



# WOMEN'S ACCESS TO AGRICULTURAL TECHNOLOGY

Strengthening Small Business Value Chains  
Learning Series





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# Abstract

This learning paper explores women's access to agricultural technology in three corridors in Tanzania; Arusha, Morogoro and Mtwara. The SSBVC project implemented an eVoucher activity which provides an electronic voucher to small entrepreneurs (SEs) in order to receive a price discount on agricultural equipment to improve productivity. The purpose of the eVoucher price discount is to stimulate market interaction between market actors incentivizing supply and demand. It strategically promotes sustainable change as the price discount is geared towards those most in need of the discount while demonstrating the benefit of agricultural equipment upgrading and allows for a demonstration effect to create demand from other SEs to adopt this equipment. When measuring SEs reached through the eVoucher activity the project focused on who purchased the agricultural equipment to analyze who was benefitting from this activity. However, this study aims to dive deeper into "rights to an asset" which includes purchasing but also usage, ownership and control.

There are many factors that relate to a person's right to an asset, and it is important to understand how each individual within the household interacts with the asset. Ownership and control over assets are essential contributors to an individual's well-being. Much research indicates that increasing ownership and control over assets, including agricultural equipment, helps to create success in pathways out of poverty in comparison to interventions aimed at increasing income or consumption alone.<sup>1</sup>

Key findings from MEDA's Women's Access to Agricultural Technology study include the following:

- Practices around rights to an asset vary across corridors but also at the household level.
- Purchasing of agricultural equipment is oftentimes done by the man in the household as longstanding cultural practices are still at play where the man as "head of household" is responsible for being seen as making decisions. However, a level of joint decision-making is taking place for many at the household level.
- Though a particular individual may purchase the agricultural equipment, it is not often seen as owned by that individual but considered to be owned by the family as it is a family asset.
- Control of an asset is less clear; many respondents stated that control of the asset is in the hands of the family as it is a family asset however, the nuance was that many SEs also stated that who uses the equipment is delegated by a particular individual,

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<sup>1</sup> IFPRI & ILRI. (2014). GAAP: A Toolkit on Collecting Gender & Assets Data in Qualitative and Quantitative Program Evaluations. [https://gaap.ifpri.info/files/2010/12/GAAP\\_Toolkit\\_Update\\_FINAL.pdf](https://gaap.ifpri.info/files/2010/12/GAAP_Toolkit_Update_FINAL.pdf)

usually the man of the household. Indicating that the man would have a level of control over the asset.

- Gender training was essential for equipment suppliers to reach more women SEs and build suppliers capacity around how to better market and promote agricultural equipment to women.
- Gender training has also impacted SEs at the village level with Village Leaders stating that the joint decision making, as opposed to the man of the household deciding alone, is primarily due to these trainings conducted by both government and non-governmental organizations over several years.



# SSBVC Project Overview

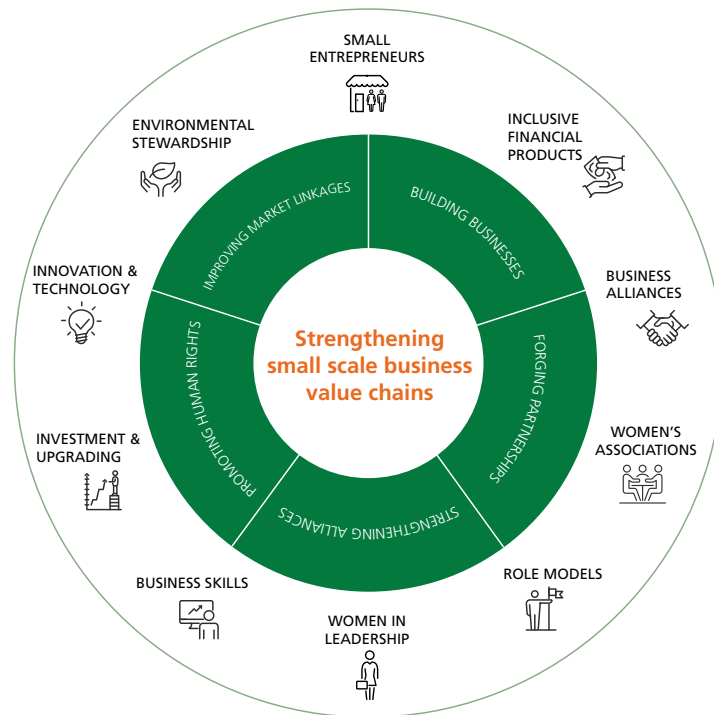
Around the world, MEDA combines innovative private sector solutions with a commitment to the advancement of systemically marginalized communities, including women and youth. MEDA's expertise includes market systems development, environment and climate change, inclusive and green finance, impact investing, and gender equality and social inclusion. In Tanzania, MEDA's Strengthening Small Business Value Chains (SSBVC) project aims to contribute to Tanzania's economic growth and increase job creation by sustainably improving the business performance of Lead Firms (LFs) and the Small and Growing Businesses (SGBs) and women and men Small Entrepreneurs (SEs) in their value chains. The project develops industry and private sector partnerships, linking LFs to SGBs and SEs as well as the end market by taking promising businesses to the next level with smart subsidies (including eVoucher), matching grants and access to financial services. Through the project, MEDA works with local partners to provide business development services and support market development in the extractives, agri-food, logistics, construction, and manufacturing sectors. The project focuses on three regions, namely Arusha, Morogoro, and Mtwara.

