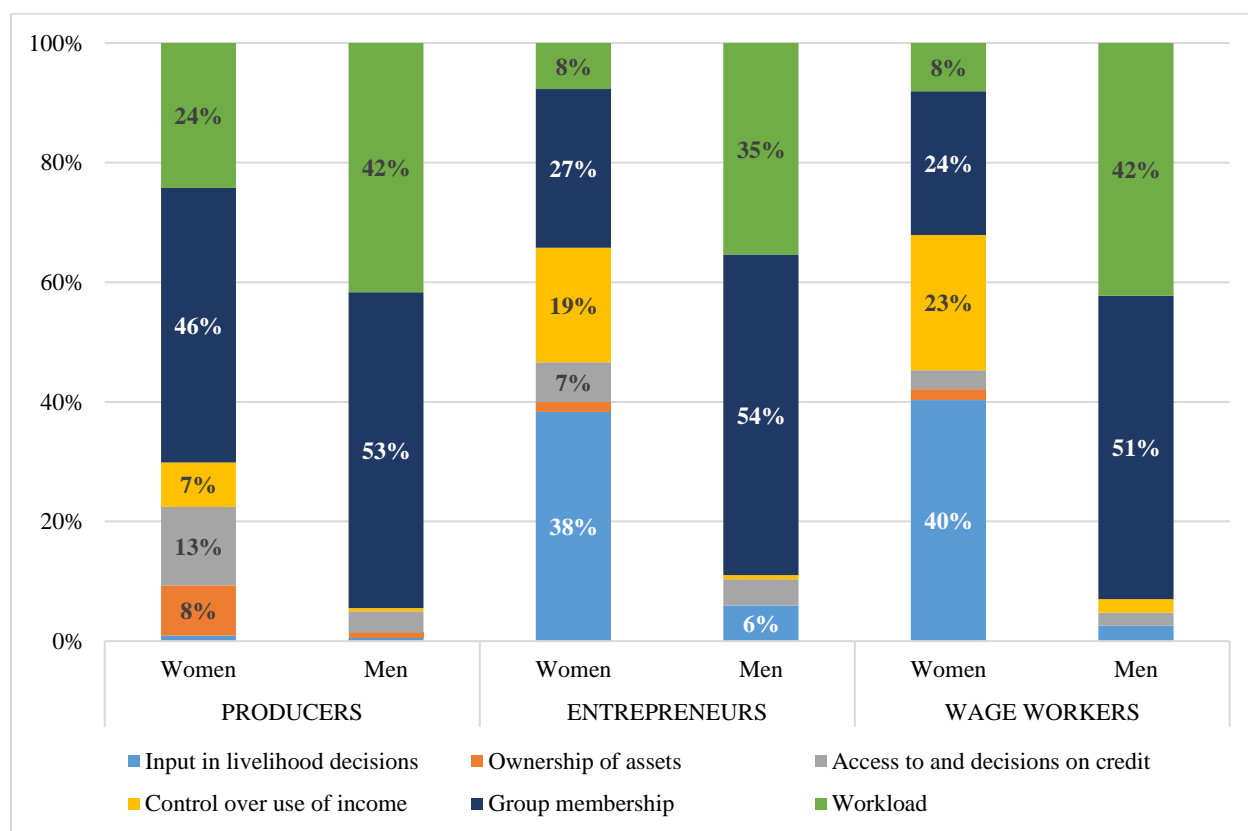


on credit. Control over use of income and ownership of assets were key contributors to disempowerment for women, but not men.

The biggest contributor to disempowerment for women in entrepreneur households was in input in livelihood activities (38 percent), followed by group membership (27 percent), and control over use of income (19 percent). Disempowerment for men in input in livelihood activities was much smaller at 6 percent, but larger for group membership at 54 percent, and workload at 35 percent. Control over use of income was not a large contributor to disempowerment for men.

Similar to entrepreneur households, women in wage-work households were most disempowered in input in livelihood decisions (40 percent), group membership (24 percent), and control over use of income (23 percent). For men, the biggest contributors to disempowerment were group membership (51 percent) and work (42 percent).

