

Women's Empowerment in Agriculture and Nutritional Outcomes in Ethiopia

NNP related research finding dissemination workshop



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Background

- Agriculture is closely linked to food security in rural parts of Ethiopia.
- Change in agricultural productivity - both direct and indirect implications on nutritional outcomes.
- Various ways through which increase in agricultural productivity can translate to change in nutritional outcomes.
 - increased food for own consumption,
 - increase in income,
 - reduction in market prices,
 - changes in preferences and
 - shifts in the control of resources within households.



Background

- Intra-household resource allocation has a considerable role to play in nutritional outcomes.
- The extent to which women have access to and control over resources largely determines the kind of care they provide for their children.
- As acknowledged by the National Nutrition Program, women's lack of control over household resources, time, knowledge, and social support networks constitute a major barrier to improving poor nutritional outcomes in Ethiopia
- Empirical researches have also shown that women's greater control in household has an impact on the nutritional and educational outcomes of children



Objective

- This research aims at looking into the relationship between women's empowerment and nutritional outcomes of both women and children in the rural Ethiopia context
- Using a recently developed measure of women empowerment called Women Empowerment in Agriculture Index (WEAI).
- Outcome variables
 - Children's nutritional outcomes (stunting, wasting, underweight)
 - Women's nutritional outcomes (BMI and Dietary Diversity)



Data

- Data from a baseline survey conducted for the evaluation of the FtF program in Ethiopia, the US government global hunger and food security initiative.
- Collected from 5 regions of the country and comprises of 7,056 households from 84 woredas (districts).
- Data collection took place in June-July 2013.
- The questionnaire used for the survey includes modules on
 - basic demographic information; household consumption expenditure; Women empowerment indicators; women dietary diversity and anthropometry; child anthropometry and infant and young child feeding; employment, agricultural productivity and input use; and other relevant information.



Methods - Women's Empowerment in Agriculture Index (WEAI)

- The Women Empowerment in Agriculture Index (WEAI) is used to measure women's empowerment.
- The index was developed by researchers at USAID, IFPRI, and the Oxford Poverty and Human Development Initiative (OPHI)
- To track the change in women's empowerment levels that occurs as a direct or indirect result of interventions under Feed the Future, the U.S. government's global hunger and food security initiative.
- Measures the empowerment, agency and inclusion of women in the agricultural sector.



Methods - Women's Empowerment in Agriculture Index (WEAI)

- Composed of two sub-indices: the Five Domains of Empowerment sub-index (5DE) and the Gender Parity sub-Index (GPI)
- Five Domains of Empowerment (5DE) measures the empowerment of women in five areas (90 percent of the total WEAI); and
- The Gender Parity Index (GPI) measures the average level of equality in empowerment of men and women within the household (10 percent of the total WEAI).



Methods - WEAI Components

- The five domains, their definitions under the WEAI, the corresponding indicators, and their weights for the 5DE are:

Domain(each weighted 1/5 of 5DE sub-index)	Indicator	Weight
Production	Input in productive decisions	1/10
	Autonomy in production	1/10
Resources	Ownership of assets	1/15
	Purchase, sale, or transfer of assets	1/15
	Access to and decisions about credit	1/15
Income	Control over use of income	1/5
Leadership	Group member	1/10
	Speaking in public	1/10
Time	Workload	1/10
	Leisure	1/10



Methods

- Following the works by IFPRI colleagues (Sraboni et al, 2014 in Bangladesh and Malapit et al, 2013 in Nepal)
- Multivariate regression method
- Control for individual, household and community characteristics
- Likely that women's empowerment within the household might be affected by same factors affecting nutritional outcomes.
- Causal estimates through an instrumental variable strategy
- Women empowerment predicted using village level empowerment proxy, number of credit sources in the village, cluster level distance to market.

