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Gender Gap in Agricultural Productivity: A Case Study of Smallholder Farmers in Busia County, Kenya

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Abstract

Purpose: The study aimed at determining the gender gap in agricultural productivity: A case of Smallholder Farmers in Busia Kenya.

Methodology: The research employed a correlational research approach, utilizing multistage sampling to choose 384 participants from seven sub-counties within the study region. Data collection utilized structured questionnaires, and analysis was conducted on quantitative data using descriptive statistics and inferential methods with STATA version 17. The findings were presented using tables and figures.

Findings: The study revealed a statistically significant gender gap in agricultural productivity in Busia-County at the expense of female farmers. Specifically in Teso North, gender gap was -0.43 with a p-value of 0.049, in Teso south, gender gap was -0.63 with a p-value of 0.040, in Bunyala, gender gap was -0.67 with a p-value of 0.035, in Butula, gender gap was -0.47 with a p-value of 0.002, in Matayos, gender gap was -0.72 with a p-value of 0.041, in Nambale, gender gap was -0.64 with a p-value of 0.041 and In Samia, gender gap was -0.67 with a p-value of 0.036. It was concluded that female farmers are less productive than male farmers in Busia County Kenya.

Unique Contribution to Theory, Practice and Policy: Drawing from production theory, and social feminist theory, the study investigated the relationship between productivity and gender among smallholder farmers. To address the gender gap in agricultural productivity, it is recommended that policymakers, agricultural extension services, and other stakeholders advocate for gender-inclusive agricultural development initiatives in the area.

Keywords: *Agriculture, Productivity Gap, Gender, Kenya*

JEL Classification: C5, D2 Q1

INTRODUCTION

The Food and Agriculture Organization (FAO) underscores agriculture's central role in providing sustenance and livelihoods and fostering economic growth in sub-Saharan Africa (SSA) (FAO, 2020). Ensuring food security within Africa heavily relies on the productive capacity of agriculture, as 82% of households reside in rural areas and rely on agriculture for sustenance and income (IFAD 2021). Farming contributes significantly to GDP in Sub-Saharan Africa (SSA), with smallholder farmers alone contributing up to 25% of SSA's GDP and employing about 65% of the labour force (World Bank, 2023).

Despite this, SSA's agriculture faces three key challenges. First, SSA's agriculture is predominantly small-scale farming, with farms typically under 2 hectares in size, occupying 60% of arable land (Utonga, 2022). This presents challenges as small-scale farmers often face limitations in terms of resources, technology, and market access. Despite the prevalence of small-scale farming, approximately one in five Africans experience hunger, with an estimated 140 million people in Africa facing acute food insecurity (Food Security Information Network, 2022). This indicates that the current agricultural practices may not be effectively addressing these issues.

Second, the significant role of women in agriculture in Sub-Saharan Africa (SSA) is a crucial aspect of Africa’s agricultural sector. Despite comprising around 52% of the population engaged in agricultural activities, women's contributions to the farming labour force extend even further, with an average of 60% of the labour force being comprised of women (Doss & Morris, 2020). This high level of involvement underscores the vital role that women play in ensuring food security, livelihoods, and economic development in SSA. However, despite their substantial involvement, women farmers in SSA face numerous challenges that hinder their productivity and overall well-being.

Third, there is a reported gender agricultural productivity gap between female and male farmers in SSA. The gender agricultural productivity gap refers to the difference in productivity levels between male and female farmers (Doss & Morris, 2020). This indicates that, on average, female farmers tend to be less productive than their male counterparts because of various factors, such as unequal access to resources, including land, finance, agricultural inputs, education, and extension services (FAO, 2011; World Bank, 2012). This gap can result in women producing less food and earning lower incomes from agricultural activities compared to men, contributing to gender inequalities in rural areas (Meinzen-Dick, Quisumbing, Doss, and Theis, 2019).

Njikam, Araar and Elomo, (2021) reported that the conditional gender gap shows that women, female migrants, and female owners were all notably less productive than their male counterparts, with differences of approximately 5.2%, 1.1%, and 5.1%, respectively. This finding suggests that gender disparities in productivity persist across various roles within the agricultural sector in Cameroon. Contrastingly, In Senegal, there is a substantial productivity difference of 69.6% between plots managed by men and those managed by women, with plots under female management generally outperforming those managed by men (Kane and Aidara (2022). This highlights the heterogeneity of gender dynamics in agriculture, where productivity outcomes can vary significantly across different contexts and regions.

In Ethiopia, male-headed households achieved an overall maize productivity level that was 44.3 % greater than that of female-headed households (Gebre et al., 2021). This disparity underscores the importance of considering household dynamics and decision-making processes in understanding gender differences in agricultural productivity. According to Abdisa, Mehare and Wakeyo (2024), in Ethiopia, the gap show that gender productivity difference between male and female-headed households was roughly 11.2% when measured by value. This suggests that, on average, male-headed households generate higher agricultural output in monetary terms compared to female-headed households.

