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SYNOPSIS OF ESSP WORKING PAPER 80

Synopsis: Women's empowerment in agriculture and dietary diversity in Ethiopia

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Intra-household resource allocation in developing countries plays a considerable role in the nutritional status of household members. Further, maternal and children's dietary diversity are linked, not only through the general circumstances that exist within a household, but also to the level of economic control that women maintain in the household. The extent to which women have access to and control over resources largely determines the kind of nutritional care they provide for their children and for the rest of their household. As recognized by the National Nutrition Program, women's lack of control over household resources, time, knowledge, and social support networks constitutes a major barrier to improving poor nutritional outcomes in Ethiopia.

Using household survey data from 2013 covering more than 7,000 households in five regions of Ethiopia, we investigate the impact of women's empowerment in agriculture on the nutritional outcomes of children and women. We use multivariate regression methods and instrumental variable techniques to establish the relationship between women's empowerment and the dietary diversity of women and children. The results show that the indicators for assessing women's empowerment are all positively related to better dietary diversity for both children and women. As women's empowerment leads to improvements in children's and women's dietary diversity, it follows that interventions which increase women's empowerment contribute to improving child nutrition as well as their own well-being.

INTRODUCTION

Achieving improved mother and child nutritional outcomes is one of the major goals of developing countries like Ethiopia. This challenge is particularly pronounced in rural areas where access to improved food sources; health, water, and sanitation facilities; and other infrastructure is very limited. It is generally thought that providing sufficient food through increasing agricultural productivity leads to better nutritional outcomes. However, this relationship is not always straightforward.

In most rural households, the responsibility for the nutrition of all household members, in general, principally falls on the mother. Ethiopia's National Nutrition Program recognizes that the general lack of control of women over household resources, time, knowledge, and social support networks constitutes a major barrier to improving poor nutritional outcomes (GFDRE 2013).

This study investigates the link between women's empowerment and dietary diversity in rural Ethiopia. It employs the recently developed Women's Empowerment in Agriculture Index (WEAI). Recent studies have used the WEAI and its component indicators to assess the extent of women's empowerment in agriculture and the impact that varying levels of such empowerment has on nutritional outcomes for women and children.

CONCEPTUAL FRAMEWORK

Agriculture is closely linked to food security in rural parts of Ethiopia. This is mainly because household agricultural production is the primary source of nutrients and income for households. Changes in agricultural productivity and nutrition-focused interventions in agriculture are generally believed to have both direct and indirect implications on nutritional outcomes, either through increased food for own consumption or through increases in income (Arimond et al. 2010; Malapit et al. 2013).

The 1990 UNICEF framework of the determinants of child nutritional status shows how different types of maternal resources are key determinants of child nutritional status (UNICEF 1990).

This framework highlights how the care of children is linked not only to the economic condition of the household in general, but also to the status of women within the household. In consequence, the lack of control over household resources, time, knowledge, and social support networks constitute a major underlying cause of poor nutritional outcomes within a household. However, the linkages are complex. Furthermore, measuring women's empowerment is not straightforward.

Table 1: The domains used to compute the Women's Empowerment in Agriculture Index

Domain	Indicator	Definition
Production	Decisions on production	Sole or joint decisionmaking over food and cash-crop farming, livestock, fisheries.
	Autonomy in production	Autonomy in agricultural production, e.g., what inputs to buy, what crops to grow, and what livestock to raise.
Resources	Ownership of assets	Sole or joint ownership of major household assets
	Asset disposal and acquisition	Does woman participate in decisions to buy, sell, or transfer assets?
	Access to and decisions on credit	Access to credit and participation in decisions concerning credit.
Income	Control over use of income	Sole or joint control over income and expenditures.
Leadership	Group membership	Is woman an active member in at least one economic or social group, e.g. agricultural marketing.
	Speaking in public	Is woman comfortable speaking in public concerning various issues, such as intervening in a family dispute.
Time	Workload	Allocation of time to productive and domestic tasks.
	Leisure	Satisfaction with the time available for leisure activities.

Source: Alkire et al. (2013).

Note: Each of the five domains making up the empowerment in agriculture sub-index has an overall weight of 20 percent in computing the sub-index. This sub-index together with the separate 'gender parity in empowerment within the household sub-index' are used to compute the WEAI.

Hence, the Women’s Empowerment in Agriculture Index (WEAI) was developed: a) to measure gender parity in empowerment in farm households b) to track changes in empowerment, and c) to assess the impact in women’s empowerment levels that occur as a result of interventions under Feed the Future (FtF), the U.S. government’s global hunger and food security initiative. Table 1 shows the five domains of empowerment (5DE) incorporated in the WEAI. A woman is defined as ‘empowered’ if she has achieved a certain level in four of the five domains specified, or is empowered in some combination of the weighted indicators that reflects 80 percent of total empowerment.