**Figure 4.39 Contribution of each of the six indicators to disempowerment, by sex, actor, and household type**

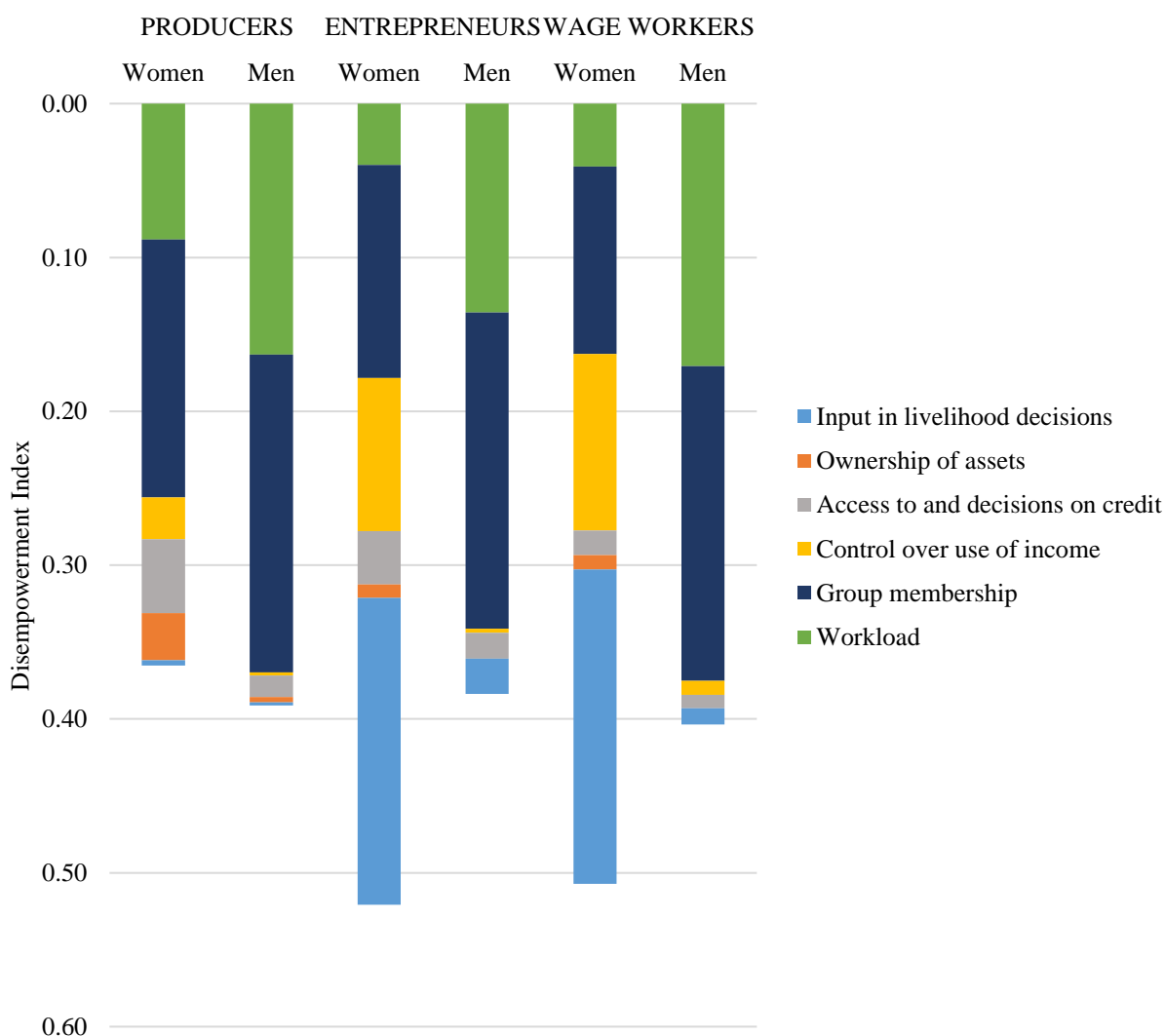


**Source:** Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Data labels are shown only for categories with >=5% contribution.

Differences in contributions to the Disempowerment Index, by sex, are shown in Figure 4.40. Women in entrepreneur and wage-work households have the largest extent of disempowerment, mostly due to contributions of input in livelihood decisions, control over use of income, and group membership. Compared to these women, women in producer households are less disempowered in these three indicators. Among women, disempowerment due to work, asset ownership, and access to and decisions on credit are fairly similar across all actors. Compared to men, women are more disempowered in access to and decisions on credit and asset ownership, across all households. Among men, group membership and work are the biggest contributors to disempowerment, regardless of livelihood activity. Additionally, men in producer and wage-work households are more disempowered compared to men in entrepreneur households.

**Figure 4.40 Percent contribution of each indicator to disempowerment, by actor and household type**



Source: Women’s Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

### Subsample of women who participate in production, entrepreneurship, and wage work

Do the WEAI results change if we restrict the sample to women who engage in production, entrepreneurship, and wage work themselves? Table 4.6 presents the results for the 5DE using this restricted sample of women, with a smaller sample size of 89 for entrepreneurs and 91 for wage workers (34 DHH and 54 FHH). Note that since all women in producer households participated in at least one productive activity, there was no difference in 5DE results between the full sample and the subsample. Men's 5DE results are also robust to this change in the sample definition and are not reported here.

In both entrepreneur and wage-work households, restricting the sample increased the 5DE scores as measured by A-WEAI, although both are still below the 5DE for the female producers. In entrepreneur households, the 5DE score increased from 0.48 to 0.51 for participants and 52 percent of participant women achieved empowerment compared to 25 percent of all women respondents. Although absolute empowerment status increased, the main contributors of disempowerment remained the same (Figure 4.41). Input in livelihood activities, group membership, and control over use of income are still the main contributors to disempowerment, with the input in livelihood activities indicator decreasing by 10 percentage points between the two samples (Figure 4.42).

