Access and Utilization of Agricultural Extension Services among Rural Ethiopian Women

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Abstract

The review paper analyzed factors affecting access and utilization of agricultural extension service among rural Ethiopian women. The objective of this paper was to review factors affecting access and utilization of agricultural extension service. Secondary sources of data were used by reviewing the findings of different researchers on the research title. "Women comprise, on average, 43 percent of the agricultural labor force in developing countries. Agriculture sector has been the recognition that past efforts have failed in part because they overlooked women's role in the sector and the role of gender inequalities in reducing agricultural productivity. The following factors including age, marital status, income, and educational attainment as well as social categories such as ethnicity and gender influence the abilities of technicians to deliver the knowledge they have and the willingness and capacity of producers and processors to make use of the services offered influence that men and women farmers have on the content of agricultural extension services and the manner in which it is delivered. In general, strengthening women's skills is essential to enable women to participate in agricultural extension service and articulate their extension needs.

Keywords: Agricultural Extension, Agricultural Extension System, Extension activities, Women Farmers, Ethiopia.

Introduction

Background of the Paper

Agriculture is recognized as a fundamental driver of economic growth and poverty reduction for many developing countries and a priority area for investment. A characteristic of the

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renaissance of the agriculture sector has been the recognition that past efforts have failed in part because they overlooked women's role in the sector and the role of gender inequalities in reducing agricultural productivity. According to the 2010-11 FAO report "The State of Food and Agriculture," "Women comprise, on average, 43 percent of the agricultural labor force in developing countries, ranging from 20 percent in Latin America to 50 percent in Eastern Asia and Sub-Saharan Africa" (FAO, 2011). The report argues that reducing gender inequalities in access to productive resources and services could produce an increase in yields on women's farms of between 20 percent and 30 percent, which could raise agricultural output in developing countries by 2.5 percent to 4 percent (FAO, 2011)

Realizing these gains requires men and women farmers to have access to the information, skills, and tools they need to improve their yields. This, in turn, requires reforming the institutions involved in the delivery of those services. A fundamental aspect of this process is recognizing that agriculture writ large, and specifically the processes of providing effective agricultural extension services, involve much more than technical solutions. Furthermore, the structure and policies of institutions that contribute to and influence agricultural development are also shaped by the values, behaviors, gender relations, and social norms of societies in which they are situated. Maximizing the benefits from agricultural growth for smallholder farmers and the economy at large depends on understanding these influences and designing programs that take them into account. These factors affect women's access and utilization of agricultural extension services (World Bank, 2009).

The gender equity dimension of agricultural extension service provision is an aspect that is widely addressed in the literature. From the global survey of 115 countries by FAO in the 1980s to the micro-studies by World Bank and introduced the Agricultural Knowledge information System approach. The Agricultural Knowledge information System perspective went a long way toward improving the inclusion of gender issues in general, and specifically in the research process and personnel policies. Despite the greater attention to gender issues, many of the constraints that impede women's ability to access extension services remained overlooked. For example, during this period, the possibility of paying for information, which had become the expectation in many advisory services, ignored the challenges that women producers and other disadvantaged groups face in generating income (World Bank, 2009).

Factors that stimulate innovative behavior" and "linkages and partnerships with a wide range of stakeholders along agricultural value chains, including the agribusiness sector". With an expanded set of stakeholders and variables, this emerging perspective embodies a more complete transition away from a simple "best practice" or one-size-fits-all approach toward the customized "best fit" application of service principles, based on assessment of contextual factors. Livelihoods approaches, integrated poverty reduction, natural resource management, and other rural development concerns have been brought into agricultural extension service with a broader and perhaps stronger impact than previous efforts. In both cases, the additional layers of focus have not always explicitly addressed gender dynamics. Nevertheless, women are now viewed as critical actors in agricultural development, and this recognition needs to translate into more equitably designed services and mechanisms for influencing extension policies and practices. Market linkages for producers have been strengthened within the agricultural extension service, but the need remains for even more substantive inclusion of women in such efforts. An explicit gender dimension is needed to adequately remove inequalities that impede women from becoming active agents in improving their livelihoods and those of their households (World Bank, 2009). Hence the objective of the this paper was to review factors affecting access and utilization of agricultural extension service of rural Ethiopia women.