SSBVC integrates gender equality (GE) into project activities with an emphasis on women's economic empowerment. The project works with various actors involved in the selected value chains to build their awareness and capacity in GE. The project works with SEs, SGBs and LFs to improve GE outcomes for men and women within the value chains in which they participate. For LFs, this includes annual training on GE for all staff, the creation of GE policies to guide their operations, and GE Action Plans to help them implement practical activities to improve GE within their company (and in some cases, among their linked SEs) over the course of MEDA's contract with them. In addition, MEDA's GE Officer supports LFs to create a post-contract GE plan to carry on the work once the project has ended. The project also works with Business Development Service Providers (BDSPs) to share GE awareness training with men and women SEs and to build women business owners' capacity, in particular. In addition, targets have been set for women's participation, including 10% women-owned/led LFs and 40% women SEs reached.

## The SSBVC Learning Series

The SSBVC Project aligns with MEDA's organizational theory of change. The goal of the project is aligned with MEDA's mission to facilitate inclusive market systems where MEDA, with its partners, helps to provide farmers and small businesses with access to finance, business skills, and productive resources. In particular, the SSBVC project supports lead firms to provide decent work for small entrepreneurs in their supply chains and adopt environmentally sustainable technologies and improved business practices while promoting human rights in the value chain.

The SSBVC Learning Series is an initiative to share lessons learned with project stakeholders and the wider global development sector. Topics include private sector engagement in Tanzania, client experiences with business performance and drivers of success, effective strategies for sustainable enterprise development and advancing and measuring women's economic empowerment.



## Context

The SSBVC project implemented an eVoucher activity which is a price discount on agricultural equipment used to promote market interaction and sustainable change. The price discount was geared towards those most in need of the discount in order to demonstrate the benefit of equipment upgrading and create linkages between equipment suppliers, SEs and LFs. The eVoucher is an electronic voucher issued by the SSBVC project team and delivered to SEs via SMS, the SEs then redeem the eVoucher from the project contracted equipment suppliers. Through the eVoucher component nine types of equipment were provided: 20L and 50L Milk Cans, Silos, Ox Ploughs, Push Seeder, Press Seeder, 2" and 3" Water Pumps.

The SSBVC project measured reach to men and women small entrepreneurs through the eVoucher activity based on the gender of who purchased the agricultural equipment. However, during multiple monitoring visits, it was discovered that the individual within the household who purchases the equipment is not necessarily the only individual using or benefitting from that equipment. Usage, ownership and control may vary from the individual that purchased the equipment. For clarity, control means to have influence or authority over





an asset while ownership is the state of having complete legal right of the asset. Much evidence has been provided through the literature that the common assumption that households consist of groups of individuals who have the same preferences and fully pool their resources is not always true. Assets may be jointly held and benefitted from but also many assets within households are held individually by men, women and youth.<sup>2</sup> This is an important point as ownership and control of assets (including agricultural equipment) affects both household and individual well-being. A growing body of evidence suggests that asset ownership can help households build financial resources (income generation, store of value), improve human capabilities (access to information, social capital, education, improved well-being), and support physical capabilities (access to markets, basic services, shelter/safety and nutrition).<sup>3</sup> Research has found that women typically own fewer assets in comparison to men and that increasing women's control over assets has positive effects on several important develop outcomes including food security, child nutrition, education as well as women's own health and well-being.<sup>4</sup> Therefore, the purpose of the Women's Access to Agricultural