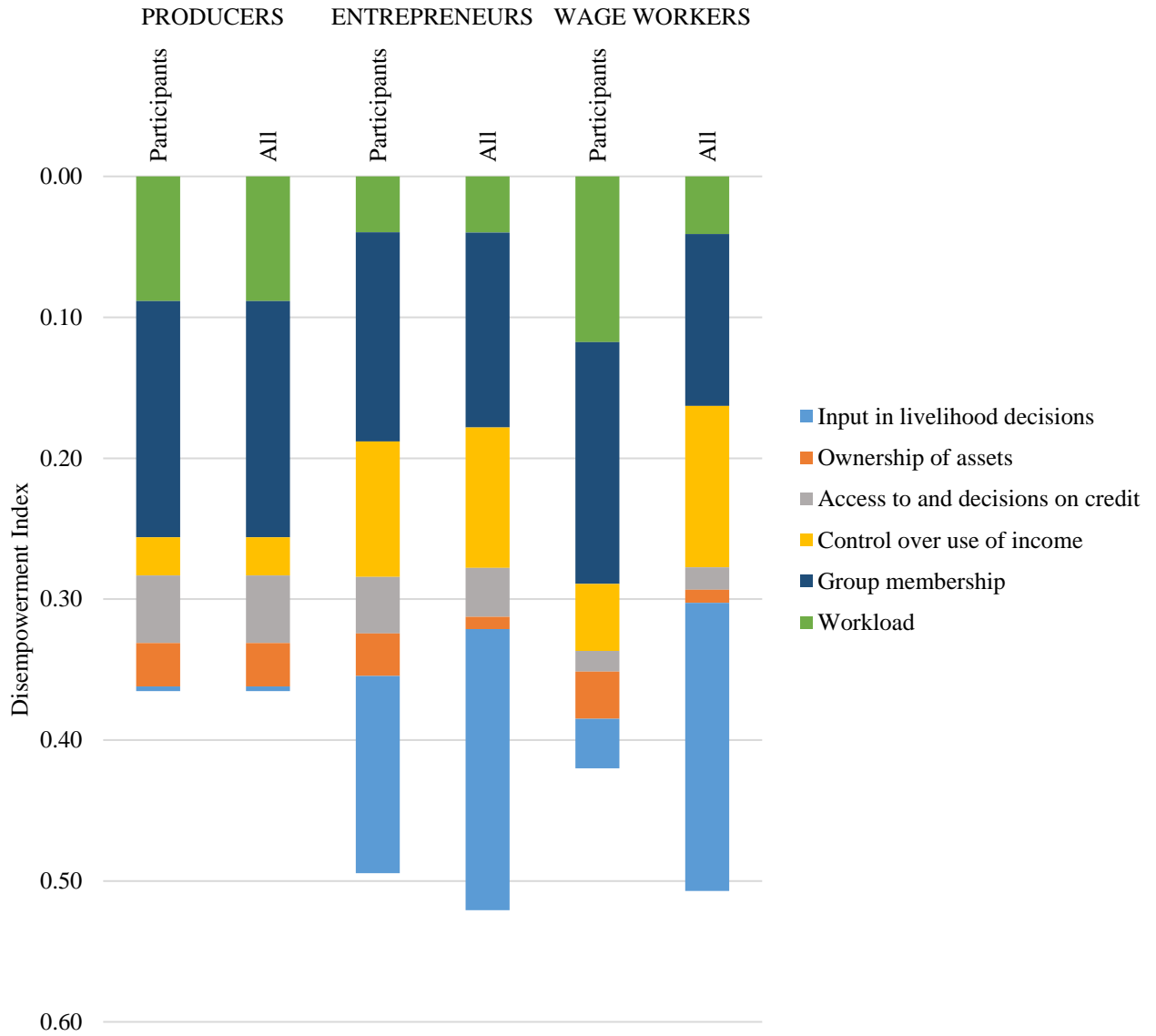
In wage-work households, the 5DE score increased from 0.49 for all female respondents to 0.58 for participants, and the empowered headcount increased from 34 percent to 89 percent. These new results suggest that women working for wages are more empowered than women entrepreneurs. In addition, the main contributors to disempowerment also changed. Group membership and control over use of income remained among the top contributors to disempowerment, but excessive workload emerged as another main contributor to disempowerment. The contribution of input in livelihood decisions to disempowerment decreased by 32 percentage points, while that for workload increased by 20 percentage points.

**Table 4.6 Women's empowerment status, by actor**

Indicator	Producers	Entrepreneurs		Wage Workers	
	All	Participants	All	Participants	All
N (number of observations)	400	89	396	91	379
<b>5DE score</b>	<b>0.63</b>	<b>0.51</b>	<b>0.48</b>	<b>0.58</b>	<b>0.49</b>
Disempowerment score (1 – 5DE)	0.37	0.49	0.52	0.42	0.51
% achieving empowerment (empowered headcount)	0.77	0.52	0.25	0.89	0.34
% not achieving empowerment (disempowered headcount)	0.23	0.48	0.75	0.11	0.66
Mean 5DE score for not yet empowered (average adequacy score)	0.63	0.51	0.48	0.58	0.49
Mean disempowerment score (1-5DE) for not yet empowered (average inadequacy score)	0.37	0.49	0.52	0.42	0.51

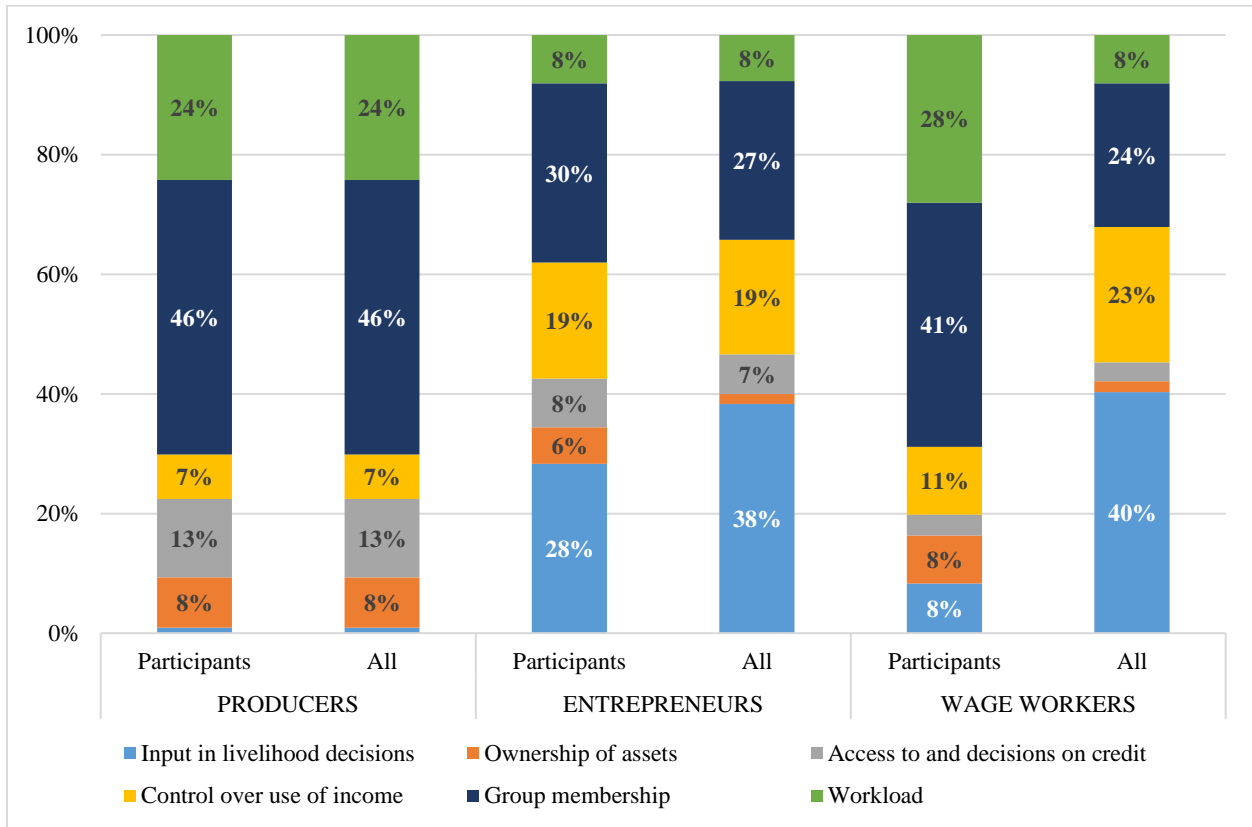
Source: Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Figure 4.41 Top contributors to disempowerment among all women respondents versus only women participants, by actor**