Results and Discussion

Definition of Concepts

Agricultural Extension Service: Service provided to increase agricultural productivity of farmers

Access

Access implies the ability to use resources and /or benefits and to make short-term decisions on them. Access means the opportunity to make use of something. It has terms of use rights for women as daughters, wives, mothers, etc depending on their life cycle and gender relations. Women generally lack access and right to resources. They gain limited benefit from the fruits of their labor. In Africa women's access to land, agricultural labor (including women's labor itself), and modern agricultural inputs such as improved seeds, chemical fertilizer, pesticides, etc is very limited. Because; land, livestock, women and their labor are all known as the properties of men household heads, and these rights in

turn, obscuring women's role in the household, have enabled men to have access rights to the modern agriculture inputs. Women's access to resource needed for their work, their control over the resource to use as they wish, their access to benefit derived from family and personal work and to control they have over the benefit(MoWA and ABD, 2009).

Utilization

It is essentially implies the ability to use and even dispose of a resource or benefit, and impose one's definition upon the other actors is a situation.

Historical Overview of Agricultural Extension Services

Agricultural extension service for improving agricultural production dates back to ancient times, as evidenced in Mesopotamian clay tablets, Egyptian hieroglyphics, Greek and Roman writings, and Chinese texts. These recommendations from antiquity were targeted at the landed elite and their tenants to control the maintenance and improvement of their estates, and to enhance revenue and tax collections. The idea of an agricultural extension service per se emerged much later, in the mid-1800s, when the Earl of Clarendon and the Royal Agricultural Improvement Society of Ireland sought to spread knowledge about the cultivation of nutritious root crops to combat the Irish potato famine. Parallel developments emerged in many European countries, including Finland, Germany, Austria, and France. The biodynamic and organic agriculture movements and associated practices were widely disseminated in the early years of the 20th century. Visitors from Canada and the United States to Europe, in turn, brought back this concept to North America.

In the United States, the concept of combining research, teaching, and extension was institutionalized in the land-grant college model, which was strengthened by the passage of the Smith-Lever Act of 1914 and its authorization of federal funds for cooperative extension. It brought the results of university research to the local farmer, the latest in home economics to his wife, and eventually the 4-H model3 to their children. The establishment of national agricultural services in the newly independent states of the developing world during the 1950s and '60s led to expanded efforts to bring new agricultural knowledge to farmers. The approach was top-down and linear, a fashion generally inherited from colonial predecessors. It was not until economist published her groundbreaking work, Women's Role in Economic Development, building on ethnographic data, that significant attention in both academic and development communities focused on women's productive roles in agriculture. From that point forward, a growing body of literature

emerged, initially identifying the failure of development programs to incorporate women as producers and, eventually, exploring what approaches actually worked. The early "training and visit" extension systems, based on an efficiency model of transferring new technologies to farmers, did not effectively reach women farmers, small-scale producers (women or men), or farmers in some ethnic populations. Within the T&V system, women were largely viewed as beneficiaries, in a welfare sense, but not as actors in their own right in agricultural production. At the institutional level, this period marks the beginning of increased attention to gender issues within personnel policies, but gender imbalances remained a major inadequacy (World Bank, 2009).

Agricultural Extension Service in Ethiopia

Agricultural extension service in Ethiopia is said to have started in 1953 with the establishment of the then Imperial Ethiopian College of Agriculture and Mechanical Arts, currently known as Haramaya University. It was established following the concept of the land grant system of the United States of America and was mandated to have three responsibilities: teaching, research and extension. The extension mandate of the college included transferring local research outputs and technologies to farmers, and importing technologies and improved practices from abroad and introducing them to farmers (Ibrahim 2004). The college was using graduates of the then Jimma and Ambo agricultural high schools as development agents, and was concentrating its efforts around the areas where it had agricultural experimental stations. The college started with only 2 extension agents; this number later increased to 132 agents operating in 77 extension posts.