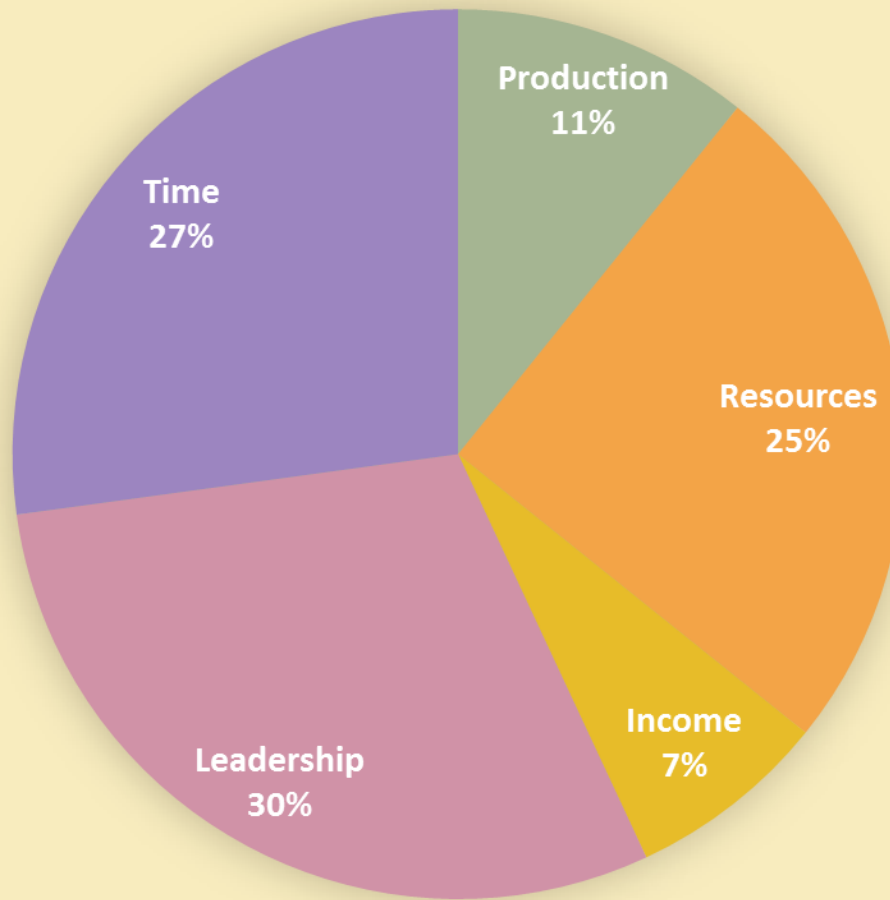


Results - Descriptive

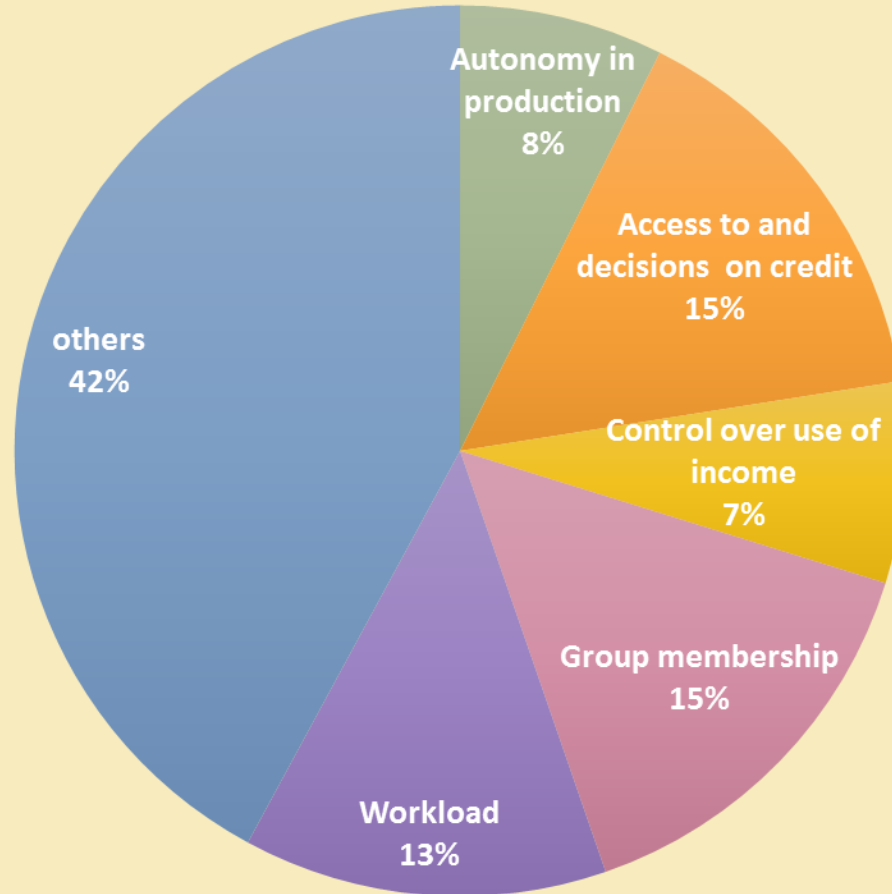
- How empowered are Ethiopian women in Agriculture?
- The female respondents' individual-level 5DE profile or score (weighted average of the 10 indicators)
- The average 5DE score is 0.64
 - A lower level of empowerment in agriculture for Ethiopian women compared with women in Bangladesh (0.75), Guatemala (0.69) and Uganda (0.79).
- The findings from the WEAI diagnostics are used to identify the focus of analysis.
- Contribution of each of the five domains to disempowerment