**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Figure 4.42 Contribution of each of the six indicators to disempowerment, by sex, actor, and household type**



**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Note:** Data labels are shown only for categories with ≥5% contribution.

#### 4.10 Key Constraints to Empowerment

The sub-indicators with the lowest adequacy achievements are the very same areas that have the most potential to create empowerment gains. Table 4.7 reports the key sub-indicators where less than 70 percent of men and women have adequate achievements, across the different value chain actors. Across all actors, very few respondents are active members of groups in their communities. They are also likely to be overworked, and lack physical mobility. Among producer households, respondents had low autonomy in fish production/farming, and low adequacy in attitudes toward domestic violence. Women were more likely than men to be inadequate in mutual respect among household members. Women in entrepreneur DHHs were inadequate in most areas, including autonomy, rights over assets, access to credit, and mutual respect among household members. Other areas with low adequacy include control over use of income and attitudes toward domestic violence. Women in wage-work DHHs also share a similar pattern of achievements, with low adequacy in rights over assets, control over income, and attitudes toward domestic violence. Comparatively, women in wage-work FHHs have fewer constraints to empowerment, with rights over assets and attitudes toward domestic violence being the lowest adequacies.

While the areas with low percentages of men and women reporting adequacy warrant attention, gender gaps in adequacies are also of interest. Figure 4.43 and Figure 4.44 report the differences in the percentages of men and women with adequate achievements in each of the sub-indicators (except access to childcare, men were not asked this question). The sub-indicators are shown in two sections: The A-WEAI sub-indicators and new sub-indicators. The first panel shows headcount differences between male respondents and female respondents in DHHs. The second panel shows headcount differences between male respondents in DHHs and female respondents in FHHs. Areas with positive differences favor men, while negative differences favor women.

Compared to female respondents in DHHs, male respondents are more empowered in all sub-indicators except in the group membership and workload sub-indicators among all actors, and in access to a financial account among wage-work households. This may reflect the women-oriented activities of NGOs in Bangladesh as well as the high degree of men's involvement in agriculture. The latter also reflects social norms regarding women's mobility and participation in agriculture and is not primarily a technological phenomenon. The higher access to financial accounts among women in wage-worker households could be an offshoot of NGO membership, because many NGOs offer financial services through group-based savings and credit activities. This is a benefit of group membership that goes beyond the social capital formed.

Because the types of livelihood activities differ across the three types of value chain actors, it is worth exploring the domains over which autonomy is exercised. Among producer households, men have greater autonomy in all spheres of activity except for livestock, in which women are heavily involved. Not only do men in entrepreneur households have more autonomy regarding the types of products to make or sell, the location of their enterprise, and the size of the enterprise, the gap between men and women in entrepreneurial households are also large. These gaps remain even if we restrict the sample of women to only those who participate in entrepreneurial activities. Interestingly, among wage-worker households, although men have more autonomy in the type of work, the choice of working conditions, and in using income from agricultural and nonagricultural activities, the gap is relatively small compared

to gaps within entrepreneurial households, and there is a relatively small gap in autonomy in using income from various activities.

Headcount patterns are less clear-cut in the figure comparing male respondents with female respondents in FHHs. Male respondents are more adequate in mutual respect among household members, autonomy in types of crops to grow among producer households, and rights over assets among wage-work households, compared to female respondents in FHHs. Women in wage-worker FHHs, however, are more adequate in group membership, access to a financial account, and control over use of agricultural income compared to men in wage-worker DHHs. This reversal in the usual pattern is worth examining in future work.

**Table 4.7 Percent of respondents adequate in modified WEAI sub-indicators, by household type**

	Producers			Entrepreneurs		Wage Workers		
	Male (DHH)	Female (DHH)	Female (FHH)	Male (DHH)	Female (DHH)	Male (DHH)	Female (DHH)	Female (FHH)
Sample size	329	329	71	397	398	344	344	56
Sub-indicator:	Percent			Percent		Percent		
Input in productive decisions†	99.70	99.39	100.00	98.49	17.77	98.83	12.69	100.00
Access to information about agricultural activities	90.58	86.32	85.92	21.41	2.27	6.12	0.29	8.93
Autonomy in livelihood activity	98.18	91.49	92.96	97.73	58.79	95.06	50.00	98.21
Autonomy for types of crops to grow	89.97	80.24	70.42					
Autonomy in livestock raising	79.94	81.46	85.92					
Autonomy in fish production/farming	54.41	48.33	53.52					
Autonomy in taking crops/livestock/fish to market	85.41	69.91	80.28					
Autonomy for types of products to make and/or sell in the market				90.68	49.62			
Autonomy in location of the enterprise				92.19	52.14			
Autonomy in size of the enterprise				90.43	48.61			
Autonomy in whether to work for someone else for pay						84.30	45.19	96.43
Autonomy in type of work						87.50	45.48	87.50
Autonomy in working conditions						82.85	45.19	91.07
Autonomy in using income from agricultural and nonagricultural activities	87.84	77.51	91.55	92.31	87.50	88.24	83.33	95.45
Ownership of assets†	99.70	93.62	100.00	100.00	94.22	100.00	93.02	100.00
Rights over assets	98.48	75.99	98.59	92.19	65.08	83.14	68.60	57.14
Access to and decisions on credit†	97.87	75.99	94.37	96.73	62.81	97.67	76.74	100.00
Access to a financial account	74.02	71.26	92.98	86.04	65.53	75.75	82.80	92.86
Control over use of income†	99.70	94.53	100.00	99.75	57.54	98.55	51.45	98.21
Control over use of agricultural income	98.78	92.71	100.00	99.75	56.03	76.16	45.93	94.64
Group membership†	19.15	50.15	57.75	27.96	42.71	8.72	52.62	42.86
Workload†	13.68	15.81	26.76	11.84	18.09	15.99	18.31	16.07
Access to childcare		90.41	100.00		85.84		83.91	‡
Mutual respect among household members	81.46	62.61	62.50	82.87	63.89	84.01	56.40	‡
Attitudes about domestic violence from husband	64.72	54.41	61.97	71.21	64.82	62.83	62.97	66.07
Mobility	20.97	1.22	9.86	11.08	0.75	12.50	2.62	19.64