The extension service of the college undertook demonstrations, regular visits of individual farmer's fields and the organization of youth clubs. The youth clubs were used as entry (focal) points to disseminate technologies to the larger farm communities. Moreover, the extension service of the college focused on improved poultry production, horticulture, tree seedling production and distribution, improved wheat varieties, and apiculture. The coverage of the extension service of the college was minuscule compared to the needs of the country due to severe shortage of manpower and limitations in new/improved technologies. The lack of complementary institutional support services such as input supply and credit services was another major constraint of the extension service provided by the college. The fact that the extension service focused on training and knowledge transfer, with the responsibilities for input supply and rural credit being assigned to other bodies signifies the importance of treating the extension service only as a source of training and

information. However, institutions to supply inputs and credit to farmers are necessary compliments to the extension service, and their absence had a negative effect on the effectiveness of the extension service. In 1963, the mandate to provide agricultural extension was moved to the then Ministry of Agriculture, structured as a department at the national level and extension personnel assigned at provincial levels. However, the extension service was not very active until 1968, even compared with the extension activities of the college (Ibrahim, 2004). The Third Five Year Development Plan (1971-74) had aimed to modernize the Ethiopian agriculture through a comprehensive package approach to be initially implemented in selected pilot areas and eventually to be scaled up to cover.

The Derg regime, which toppled the Imperial regime in 1974, continued with the four years, although the implementation of the project was constrained by political instability and changes in the government structure.

Demonstration and Training Extension System was started in 1995. It became the first extension program to be developed without foreign assistance and fully funded by the government budget (Ibrahim, 2004). It aimed at increasing productivity and production of smallholders, empowering farmers to be active participants in the development process, increasing food self-sufficiency, increasing the supply of raw materials for domestic use and export, enhancing the rehabilitation and conservation of natural resource base, and encouraging farmer organizations.

Ethiopia, presents a significant global challenge to agricultural development with a complex gender dimension (Mogues et al. 2009; Fafchamps and Quisumbing 2005; Bishop-Sambrook 2004). Using a uniquely designed dataset to capture gender dimensions in agriculture contributes new evidence on gender differences in technology adoption and productivity by providing nuanced analysis of differences between men and women farmers not only identifying the difference in productivity and technology adoption but identifying reasons why. The household headship and decision making in plots, and distinguishes between heads of the household. In addition, other social and demographic factors are used to further create a typology of women and men farmers and how these groups behave and respond differently in terms of input and service access, technology adoption, and productivity measures.

The Ethiopian case is also interesting and relevant since its government has been actively investing in its agricultural extension system in the past years. Ethiopia's extension system has one of the strongest extension agent farmer ratios found in the world. Over the years,

it had trained about 60,000 development agents for extension service provision (with only 15,000 agents prior to 2000). The field level extension service has now a strong foundation of 8,500 farmer training centers, built at the kebele (the lowest administrative division), staffed with 46,000 trained development agents (Davis et al. 2010).

While various studies have highlighted major institutional challenges remaining despite the extension reforms (EEA/EEPRI 2006; World Bank 2006; Byerlee et al. 2007; Davis et al. 2010; Spielman et al. 2010), the gender implications of these investments and challenges in extension system have not been addressed in the literature.

The Role of Agricultural Extension Service for Rural Women

It is believed that extension can increase agricultural productivity and rural income by bridging the gap between new technological knowledge and farmers own practice. In addition, effective extension systems elicit information about farmer's needs. According to (Berehanu et al., 2006), the extension service is generally biased towards crop production; the household package program appears to give better attention to the livestock sector. For example, dairy production, fattening of small ruminants and cattle, poultry and apiculture are important components of some of the household technology packages. With respect to effectiveness of the national extension services, extension methodology is not considered as something that has to be based on

professional scientific principles of information communication and technology knowledge and skill development. And also, little recognition and appreciation is given for the role of agricultural extension discipline as a separate area of expertise (Berhanu et al., 2006).