Results - Contribution of each of the 5 domains to disempowerment of women



Results - Contribution of each of the 10 domain indicators to disempowerment of women



Results –Descriptive for outcome variables

Children's Nutritional Outcomes (under 5 years)	
Stunting (%)	51.3
Wasting (%)	12.1
Underweight (%)	33.1
Women's Nutritional Outcomes	
Underweight (BMI<18.5)	28.15
Dietary Diversity (No. of food groups)	1.49



Results

- Women's empowerment leads to improvements in children's nutritional outcomes and maternal dietary diversity.
- In particular, households with empowered women are less likely to have stunted and underweight children.
- A more detailed analysis reveals that different dimensions of women's empowerment appear to have different effects on nutritional status and dietary diversity.



Results

- Group membership of women emerges as an important factor for both child and maternal outcomes.
- Number of hours women work is positively related with maternal dietary diversity and BMI – Income effect outweighs
- Women's control over income leads to considerable improvements in women's Body Mass Index and child stunting.



Results

- **Children's nutritional outcomes:**
 - Wealth
 - Availability of dairy cows and chicken
 - Dependency ratio

- **Women's nutritional outcomes (particularly Dietary Diversity)**
 - Education
 - Wealth
 - Availability of dairy cows and chicken
 - Number of crops produced by the household



Recommendation

- Interventions to increase women's agency and capability to make decisions in agriculture may not only provide another opportunity to engage them more visibly in agriculture, an area where they have traditionally been undercounted (FAO 2011), but also work to improve child nutrition as well as their own well-being.
- Improving the status of women and empowering them in agriculture has multi-dimensional benefits which include improved nutritional outcomes.
- **agricultural interventions that are nutrition sensitive should also focus on empowering women in different dimensions.**



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Acknowledgements



Appendices : Regression on Children's outcome

	5DE		Group		Credit		Work		Income	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Stunting	-1.56*	-0.69***	0.27	0.01	-1.10*	-0.12***	-0.10*	0.01	-0.61**	-0.03*
	(1.25)	(0.18)	(0.83)	(0.03)	(0.51)	(0.43)	(0.00)	(0.01)	(0.10)	(0.02)
Underweight	-1.95	-0.55***	-0.934***	-0.03	-0.03	-0.10	-0.06	0.01	0.14	0.01
	(1.58)	(0.18)	(0.15)	(0.03)	(0.49)	(0.07)	(0.07)	(0.01)	(1.37)	(0.02)
Wasting	0.36	0.03	0.07	-0.05	-0.17	0.03	-0.17**	-0.01	0.116	0.02
	(1.59)	(0.23)	(0.76)	(0.04)	(0.63)	(0.08)	(0.00)	(0.01)	(0.23)	(0.02)



Result: Regression on Women's nutritional outcome

	5DE		Group		Credit		Work		Income	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Underweight	0.26	0.05	-0.78***	-0.05**	-0.25	0.12	-0.18	-0.02**	0.06	0.02
	(1.80)	(0.16)	(0.25)	(0.02)	(0.84)	(0.05)	(0.12)	(0.01)	(0.17)	(0.01)
Dietary Diversity	2.48**	1.27***	-0.18	0.16***	1.59***	0.12***	-0.07	0.02***	0.41	0.08
	(0.86)	(0.11)	(0.34)	(0.02)	(0.64)	(0.04)	(0.01)	(0.01)	(0.12)	(0.01)