**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

† Included in A-WEAI calculation; ‡ excluded due to small sample size.



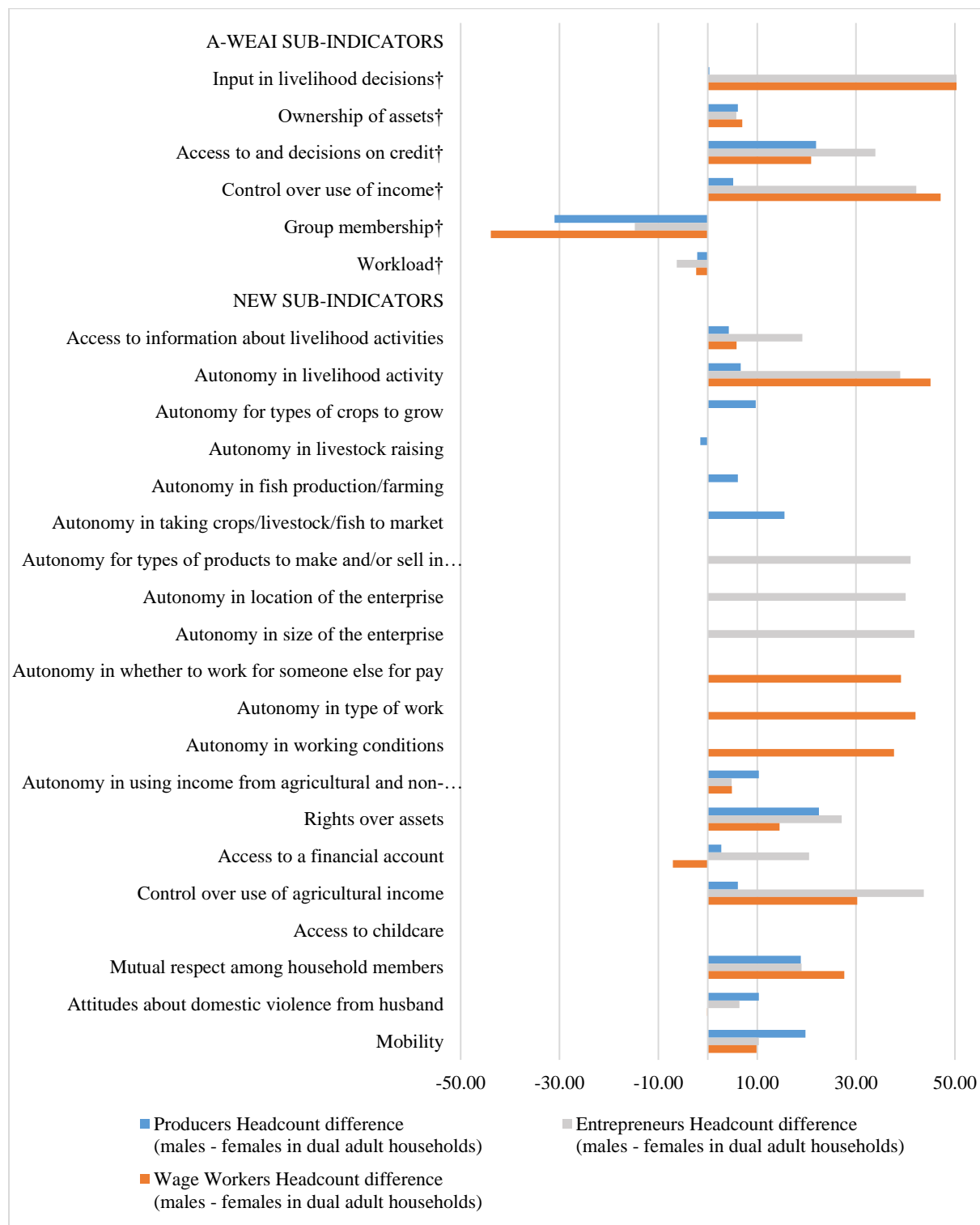
**Table 4.8 Key constraints to empowerment (adequacy below 70 percent), by actor and household type**