Factors Affecting Access and Utilization of Agricultural Extension Service

Socio-Cultural Norms and Family Responsibilities

Socially accepted norms of behavior and the roles women play in their families can have profound effects on the type of economic activities in which women can engage, the technologies available to them, the people and agencies with whom they can interact, the places they can visit, the time they have available and the control they can exert over their own capital.

In settings where socio-cultural norms restrict women's mobility, their interactions with members of the opposite sex and their ability to attend trainings or receive formal education,

women's access to information, institutions and markets is compromised. This is the case when women are not allowed to use public transportation, when they cannot afford to pay for it or when they cannot get away from their household responsibilities (Primo, 2003).

The gender division of labour in agriculture (sex-disaggregated activities across the lifecycle of a plant or animal, separate "male" and "female" crops and animals) "means" that female and male farmers usually have different extension needs. However, extension services worldwide remain dominated by men. Women are typically responsible for cooking, childcare, laundry, cleaning and the collection of water and fuel wood (Fletschner, 2008a and Bezner Kerr, 2008). While the gendered division of labour within agricultural production varies locally, men are typically in charge of tilling, ploughing, fumigating and selling crops to wholesale traders, and women tend to do most of the animal husbandry and the processing of agricultural or animal products (Fletschner, 2008a and World Bank, 2008b).

Similarly a study conducted by (Budlender, 2010) also indicted that household division of labor highlights women's double or triple burden of responsibility for productive, household, and community activities and a disproportionate amount of time spent on certain types of activities by women. Women in India spend 354 minutes a day, compared with 36 minutes by men, on household activities including cooking and caring for children.

In Tanzania, women spend 270 minutes per day, compared with men's 54 minutes, on similar tasks which are highly limits their access and control over agricultural extinction services. The (World Bank, 2009) report also supports that Women are usually required to care for the sick or orphans, thereby reducing the time they spend on farming and other productive activities. More importantly, women can lose their land after the death of the household head

Gender discrimination hampers women's participation in the governance of natural resources. Climate change, drought and natural resource degradation contribute to further exacerbate inequalities in access to and control over resources (World Bank, 2009). Rapidly increasing deforestation is making it more difficult for women to find firewood and to gain income from non-timber forest products (World Bank, 2009). This can have a disrupting effect on the livelihoods of landless women, such as widows and single women, who depend primarily on the use of forest and other common pool resources for their survival.

Inadequate Focus on Women's Needs and Roles during Technology Transfer

Agricultural technology transfer and capacity development is one of the main instruments to increase agricultural production and productivity. Very often women are not targeted by projects because it is assumed that the men of the families will transfer skills and knowledge to them (FAO, 2009). Moreover, technology research and innovations are rarely focused on women's specific needs and roles. For instance, little is invested in technology research into on-farm crop processing, which is largely undertaken by women farmers. As a result, rural women generally lack access to improved technologies for use in farming and processing, and the large majority of them still rely on traditional, labour-intensive and time-consuming technologies. Daily reproductive activities such as the collection of water and fuel wood, reduce the time spent by women on farming and other income generating activities. Women's time poverty and lack of access to improved technologies and techniques lead to low agricultural yields and low levels of food security (Carr, 2009).

In addition to the above findings, technology packages delivered by extension services sometimes reinforce stereotypic divisions of labor.

Ethiopia's Women's Development and Change extension package provides advice related to home gardens and poultry on the basis of the assumption that women do not farm but garden (Cohen and Lemma, 2011). In Nicaragua, Fonde Agro focused its efforts on women's patio gardens and failed to build on their important roles in the production and processing of coffee and in dairy, even though this was envisaged in the design stage (Farnworth, 2010).

Although information and communication technologies are a major contributor to extending the reach of extension services into remote locations where the networks exist and to diverse populations to reach women effectively, they need to account for women's lack of financial resources to pay for ICTs, higher levels of technology and language illiteracy, norms that discourage women from using technology, and lack of control over or ownership of technologies (Manfre, 2011).

Lack of Integrity by Development Agents

Farmer selection bias may be attributed with the sake of attaining maximum achievement to fulfill the assigned quota plan, and also they may focus to select and work with few

farmers whom they are resource-rich than poor and women farmers (Edlu, 2006). It is estimated that globally only 15 % of extension agents are women (World Bank, 2009).

