**Introduction**

Ethiopia has an ambitious goal to transform its economy by moving farmers from subsistence to commercial agriculture, to become food self-sufficient and to improve livelihoods for the country's estimated 50 million smallholder farmers. This will be achieved in part through an extension system that links farmers to frontline extension agents for advice and support. However, the system is plagued by inefficiencies due to insufficient numbers of agents, low system capacity and performance, poor information quality, and lack of coordination among the various development agencies. In addition, gender equality in agricultural extension services is also a significant productivity, as women have limited access to extension services tailored to their specific needs, and this undermines their ability to fully benefit from the services.

In response, the Digital Agricultural Advisory Services (DAAS) program uses digital technologies (e.g., audio, SMS, video, and mobile applications) to transmit information to farmers, providing content that is of higher quality and more customized to their needs, and providing a platform for farmer feedback on the services. This study examined how the DAAS program can equitably engage both women and men to achieve the project’s strategic objectives and advance women’s empowerment. It aimed to generate information on gender gaps, needs, constraints, and opportunities for women and men in using and adopting digital advisory services in the Amhara, Oromia, Southern Nations, Nationalities and Peoples’ (SNNP), and Tigray regions.

**About DAAS**

DAAS is a digital agricultural advisory services platform that integrates the elements of farm-level data such as soil type and crop varieties, content on agricultural practices, local weather, input availability and market information, and multimodal information delivery channels (videos, Interactive Video Response (IVR), Short Message Service (SMS), and radio).

**Research Methods**

This study used qualitative methods (key informant interviews and focus group discussions). It also employed Harvard framework and Moser analytical tools as theoretical frameworks. The study covered four regions: Amhara, Oromia, SNNPR and Tigray in Ethiopia. Data was collected from eight woredas - two from each region, where dairy and wheat farming is practiced. Seventy-two KIIIs (27 women and 45 men) and 28 FGDs were conducted. Out of the 197 FGD participants, 123 were women and 74 men.

**Key Findings**

The study established that contrary to popular beliefs that men do the farming, women and female youth in the study areas are heavily engaged in both wheat and dairy production. In wheat production, women are heavily involved in land preparation, sowing, weeding, and transporting produce to storage. However, they do not gain much from its sale - while both women and men sell wheat in all the regions, men sell in bulk and transport the produce to the market via donkey or vehicles, but women are allowed to sell only in smaller quantities — “a scoop of wheat” (FGD participant). In dairy farming, this study established that the contribution of girls and women is enormous. However, women are responsible for daily sales and the income goes to them directly. Other findings are summarized in the following sections.

**Female headed households are relatively disadvantaged in agricultural production:**

Respondents in FGDs suggested that compared to male headed households, female headed households have less access to extension services, are less productive, and have smaller incomes. Further, if such households do not have a son or male relatives to support them in crop production, they give their land to other men to cultivate and in return get half of the produce.
Women's decision-making power is generally weaker than men’s: The study noted that there is increasing joint decision-making between men and women on many issues. However, in most cases, women’s decision-making is still limited to milking processes, dairy sales, family welfare-related decisions such as seeking healthcare, and small household expenditures. On the other hand, men have relatively more decision-making power on issues like buying or selling major household items (solar, TV/radio, etc.), buying or selling livestock, and whether to engage in non-farm business activity. Men also decide how much wheat to produce, consume, or sell, and on purchase of agricultural inputs.

Men determine how household incomes will be spent: The findings show that while both men and women contribute to household incomes through agriculture and non-agricultural income-generating activities, in general, it is men who determine how this income will be spent. Women’s decision-making power is limited to income from the sale of chickens, eggs, and dairy products, which they spend on basic household needs. Men's income is spent on purchasing agriculture inputs including cattle feed, annual tax, children's clothes, children’s education, livestock, and costs related to festivities, and house construction.

Women have less access to and control over mobile phones. They do not have the money to purchase mobile phones, and neither do they have the power to decide to buy one. Some respondents noted that they also do not know how to operate mobile phones. Those that have access to a phone use them to stay in touch with their social networks, but not to access extension services.

Women’s leadership and participation in common groups: The findings show that women in the study areas participate more in women-only self-help and savings groups. Where they are members in mixed gender groups, their participation in leadership positions is minimal, and they are mostly treasurers because of the belief that women are trustworthy with money. Among the factors that undermine women’s participation in groups and active leadership include belief that they are represented by their husbands and having less capacity to pay monthly savings and to repay a loan. Other factors are workload, which consumes all their time, and lack of confidence to run for leadership positions.

Women in the study region have less access to agricultural advisory services: Agricultural advisory services in Ethiopia make use of farmer development groups, cooperatives and other similar groups to provide support to farmers. This study found that because women generally do not participate in these groups, extension agents struggle to reach them. Extension agents chiefly contact men, due to women’s time burdens and limited connections to the existing farmer networks.

In addition, study respondents reported that women take more time to adopt new practices, because they need approval from their husbands. They also have limited control over productive resources, which further hampers their ability to adopt new agricultural practices and technologies. However, some key informants believed that women adopt new behaviors easily, if trained and monitored well.

Study Recommendations

The findings show that for DAAS and other similar programs to equitably engage women and men in agricultural production and advance women’s empowerment, they will need to adjust advisory and other support services to meet the needs of women farmers, and especially those in female headed households. This study makes the following recommendations to help achieve this objective:

1. Deliberately target women farmers, in both female- and male-headed households, with agricultural advisory services. This can be achieved through efforts such as having content related to their needs and setting targets for extension agents to reach women farmers. In addition, given women’s poor access to digital communication tools, DAAS should sensitize them on what content/programs are available, and demonstrate how to access them. If such programs are on radio or TV, they should be available during hours when women are free.

2. Integrate women empowerment messaging in all content: To further level the ground and reduce gender-related obstacles to women’s participation in agricultural production, DAAS should integrate women’s empowerment messaging into all training content, including sessions attended mostly by men.

3. Encourage joint financial decision making at household level: DAAS should build in its training programs messaging that encourages joint decision-making, to increase women's decision-making power over household finances. In addition, DAAS can link them to financial services to boost their control over their own income, as well as their decision-making power.

4. Partner with existing groups that have substantial women’s memberships and female leadership: The results show that women do not fully participate in farmer groups and cooperatives, and therefore do not benefit from farmer advisory services. DAAS should work more with groups that have substantial women’s memberships and female leadership, to reach more women.