<sup>2</sup> IFPRI & ILRI. (2014). GAAP: A Toolkit on Collecting Gender & Assets Data in Qualitative and Quantitative Program Evaluations. [https://gaap.ifpri.info/files/2010/12/GAAP\\_Toolkit\\_Update\\_FINAL.pdf](https://gaap.ifpri.info/files/2010/12/GAAP_Toolkit_Update_FINAL.pdf)

<sup>3</sup> CGAP. (2020). Innovations in Asset Finance: Unlocking the potential for low-income customers. [https://www.cgap.org/sites/default/files/publications/slidedeck/2020\\_05\\_Slidedeck\\_Innovations\\_Asset\\_Finance\\_0.pdf](https://www.cgap.org/sites/default/files/publications/slidedeck/2020_05_Slidedeck_Innovations_Asset_Finance_0.pdf)

<sup>4</sup> Ibid., 6.

Technology study is to investigate SEs behaviours with respect to decisions around purchasing, usage, ownership and control of the agricultural equipment supplied by the project with a gender lens. The findings of this study will also inform future MEDA programming to ensure engagement with both men and women in program activities, more specifically, within future eVoucher work.

## Study Methodology

The Women's Access to Agricultural Technology study looked at four main research questions to better understand SE behaviours around assets more specifically, agricultural equipment supplied through the SSBVC project. The main research questions are:

1. How are household decisions made with respect to the purchase of agricultural equipment?
2. Who within the household is the primary user of the agricultural equipment purchased and why?
3. How is ownership determined of the purchased agricultural equipment?
4. How is control determined of the purchased agricultural equipment?

The project conducted Key Informant Interviews with three groups of respondents across three corridors of Tanzania: Small Entrepreneurs (SEs), Village Leaders and Equipment Suppliers.

- Semi-structured interviews were conducted with 80 (36 women) SEs from 48 married households selected from the population of SEs who purchased agricultural equipment through the eVoucher activity.<sup>5</sup> These interviews were used to gain an understanding on how each household decided who would purchase the equipment and why, who uses the equipment and who within the household is considered the owner, and who has control of the agricultural equipment.
- Semi-structured interviews were conducted with five Village Leaders spanning the three corridors of Morogoro, Arusha and Mtwara to gain their perspective on gender norms within their villages surrounding purchasing, usage, ownership and control of agricultural equipment.<sup>6</sup>

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<sup>5</sup> When available both man and woman of the household were interviewed. In some households it was only possible to reach one respondent from the household.

<sup>6</sup> When this study was being executed, it was hoped that a greater sample of Village Leaders could have been included however, given the timing of the study in March 2021, most Village Leaders were in meetings and finalizing their village budgets required by the District Council Authority before the end of March 2021.

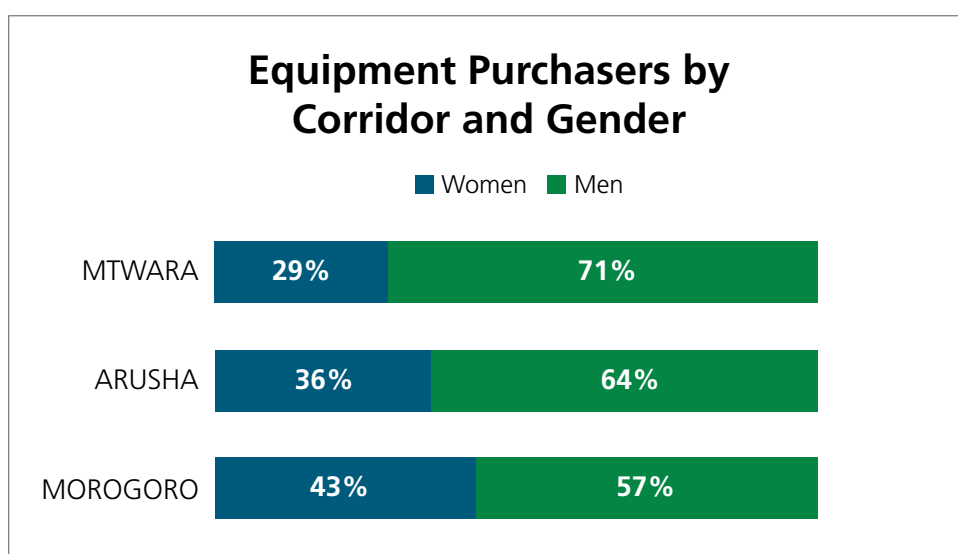


- Finally, semi-structured interviews were conducted with the two equipment suppliers the project worked with, Kilawa Enterprises and Hans Agricultural Machinery Ltd., to capture their insights and experience on marketing and selling the agricultural equipment through the project with a gender lens.