	Producers			Entrepreneurs		Wage Workers		
	Male (DHH)	Female (DHH)	Female (FHH)	Male (DHH)	Female (DHH)	Male (DHH)	Female (DHH)	Female (FHH)
Sample size:	329	329	71	397	398	344	344	56
Sub-indicator:	Percent			Percent		Percent		
Input in livelihood decisions†					<b>17.77</b>		<b>12.69</b>	
Access to information about livelihood activities				<b>21.41</b>	<b>2.27</b>	<b>6.12</b>	<b>0.29</b>	<b>8.93</b>
Autonomy in livelihood activity					58.79		50.00	
Autonomy for types of crops to grow								
Autonomy in livestock raising								
Autonomy in fish production/farming	54.41	48.33	53.52					
Autonomy in taking crops/livestock/fish to market		69.91						
Autonomy for types of products to make and/or sell in the market					<b>49.62</b>			
Autonomy in location of the enterprise					52.14			
Autonomy in size of the enterprise					<b>48.61</b>			
Autonomy in whether to work for someone else for pay							45.19	
Autonomy in type of work							45.48	
Autonomy in working conditions							45.19	
Autonomy in using income from agricultural and nonagricultural activities								
Ownership of assets†								
Rights over assets					65.08		68.60	57.14
Access to and decisions on credit†					62.81			
Access to a financial account					65.53			
Control over use of income†					57.54		51.45	
Control over use of agricultural income					56.03		45.93	
Group membership†	<b>19.15</b>	50.15	57.75	27.96	42.71	<b>8.72</b>	52.62	42.86
Workload†	<b>13.68</b>	<b>15.81</b>	<b>26.76</b>	<b>11.84</b>	<b>18.09</b>	<b>15.99</b>	<b>18.31</b>	<b>16.07</b>
Access to childcare								‡
Mutual respect among household members		62.61	62.50		63.89		56.40	‡
Attitudes about domestic violence from husband	64.72	54.41	61.97		64.82	62.83	62.97	66.07
Mobility	<b>20.97</b>	<b>1.22</b>	<b>9.86</b>	<b>11.08</b>	<b>0.75</b>	<b>12.50</b>	<b>2.62</b>	<b>19.64</b>

Source: Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

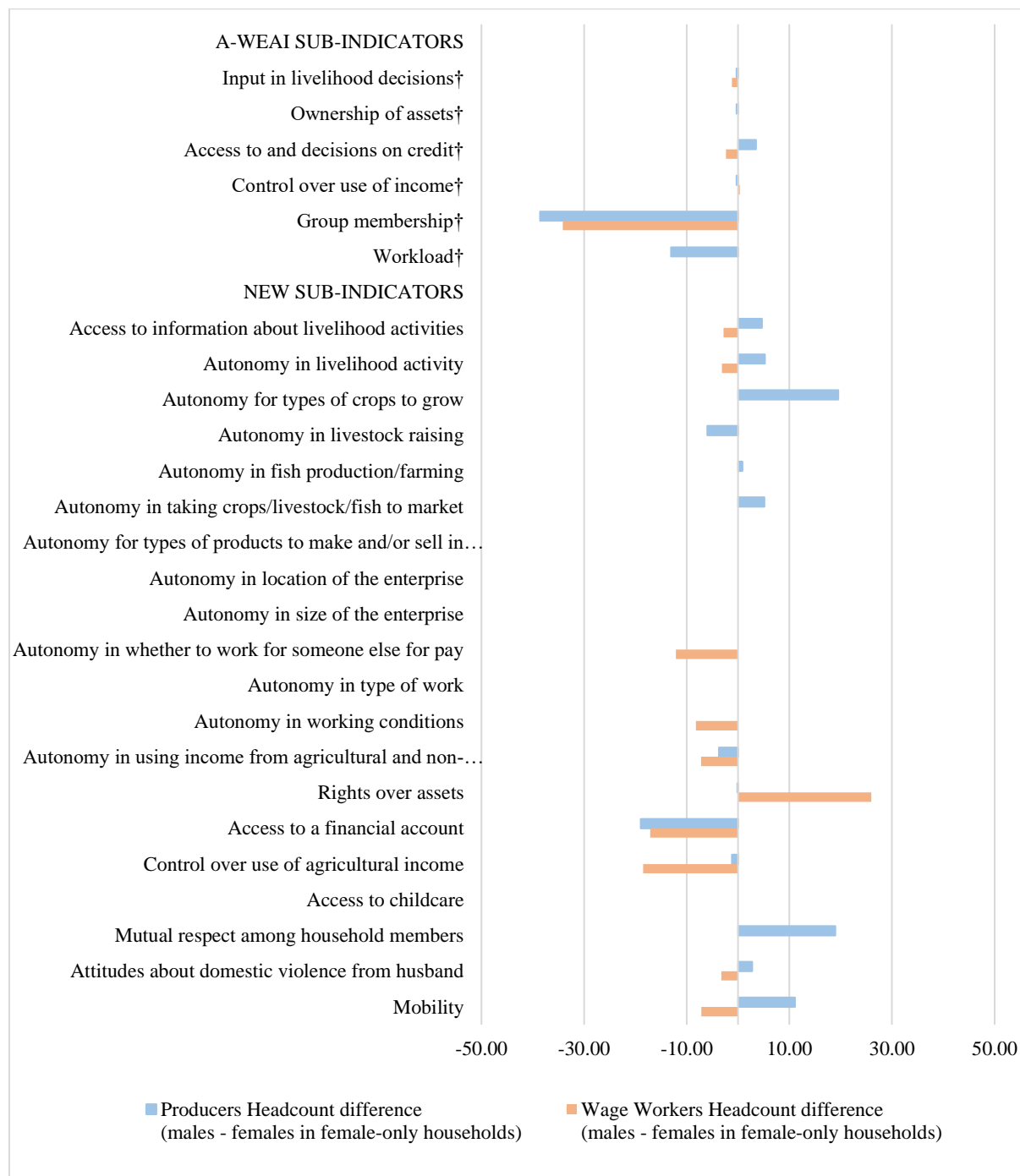
† Included in A-WEAI calculation; ‡ excluded due to small sample size. Legend: 0-25, 26-50, 51-70.

**Figure 4.43** Difference between the percentages of men and women (in dual-adult households) who have adequate achievements in each sub-indicator, by actor and household type



**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 †included in A-WEAI score calculation; access to childcare asked for female respondents only.

**Figure 4.44 Difference between the percentages of men and women (in female-adult only households) who have adequate achievements in each sub-indicator, by actor and household type**



**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.  
 †included in A-WEAI score calculation; access to childcare asked for female respondents only.