Male extension agents frequently target male-dominated farmers groups and focus information and inputs on their needs (World Bank, 2009), sometimes because it may not be culturally acceptable for them to interact with women. When women do participate in extension activities, they may not be provided equal recognition for their responsibilities and skills. This is because farmers and farming activities continue to be perceived as "male" by policy makers, planners and agricultural service deliverers, thereby ignoring the important and increasing role women play in agriculture.

Inadequate Access to Credit

Financial institutions are among the main supporters of value chain actors. It is widely documented that women in developing countries, particularly women headed households and single women, have little access to credit and loans, often because of lack of collateral requirements, high transaction costs, limited education and mobility and the assumption that they will be unable to meet financial obligations in the absence of a male partner (Fletschner and Kenney, 2011 and Henriksen et al., 2010).

The provision of credit has increasingly been regarded as an important tool for raising the incomes of rural populations, mainly by mobilizing resources for more productive uses. As development takes place, one question that arises is the extent to which credit can be offered to the rural poor to facilitate their taking advantage of the developing entrepreneurial activities. Women access to credit is low. It may not be limited from the supply side alone. In fact, women may face demand-side constraints that make them less likely than their husbands to apply for loans, even when they have profitable projects and funds are available to them. For instance, demand-side constraints can arise when long travel distances and inconvenient schedules become greater obstacles for women due to their reproductive roles in the household, thereby increasing their transaction costs of applying for and repaying loans or when applying for a loan contravenes what is considered socially acceptable behavior for women (Fletschner & Carter, 2008). If these demand-side constraints are sufficiently strong, they can hamper women's effective demand for capital, leading to the almost perverse result where they are classified as having adequate access to capital when in fact they do not have access to funds.

Evidence from Bangladesh shows mixed results on the impact of credit access contributing to changing social norms and gender equality. Some studies show that women's bargaining position within households is strengthened by access to credit and the control over income and assets it brings. Other researchers, however, argue that the loans and the pressure to repay lead to stress, and to higher levels of domestic violence. Another study in Tanzania shows that while men seemed willing to acquiesce in women's new cash earning opportunities, they were much less willing to accept a restructuring of household relations. Complains over women arose from husbands who resent their wives' efforts to realize extra cash from trade and beer-brewing and even beating was cited as an increasing problem for women (UNSRID, 2005).

Inadequate Access to Land

Historically, extension services were designed for farmers with access to or ownership over land (Meinzen-Dick et al., 2010). This poses a challenge for women, whose access to land is shaped by a complicated web of social, legal, and customary norms. Globally, women's land ownership lags behind men's.

In sub-Saharan Africa, women make up roughly 15 percent of agricultural land holders, but huge differences exist by country: in Mali, less than 5 percent of agricultural land holders are women; in Botswana, Cape Verde and Malawi, they make up over 30 percent (FAO, 2011). In contrast to Latin America, where the share of women agricultural land holders is close to 20 percent, in southern Asia and southeastern Asia the proportion is closer to 10 percent (FAO, 2011). Gender inequalities in land ownership reduce women's access to extension services where land serves as a key criterion for establishing who extension clients are. When women do own land, their plots are small, often of poor quality, requiring extension advice tailored to the agronomic potential of their land holdings. Land ownership often facilitates eligibility for access to other productive resources, such as credit or producer associations, which allow men and women farmers to act on the information they receive.

Similarly, in Ghana, research by Goldstein and Udry (2005) research found that productivity differentials between men and women farmers are the result of women's higher level of tenure insecurity. Women will avoid investing in fallowing their land and will continuously farm it or risk losing access to the land from one season to the next.

As producers, women have weak property and contractual rights to land, water and other resources (Quisumbing and Pandolfelli, 2009, and FAO, 2013). Paradoxically, and in spite of control and management of property being a crucial requirement to productivity, because many countries do not collect separate data on women's and men's ownership or access to land, water or credit. Secure land tenure is central to accessing water, soil fertilizers and improved seeds as well as accessing credit, loans and extension services (Lee-Smith and Trujillo, 2006 and Daley andPark, 2011).