## Research Findings

### Purchasing Agricultural Equipment

In analyzing the eVoucher data from July 1st, 2019 to March 31st, 2021 (when the component was completed), of the women and men SEs who purchased the agricultural equipment through the eVoucher activity it is clear that in all corridors more men SEs in comparison to women SEs purchased agricultural equipment. As seen in Graph 1, Morogoro Corridor had the largest percentage of women SEs purchasing agricultural equipment, while Mtwara Corridor had the fewest women SEs purchasing equipment.



*Graph 1: SEs who purchased agricultural equipment disaggregated by corridor and gender*

When surveying Village Leaders, all five of the Village Leaders met with believed that men were more likely to buy agricultural equipment largely due to longstanding cultural perceptions that men are the head of the household and should be responsible for purchasing assets for the household. As well as that in the past, most agricultural equipment was bought and owned by men as women were not allowed. However, all Village Leaders stated that these gender norms are from the “past” and that some households still support this cultural practice however, it was stated that it is acceptable for women SEs to purchase agricultural equipment and that gender trainings by non-governmental organizations (NGOs) and government institutions in the villages have been critical in reducing these gender barriers.

It was discussed that there is still a need for more training on gender equality and asset ownership to ensure all households in the villages accept this.

The two equipment suppliers, Kilawa Enterprises and Hans Agricultural Machinery Ltd., discussed another factor that may have contributed to the lower number of women purchasers of agricultural equipment. This relates to the type of equipment being provided. It was noted that most of the agricultural equipment was purchased by men however, silos and milk cans (20L and 50L), are purchased by women who use the silos for storage and the milk cans to collect milk as this is deemed “women’s work”. However, when analyzing the data, it was found that women do indeed purchase more silos with 58% of purchases however, for both 20L and 50L Milk Cans, it was found that more men SEs had purchased these, 51% and 71%. Therefore it appears that even for equipment used primarily by women SEs that men SEs are still quite active in purchasing these goods.

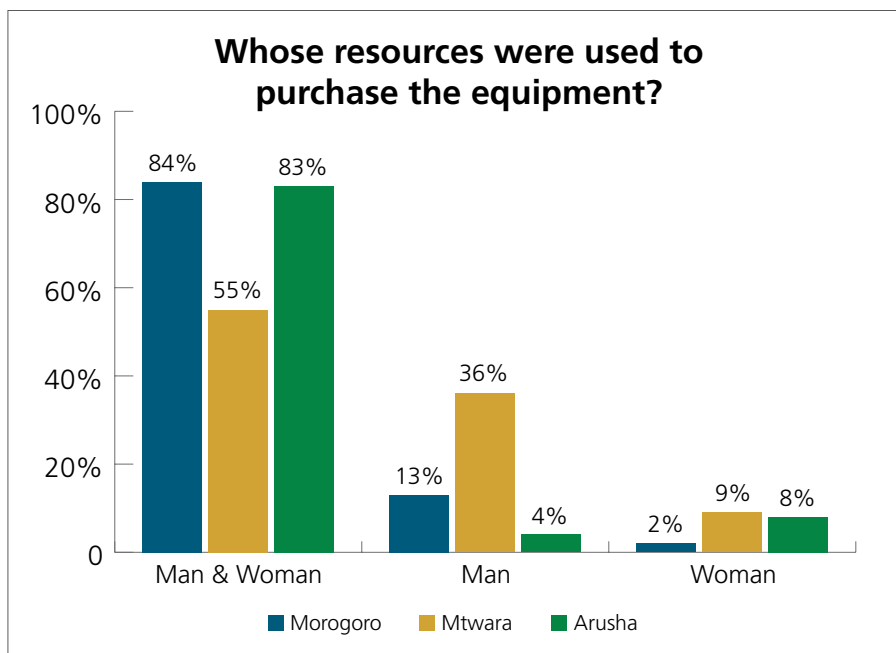
During the implementation of the eVoucher activity, the equipment suppliers were encouraged to reach women SEs with this productive agricultural equipment. There was continuously less demand from women SEs in comparison to men SEs, however the project worked with the equipment suppliers through gender sensitization trainings to better promote and reach women SEs. This proved very valuable and increased purchasing of equipment by women.