## 5. Summary and Concluding Remarks

Overall, the A-WEAI sub-indices show that women in producer households are more empowered and have greater gender parity than women in entrepreneur and wage-work households (Table 5.1). This reflects less agency as measured by the A-WEAI indicators for women in entrepreneur and wage-work households, particularly regarding input over livelihood decisions that appears as their top constraint to empowerment. Even when we restrict the sample to only women who participate in entrepreneurship and wage work themselves, women who are engaged in production appear more empowered according to A-WEAI. For men, however, there was little difference in A-WEAI scores across producer, entrepreneur, and wage-work households.

These patterns are consistent with values expressed in the qualitative interviews that women are expected to have control over the management of household chores, childcare, and agricultural tasks that take place near the homestead. However, women who work outside the home, whether as wage workers or as entrepreneurs, may risk the loss of social respect. Interviewees reported that when a woman works outside the home it appears that her husband is unable to support her or their family, and that can be shameful. As a result, their contributions are described as “helping out,” rather than choosing to find employment or business opportunities.

Across all household groups, and for men and women alike, lack of group membership emerges as among the top three contributors to disempowerment. This is consistent with both baseline and interim findings from the BIHS collected from the FTF ZOI (Ahmed et al. 2015, IFPRI 2018), and is also consistent with preliminary findings from the Philippines WEAI4VC pilot (Malapit et al. 2018). We also find that among producer households, two of the top constraints for women are consistent with the global baseline findings from 13 FTF zones: lack of group membership and lack of access to and decisions on credit (Malapit et al. 2014). Among men, lack of group membership and excessive workload are the biggest contributors to disempowerment, regardless of livelihood activity. However, men in producer and wage-work households are more disempowered compared to men in entrepreneur households. And men in producer households are slightly more disempowered compared to women in producer households.

For both women and men in entrepreneur and wage-work households, group membership and input in livelihood activities emerged as among the top three contributors to disempowerment. Control over use of income was the third most important constraint for women, whereas for men it was workload.

In summarizing findings for the additional indicators that we have proposed for the WEAI4VC, we present two ways of identifying areas of focus for future programming. The first approach is to identify the indicators with low achievements, which would, therefore, have more potential for substantial improvement (Table 5.1). Across the board, both workload and physical mobility emerge as key constraints for both men and women in dual-headed households, regardless of livelihood activity. This suggests that any intervention will need to consider the time burden required to participate in a particular livelihood or to adopt a specific practice or technology. Interventions that require physical mobility to travel to different places will be particularly challenging, not only for women, but for men as well. This emphasizes the need for better transport-related infrastructure for both men and women, and ways to address gender norms related to limited mobility, for women. In the short run, this may mean accommodation (for example, NGOs doing bulk procurement and marketing for women who have

limited mobility), but in the longer run, it would mean challenging these norms that limit women's mobility in the first place. It might also be possible to build on the expressed recognition and even acceptance that sometimes circumstances warrant women's greater independence running the family, the farm, and/or other business when there is an absent or deceased spouse. Another pathway toward empowerment could rest in the clearly expressed, positive views toward spouses' joint decision making, suggesting support to programming that strengthens awareness of the contributions of both men and women to household livelihood activities.

Both women and men in entrepreneur and wage-work households also have very low achievements in access to information, which suggests that there may be demand for specific livelihood-related training that go beyond agricultural production.

The second approach is to look at the differences between the male achievements and the female achievements to see which indicators have the largest achievement gaps by gender. Table 5.2 summarizes the achievement gaps between men and women by indicator and by value chain actor and is color-coded for ease of reference. Cells that are shaded green identify gaps favoring men, while those shaded orange show advantages in women's favor. Although most gaps favor men, there are some notable exceptions: group membership (favoring women in all household types and value chain actors) and workload (favoring women in comparisons of the male head vs. female household head comparisons in producer households, and in dual-headed entrepreneurial households).

The consistent advantage for women in group membership is noteworthy. Group membership not only builds social capital, but it can also facilitate the accumulation of other forms of capital (Quisumbing and Kumar 2011). In this specific case, group membership may facilitate access to financial capital, since many group-based programs have savings and credit components.

Despite these exceptions, the prevalence of gaps favoring men across most domains, including the new indicators regarding mutual respect, attitudes toward domestic violence, and mobility, emphasizes that most programming should continue to address the long-standing disadvantage against women in Bangladesh.

The low empowerment scores among women in entrepreneur households may be surprising to those who think that entrepreneurship is the key to empowering poor rural women. However, the nature and the scale of the enterprise may be important to consider. The low adequacy scores with respect to autonomy indicates that women may not have many options to choose the type of product, location, and size of their enterprise. Most of the women entrepreneurs in our sample are engaged in small-scale retail, which typically involves small margins and is not very lucrative. Smaller enterprises that are additions to household work, essentially household-based enterprises, would be unlikely to provide the benefits that make the hard work of entrepreneurship worthwhile and are likely more about maintaining cash flow rather than building a business. Entrepreneurship may only begin to pay off as micro-entrepreneurs become small or medium enterprises, and can start hiring others and retain more of the profits.

What are the implications for value chain development? Our results suggest that efforts to increase women's involvement in higher nodes of the value chain that have the potential for high returns may not automatically be empowering. The diagnostics offered by the WEAI4VC analysis can identify areas that can be addressed so that value chain development can help to empower women, whether as

producers, entrepreneurs, or wage workers. For producers, increasing participation in groups, decreasing workload, and improving physical mobility are important to close empowerment gaps. It is also important to address the low autonomy that women report in many aspects of agricultural production, and to change attitudes toward domestic violence. For entrepreneurs, increasing autonomy, rights over assets, access to credit, and increasing mutual respect among household members are key to women's empowerment. For wage workers, increasing autonomy, strengthening rights over assets and control over income, and addressing norms surrounding domestic violence may help close empowerment gaps. The qualitative work also provided more insights and nuance into the specific constraints to empowerment that women producers, entrepreneurs, and wage workers face.