In Ethiopia only 18.7% of the landholders were women and the rest of the rural women, it is their husband, fathers and brothers who hold land title, a practice which essentially eliminates their eligibility for formal sources of credit or membership in farmer organization which could enable them to gain access to input that can help stabilize or enhance their production system (MoARD, 2009).

Inadequate Focus for Female Headed Household in Extension Services

Swanson & Rajalahti(2010) stated that strengthening women's leadership skills is essential to enable women to participate in decentralized governance institutions and articulate their extension needs. In many countries agricultural extension systems are increasingly decentralizing programme planning and management functions to the district and sub-district levels, as a way to create a more participatory, demand-driven extension system. The participation of different categories of farmer ensures that their specific needs are reflected in the definition of the extension programme. There is increasing recognition that farming is a family business, in many societies the head of household, whether a man or a woman, is still defined as the primary farmer and is perceived as the only appropriate recipient of agricultural extension information.

In contrast to the findings of the above study, this is slowly changing, according to a report by the World Bank (2010), many institutions continue to operate under the perception that "women are not farmers" (World Bank, 2010). As a result, women are underserved as clients of extension services in their own right, often seen to be only helping. Alternatively, they are targeted for agricultural information related to home economics.

Similarly, the World Bank report extension services are decisive to furthering knowledge, skills, information and technology adoption along value chains. Many studies show that extension systems do not yet pay adequate attention to gender and that extension services

are lower for women as compared to men (Ragasa, et al., 2012 and Quisumbing and Pandolfelli, 2009). For example, a study carried out in Ethiopia (Ragasa, et al., 2012) concludes that female farmers are less likely to get extension services and less likely to access quality service than their male counterparts. Among female heads, those with more male members in their household and more assets in the form of land and livestock are more likely to be visited or to initiate visits to extension service providers.

More importantly, the study concludes that, holding other factors constant, plots of male and female farmers are as equally productive. It is not gender by itself that explains productivity, but the differentiated access to quality extension, radio connectivity and inputs as well as the quality of plots and agro ecological conditions.

Women fare poorly when services are delivered through group or community meetings held by extension agents: in Ghana, 0 to 6 percent of women-headed households and 5 to 9 percent of women spouses versus 11 to 24 percent of men-headed households participate in meetings, and in Ethiopia, 11 percent versus 28 percent of women and men, respectively (World Bank, 2010). Women may also be excluded from membership-based groups such as producer associations or dairy cooperatives. In Ethiopia, 24 percent of men and 4 percent of women belonged to some kind of cooperative, and 13 percent of men and 2 percent of women belonged to agricultural cooperatives (World Bank, 2010). Gender differences also exist in Ghana: 2 to 5 percent of female spouses and only 3 to 7 percent of female-headed households belonged to a community based organizations (World Bank, 2010). Women are also excluded from rising to leadership positions in these organizations as a result of biases about their skills. In Ethiopia, men are five times more likely than women to hold a leadership position within a cooperative; in India, only 10 percent of dairy cooperatives had women chairpersons (World Bank, 2010).

Method Used

For the review paper, the researcher used secondary sources of data by reviewing the findings of different researchers work on factors affecting access and utilization of agricultural extension service.

Conclusion

Female farmers are less likely to get extension services and less likely to access quality service than their male counterparts. Although extension service can increase agricultural

productivity and rural income by bridging the gap between new technological knowledge and farmers own practice, effective extension systems elicit information about farmer's needs, technology research and innovations are rarely focused on women's specific needs and roles. Very often women are not targeted by projects because it is assumed that the men of the families will transfer skills and knowledge to them.

It was found that rural women generally lack access to improved technologies for use in farming and processing, and the large majority of them still rely on traditional, labour-intensive and time-consuming technologies. Daily reproductive activities such as the collection of water and fuel wood, reduce the time spent by women on farming and other income generating activities.

It revealed that technologies do not account for women's need, lack of financial resources to pay for it, higher levels of technology and language illiteracy, norms that discourage women from using technology, and lack of control over or ownership of technologies.

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