Firstly, the research study asked SEs surveyed, why they were interested in purchasing the agricultural equipment provided through the project. Both women and men SEs primary reasons were to improve their agricultural practices followed in descending order, by the discount provided, the equipment would contribute to time-savings, the equipment would improve yields and finally the ease of use of the equipment. Interestingly, the respondents who mentioned ease of use were all women SEs as it related to two pieces of equipment, Ox Ploughs and Push Seeders. It was noted that prior to receiving this equipment both ploughing and planting were done by hand and that the new equipment simplifies the work and is less strenuous on the body.

Further, the project asked respondents about whose resources were used to purchase the equipment, the vast majority (80%) stated that it was both the man and woman's resources used. Many comments referred to selling products from the family farms such as maize and livestock in order to purchase the agricultural equipment. When analyzed by corridor, it is still primarily family resources used however there is a higher percentage of men purchasing with their own resources in Mtwara in comparison to other corridors.



Graph 2: Whose resources were used to purchase the equipment, disaggregated by corridor

***"My husband and I sat together and decided uniformly that we should purchase the agricultural equipment after hearing the (eVoucher) program."***  
 — Woman SE from Morogoro

The project was interested in understanding how this decision was made on who would purchase the equipment, when asked 94% of respondents stated that it was a family decision, while 6% reported that it was the man within the household who made the decision.

In conclusion, although our eVoucher reporting data states that overall men are purchasing the equipment more than women the research study finds that often the decision to purchase the equipment is made by both the man and woman in the household, they discuss the opportunity to purchase together and come to an agreement on what to purchase and who will register their name and family resources are used.

## **Usage of Agricultural Equipment**

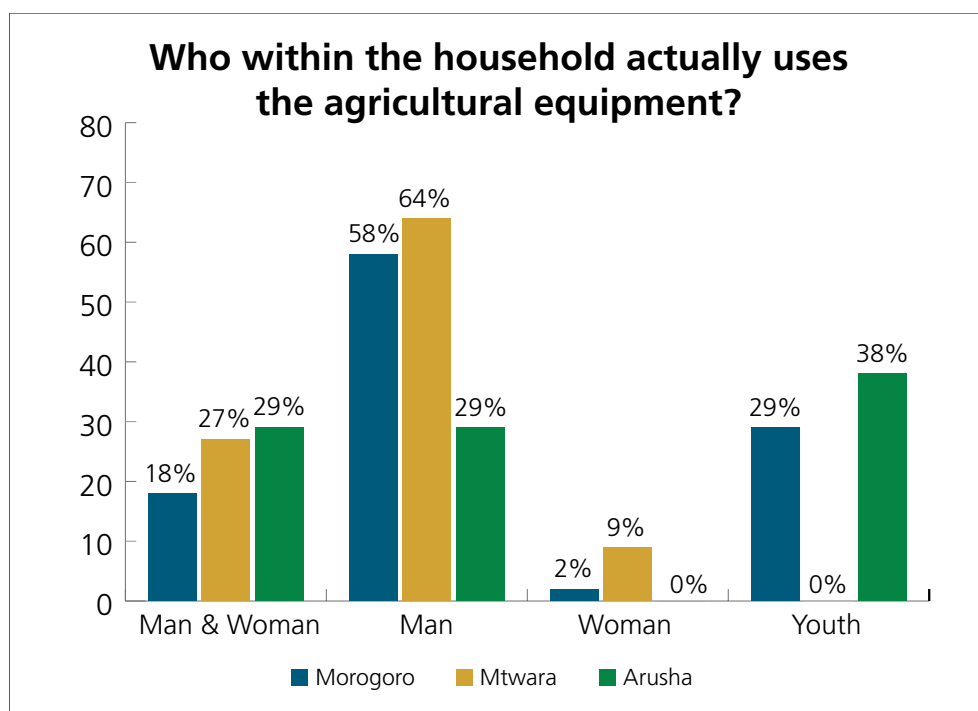
When analyzing the right to an asset, an important component of this is who is using the asset. It may not be true that the individual within the household who purchases the asset is the same individual who uses that asset. An important consideration in terms of usage for this study is that the eVoucher component delivered a significantly larger percentage of Ox Ploughs to SEs in comparison to the other equipment offerings, therefore the sample of 80 SEs surveyed in this study is made up of the below allocation of equipment: 59 Ox Ploughs, 17 Push Seeders, 2 Silos, 1 3" water pump, 1 press seeder. Due to the limited types of equipment surveyed, the following is highly reflective of the perceptions around the use of Ox Ploughs and Push Seeders.