The results from this mixed-methods pilot study testing a new instrument to measure empowerment among different value chain actors also reveals the difficulty of assessing empowerment of different value chain actors when households are themselves diversified. Although sampling decisions for the household survey were made based on at least one household member undertaking a specific activity (agricultural production, entrepreneurship, or wage work), our results also reveal that households undertake a variety of livelihood activities and, in very rare exceptions, do not fit into neat categories. This is consistent with findings from the qualitative work (Rubin 2018, p. 11): most of the interviewees in the qualitative subsample were also engaged in farming for both home consumption and for sale, even when their main source of income derived from their occupations as entrepreneurs or traders. In these areas, a smart livelihood strategy is a multifaceted one, and the qualitative interviews illustrated the many ways that households seek to maintain themselves.

Thus, while this version of our report has assessed empowerment for specific types of livelihood activities, our initial analysis does not fully capture other aspects of livelihoods decisions in diversified households. In future work, we plan to draw on the information collected on the multiple roles undertaken by households and individuals to come up with a more comprehensive assessment of empowerment that accounts for diversification. Further analysis will focus on the specific livelihood activities that individual respondents undertake, which will sharpen our diagnosis of empowerment gaps along the agricultural value chain in Bangladesh.

**Table 5.1 Summary of empowerment scores and indicators, by actor and sex**

	Producers		Entrepreneurs		Wage Workers	
	Women	Men	Women	Men	Women	Men
<b>5DE score</b>	0.63	0.61	0.48	0.62	0.49	0.60
<b>Gender Parity Index (GPI)</b>	<b>0.95</b>	<b>0.95</b>	<b>0.71</b>	<b>0.71</b>	<b>0.73</b>	<b>0.73</b>
<b>A-WEAI score</b>	0.67		0.50		0.51	
Top A-WEAI indicator contributing to disempowerment	Group membership	Group membership	Input in livelihood activities	Group membership	Input in livelihood activities	Group membership
Top three A-WEAI indicators contributing to disempowerment	1. Group membership 2. Workload 3. Access to and decisions on credit	1. Group membership 2. Workload 3. Access to and decisions on credit	1. Input in livelihood activities 2. Group membership 3. Control over use of income	1. Group membership 2. Workload 3. Input in livelihood activities	1. Input in livelihood activities 2. Group membership 3. Control over use of income	1. Group membership 2. Workload 3. Input in livelihood activities
Indicators with adequacy equal to or less than 25 percent	DHH: ▪ Workload ▪ Physical mobility FHH: ▪ Physical mobility	DHH: ▪ Group membership ▪ Workload ▪ Physical mobility	DHH: ▪ Input in livelihood decisions ▪ Access to information about livelihood activities ▪ Workload ▪ Physical mobility	DHH: ▪ Access to information about livelihood activities ▪ Workload ▪ Physical mobility	DHH: ▪ Input in livelihood decisions ▪ Access to information about livelihood activities ▪ Workload ▪ Physical mobility FHH: ▪ Access to information about livelihood activities ▪ Workload ▪ Physical mobility	DHH: ▪ Access to information about livelihood activities ▪ Group membership ▪ Workload ▪ Physical mobility

Source: Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

**Table 5.2 Male-female headcount differences in adequacy, by household type**

	Producers		Entrepreneurs	Wage Workers	
	Men vs Women, dual-adult HHs	Men vs Women, female-only HHs	Men vs Women, dual-adult HHs	Men vs Women, dual-adult HHs	Men vs Women, female-only HHs
Input in productive decisions <sup>†</sup>	0.3	-0.3	80.7***	86.1***	-1.2
Access to information about agricultural activities	4.3*	4.7	19.1***	5.8***	-2.8
Autonomy in livelihood activity	6.7***	5.2***	38.9***	45.1***	-3.2
Autonomy for types of crops to grow	9.7***	19.5***			
Autonomy in livestock raising	-1.5	-6.0			
Autonomy in fish production/farming	6.1	0.9			
Autonomy in taking crops/livestock/fish to market	15.5***	5.1			
Autonomy for types of products to make and/or sell in the market			41.1***		
Autonomy in location of the enterprise			40.1***		
Autonomy in size of the enterprise			41.8***		
Autonomy in whether to work for someone else for pay				39.1***	-12.1**
Autonomy in type of work				42.0***	0.0
Autonomy in working conditions				37.7***	-8.2
Autonomy in using income from agricultural and non-agricultural activities	10.3***	-3.7	4.8	4.9	-7.2
Ownership of assets <sup>†</sup>	6.1***	-0.3	5.8***	7.0***	
Rights over assets	22.5***	-0.1	27.1***	14.5***	26.0***
Access to and decisions on credit <sup>†</sup>	21.9***	3.5*	33.9***	20.9***	-2.3
Access to a financial account	2.8	-19.0***	20.5***	-7.0**	-17.1**
Control over use of income <sup>†</sup>	5.2***	-0.3	42.2***	47.1***	0.3
Control over use of agricultural income	6.1***	-1.2	43.7***	30.2***	-18.5***
Group membership <sup>†</sup>	-31.0***	-38.6***	-14.8***	-43.9***	-34.1***
Workload <sup>†</sup>	-2.1	-13.1***	-6.3***	-2.3	-0.1
Mutual respect among household members	18.8***	19.0***	19.0***	27.6***	‡
Attitudes about domestic violence from husband	10.3***	2.8	6.4**	-0.1	-3.2
Mobility	19.8***	11.1**	10.3***	9.9***	-7.1

**Source:** Women's Empowerment in Agriculture Index for Value Chain (WEAI4VC) Quantitative Survey 2017, IFPRI.

Notes: Estimates are headcount differences, with significance based on chi-square tests between men versus women in dual-adult households, and men versus women in female-only households, by actor. Color legend: **green** = statistically significant achievement gap favoring men; **orange** = statistically significant achievement gap favoring women. \* Significant at the 10% level, \*\* significant at the 5% level, \*\*\* significant at the 1% level.

<sup>†</sup> Included in A-WEAI calculation; ‡ excluded due to small sample size



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