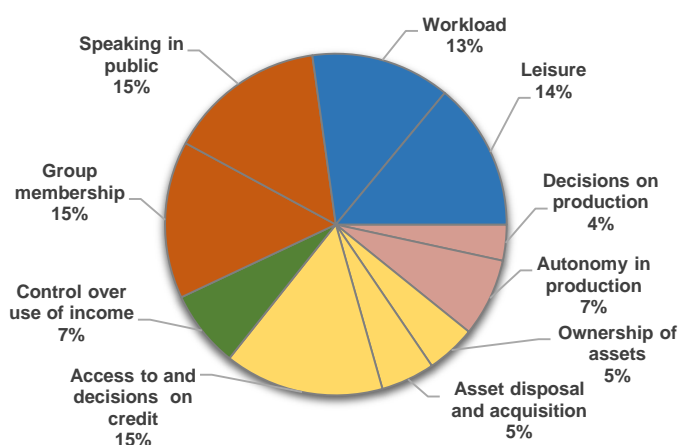
DATA AND METHODOLOGY

We use primary data from a baseline survey conducted for the evaluation of the FtF program in Ethiopia. The data were collected in June 2013 from five regions – Tigray; Amhara; Oromiya; Southern Nations, Nationalities, and Peoples Region (SNNP); and Somali - comprising 7,011 households from 84 *woredas* (districts).

We used a Two-Stage Least Squares analytical approach, first estimating the women’s empowerment indicators and, second, looking at association between women’s empowerment indicators and the dietary diversity of children and women in the study households, the outcome variables.

The WEAI, described above, was used to measure the empowerment of women and also to identify the domains in which women are disempowered. This helps to identify empowerment indicators that contribute substantially to the degree of disempowerment. Taking the five domains of the empowerment in agriculture sub-index, presented in Table 1, for our dataset, Figure 1 presents a breakdown of the contribution of each indicator in the five domains to, in this case, the degree of women’s disempowerment. For example, *group membership* emerges as the indicator that contributes most to the disempowerment in the Leadership domain, while *access to and decisions on credit* and *autonomy in production* contribute the most to disempowerment in the Resources and Production domains, respectively.

Figure 1: Contribution of the 10 indicators to women’s disempowerment, organized by the five domains of the empowerment in agriculture sub-index



Source: Authors’ compilation using FtF baseline Survey, 2013

The four major domains that contribute to disempowerment are Leadership, Time, Resources, and Production. Under these domains, the most significant indicators contributing to disempowerment are group membership, workload, access to and decisions on credit, and autonomy in production, respectively. We consider these contributors as *explanatory* variables in order to assess how the domain indicators correlate with nutritional outcomes of children and women.

RESULTS

Using different specifications in our analysis, all our models show that women’s empowerment indicators associate positively with children’s dietary diversity. The more that women are empowered within their households, the better the dietary diversity of their children. Other factors that significantly contribute to an improvement in children’s dietary diversity include diversity of agricultural production and the educational attainment of their mothers, especially primary education. On the other hand, the experience of a shock in the household has negative implication on the dietary diversity of children.

Similarly, all the empowerment indicators are positively and significantly related to women’s dietary diversity. In addition to the aggregate empowerment score, group membership, the amount of time spent on paid and unpaid activities, control over income, and autonomy on production decisions all have a positive and significant effect on the number of food groups that women consume. Other factors that significantly affect women’s dietary diversity are production diversity, the woman’s education, and the wealth of the household. The fact that the empowerment indicators are all positive and significant in explaining women’s dietary diversity, even after controlling for individual- and household-level effects, implies that empowering women in agriculture gives them more power to improve their own nutritional well-being, as well as that of their children.

CONCLUSION AND IMPLICATIONS

Improving the health of children and their mothers is an important development issue in countries like Ethiopia. Consequently, the Ethiopian government is designing different policies and interventions to enhance the health status of children and women of childbearing age. One aim of these interventions is to empower women in order to improve their general health and nutritional status. Women who are disempowered constitute a major barrier to improving nutritional outcomes in Ethiopia.

These results indicate that the empowerment of women in general, as well as engagement of women in different economic activities, has a significant positive impact on their nutritional status and that of their children. Efforts to enhance the control that women in Ethiopia can exercise in their farming activities, as well as in other economic activities, will generate improvements in both their own nutritional status and that of their children.

REFERENCES

Refer to [ESSP Working Paper 80](#) for a full list of the references used in this study.

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The Ethiopia Strategy Support Program (ESSP) is financially supported by the United States Agency for International Development (USAID) and the Department for International Development (DFID) of the government of the United Kingdom and is undertaken as part of the CGIAR Research Program on Policies, Institutions, and Markets (PIM) led by the International Food Policy Research Institute (IFPRI). This publication has been prepared as an output of ESSP and has not been independently peer reviewed. Any opinions expressed here belong to the author(s) and do not necessarily reflect those of IFPRI, the Ethiopian Development Research Institute, USAID, DFID, PIM, or CGIAR.

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