The following graph 3 demonstrates that:

- In Morogoro corridor the man uses the equipment in most of the households surveyed followed by youth in the household, and then both the man and woman jointly.
- In Mtwara corridor, it is also the man who uses the equipment in most of the households surveyed followed by both the man and woman jointly and then solely the woman. Interestingly, no youth were reported to be using the equipment in Mtwara.
- In Arusha corridor, youth are more likely to be using the equipment followed equally by the man alone, and the man and woman jointly. No women were reported as being the sole user of the equipment.
- From the research data, in all three corridors, it was reported that the woman in the household is less likely to be the sole user of the equipment.

It can be inferred from this finding that although men SEs purchased the majority of agricultural equipment offered under the eVoucher in all corridors, there are several users within the household who are using and benefitting from the agricultural equipment.





Graph 3: Who within the household uses the agricultural equipment, disaggregated by corridor

*"It is my husband and my child that uses the equipment daily to farm, I usually stay back at home and cook for the family, though I know how to use it and I have used it before." — Woman SE from Morogoro*

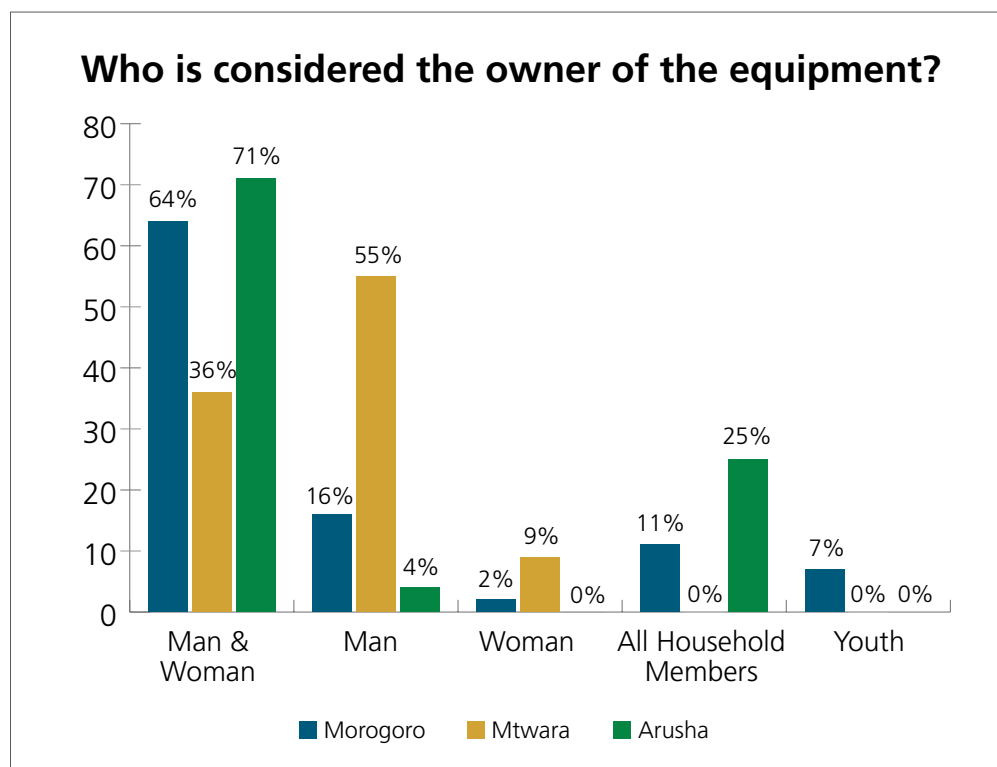
The respondents were asked why this person/people use the agricultural equipment with 31% responding that the use of the equipment required strength. Twenty-five respondents stated this including both women and men respondents, 14 women and 11 men, the responses were primarily in regard to the use of Ox Ploughs.

Twenty-eight percent of respondents, 23 (10 women) SEs, stated that this person/people use the agricultural equipment most often because that individual(s) is working on the farm most often. Fifteen percent of respondents, 12 (9 women) SEs, stated that this particular person understands how to use the equipment. While 11% of respondents, 9 (7 women) SEs, commented on the reasoning being related to division of labour, in that the man goes to the farm more regularly while the woman is responsible for domestic labour including taking care of the family.

## Ownership of Agricultural Equipment

It was important for the project to understand ownership of the agricultural equipment and who has the legal right to the asset from the viewpoint of the household. Whether this related to who purchased the equipment and registered their name or if there was more

occurring at the household level. The Village Leaders were asked in their experience, who is more likely to be considered the owner of equipment, all five Village Leaders said the man is more likely due to cultural practices of the man being the head of household and therefore the owner of the family properties. However, of the 80 respondents, it was found that in Morogoro and Arusha, it was more likely that both the man and woman in the household would be considered joint owners of the agricultural equipment (49 responses of men and women equal ownership were recorded; 26 women and 23 men) while in Mtwara, the man is more likely to be the owner.



Graph 4: Who is considered the owner of the equipment, disaggregated by corridor

*"The equipment is considered to be owned by my husband, because it is an honor in the house, the equipment to belong to the husband who is the head of the family. Even if I could bought it, the equipment must appear to belong to my husband. That is the respect." — Woman SE from Mtwara*

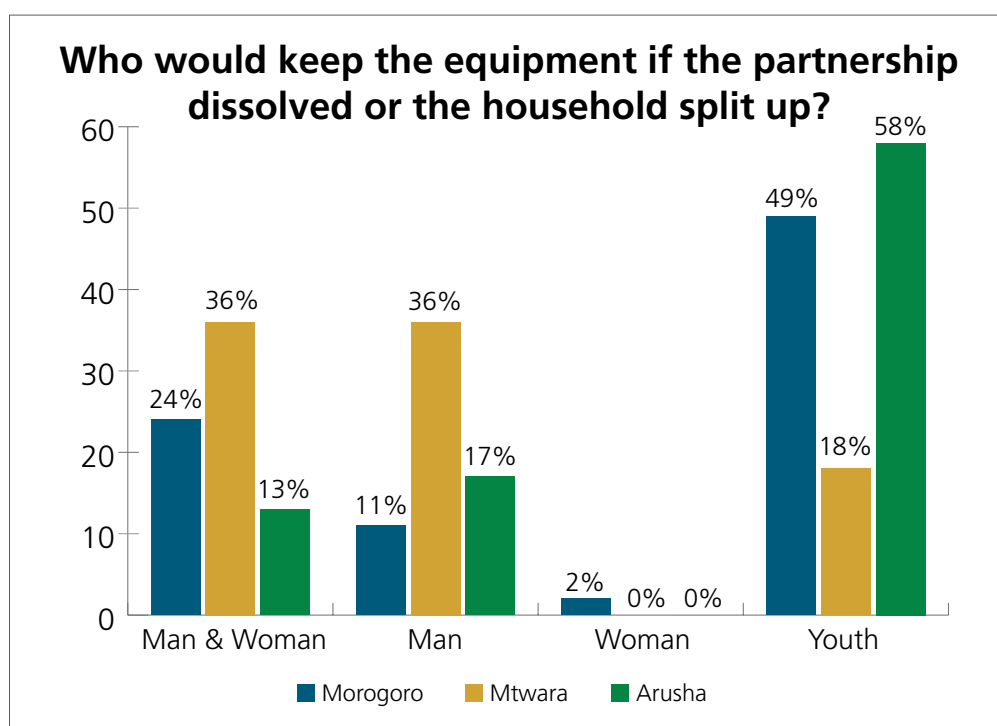
When respondents were asked why this person/people is considered the owner of the agricultural equipment, 46% reported simply that the agricultural equipment belongs to both the man and woman within the household because they are married. This was mentioned by 37 respondents (9 women and 28 men). Twenty-eight percent of responses mentioned



that the reason is because family-money was used to purchase the agricultural equipment (22 respondents; 19 women and 3 men), 15% mentioned it was because the decision was made together (12 respondents; 6 women and 6 men).

With respect to the man being considered the owner of the equipment, the reason was simply that the equipment belongs to the man as the head of household, this was the response from Mtwara and Morogoro respondents (13 respondents, 6 women and 7 men). In Arusha, only one household (1 woman) stated that the equipment was owned by the man and this was because the brother-in-law purchased the equipment and shares with his brother (the man of the household).

For the responses where the woman is considered the owner, there were two responses, the reasons included that the woman has her own plot of land for farming and the other was that the woman uses the equipment most often.



Graph 5: Partnership dissolved/household split up disaggregated by corridor

This study wanted to understand ownership more deeply by enquiring into what would become of the agricultural equipment if the partnership between the man and woman of the household dissolved or the household were to split up. In Morogoro and Arusha, the most common response was that the equipment would be passed to the children of the household if they were above 18 years of age. Fifty-six percent stated that it is cultural custom that the agricultural equipment would go to their children. In Mtwara, it was equally split that the equipment would go to the man, or it would be sold and divided between the man and



woman of the household. With respect to the man and woman of the household receiving the equipment, 24% stated that because the equipment was bought with shared resources than it should be sold and the income should be split equally. Nineteen percent responded that if the children are still dependent than the equipment should stay with the head of household who is responsible for taking care of the children; of the 15 respondents who said this, nine stated that it will go to the man who would be responsible for taking care of the children.

## **Control of Agricultural Equipment**

As mentioned, control means to have influence or authority over an asset therefore the study asked, “how was the decision made on who may use the equipment?”

The majority of respondents noted that the decision was made together, that the family sat together and decided who may use the equipment. However, there seemed to be a nuance in many responses such as, “my husband agreed that our child should be the one to use the equipment...”, “my husband agreed that we should all use the equipment...”, and “he has never restricted anyone from using the equipment...”. There appears to be a level of control of the resource by the man of the household in many of the cases where it was noted there was a family decision made. The process of discussing and delegating usage, where a single individual hears opinions from the household but ultimately makes the decision would dictate control of the asset by that individual. This is worth exploring further and in more detail in future studies as it is a complex topic.

# Conclusion and Recommendations

Throughout the eVoucher activity and through this study, MEDA has learned many valuable lessons. MEDA intends to incorporate these learnings in future projects in Tanzania ensuring to continually expand engagement with and reach to women and addressing all aspects of a right to asset, beyond purchasing but including use, ownership and control. The following are key learnings and recommendations:

- Practices around rights to an asset vary across corridors but also at the household level. The results from the Mtwara corridor seem to demonstrate that there are stronger gender norms around the man of the household being the purchaser, user and owner of the agricultural equipment in comparison to Morogoro and Arusha. However, the right to an asset is a household decision, and perceptions can vary across households. When promoting access to an asset more specific analyses on gender should be done with respect to the right to an asset in the areas where the project is working.
- Although it is more common to use the man of the household's name when purchasing the equipment; the study found that in each corridor the asset is purchased primarily using family resources after a decision is made between the woman and man in the household.
- More focus should be placed on the role that youth play in using agricultural equipment. This project concentrated largely on who was purchasing the equipment and assuming this was likely the user as well. But as the results of this study demonstrate there are other individuals in the household who are using and benefitting from this agricultural equipment.
- In many cases it was not the individual purchaser who was considered the owner of the agricultural equipment, but the equipment became owned by both the woman and man in the household and the family more broadly. However, the concept of control was more difficult to decipher. As there is discussion around who should or should not use the equipment within the household but the ultimate decision may rest with the man of the household.
- The gender training provided by the project to the equipment suppliers proved very successful. Suppliers noted that, not only within the project itself did they change their marketing and mode of approaching/reaching women, but that it has impacted them at the company level. MEDA should continue to conduct trainings on gender with suppliers at the beginning of implementation and throughout the life of the eVoucher activity.



- Village Leaders discussed the usefulness of gender trainings in their villages to encourage joint decision-making and that this has played a large role in changing household behaviours. MEDA should look to conduct Training of Trainers initiatives with Village Leaders and/or direct to SEs around all aspects of the right to an asset (purchasing, usage, ownership and control).


Understanding the concept of rights to assets is imperative for successful impact with our project clients. Not only is it important to ensure SEs have access and use productive equipment to improve their agricultural practices, it is key that ownership and control over assets is taken into account as it affects household and individual well-being. Awareness around the aspect of rights to assets is imperative for the sustainability and successful impact of future eVoucher activities.





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