On the other hand, when measured by an area-weighted formula, the gender productivity gap is reported to be around 5%. This metric takes into account the physical size of land cultivated by male and female-headed households. The smaller productivity gap observed through this measure could indicate that female-headed households are more efficient in utilizing the available land resources compared to their male counterparts. This efficiency might be driven by factors such as smaller plot sizes necessitating intensive cultivation methods, diversification of crops, or adoption of labour-saving technologies. Moreover, a study on agricultural productivity in Tanzania by Nchanji, Collins, Katungi, Nduguru, Kabungo, Njuguna, Ojiewo (2021) found that productivity of plots farmed by female beans farmers was 6 percent lower compared to plots farmed by male farmers.

Research using data from Mali, conducted by Singbo, Njuguna-Mungai, Yila, Sissoko and Tabo (2020), found that the agricultural productivity of female plot managers was 20.18% lower than that of male plot managers. In Uganda, Miriti, Otieno, Chimoita, Bikketi, Njuguna, and Ojiewo, (2022) found that male-managed plots have higher productivity of 850.6 kgs/ha compared to female-managed plots (832.6 kgs/ha). This suggests that gender disparities in agricultural productivity persist across different crops and regions, highlighting the need for targeted interventions to address underlying constraints faced by female farmers. In Ghana, Boahen, Dankwah and Berko (2024) found that the total cereal production of female plot managers is 46% lower than that of their male counterparts. This finding underscores the magnitude of gender disparities in agricultural productivity and their implications for food security and rural livelihoods.

In Kenya, a prior investigation conducted by Saito, Mekonnen, and Spurling in 1994 documented that Kenya had the smallest gap at 8.4 % in favour of men. This led to a significant decline in agricultural productivity and output, amounting to a reduction of over 20 %. A different research effort aimed at exploring the gender productivity disparity in Kenyan agriculture was carried out by Alene et al. (2008). However, it should be noted that this study focused exclusively on maize production in western Kenya. The researchers did identify a gender disparity of 19 % in the western region of Kenya. In a study by Mwangi, Konstantinidis, and Barenberg (2014) in Kenya utilizing household survey data from the year 2006, found that female farmers' output per acre was 17.4 % less than that of their male counterparts. From these past studies in Kenya, it is evident that the gender gap exists in agricultural productivity, and the magnitude keeps on increasing indicating consistent loss of output over the years.

In Busia County, both men and women are actively involved in agricultural activities. Nevertheless, female-headed households are particularly susceptible to poverty and food insecurity, according to the KIPPRA (2020). In instances where men are not available, women or wives assume the responsibilities for all household food production, in addition to managing domestic tasks, including childcare. To address productivity decline, there is need to estimate the gap to determine its direction and magnitude in Busia County Kenya.

Statement of the Problem

There is considerable variation in the reported gender productivity gaps across different regions and crops. For example, while some studies show female to be less productive, others find female farmers to be more productive than male farmers. This suggests that productivity outcomes can vary significantly depending on the specific context and agricultural practices employed. Variations in measurement methods contribute to discrepancies in reported gender productivity gaps. Studies employ different metrics, such as yield per hectare, value of output, or area-weighted formulas, making it challenging to directly compare and generalize results. Additionally, some studies focus on specific crops or regions, limiting the generalizability of their findings to broader agricultural contexts. Moreover, other studies focus exclusively on certain crops or regions, neglecting the broader diversity of agricultural practices and contexts within the respective countries. This limits the understanding of gender dynamics and productivity disparities across different agricultural sectors and geographical areas. It is against this background that this study sought to determine the gender gap in agricultural productivity among smallholder farmers in Busia County Kenya.

LITERATURE REVIEW

Theoretical Framework

Production Theory

This theory, served as the foundation for the study of production economics, particularly in the context of agricultural markets, as noted by Colman and Young (1989). Within economics, production theory explains how scarce resources are allocated to various competing uses. It revolved around key decisions regarding what to produce (the selection of products or combinations), the quantity to produce (the output level), and the method of production (the choice of input combinations). The central decision-maker in this context was the farmer, who was described as a 'distinct agent specialized in the conversion of inputs into desired goods as outputs,' as defined by Hirshleifer (1976). Scholars like Schultz (1964) and others contended that smallholder farmers, given their resource access, combine inputs in a way that maximizes outputs, often referred to as technical efficiency. According to Doss (2015), output can be defined either in terms of physical measures, like kilograms of grain, or in economic value. In this particular study, the output was quantified in physical units, specifically kilograms. This choice aligns with the production theory itself, which establishes a relationship between physical inputs and physical outputs, without considering monetary aspects like prices and costs within the function. This theory therefore served as the cornerstone for this study. It helped relate different gender of the farmer to the level of agricultural productivity in Busia County.

Social Feminist Theory

Additionally, the social feminist theory aligns with both the principles of socialist class struggle and feminist recognition of class distinctions based on gender, as indicated by Dewi (2007). According to the social feminist theory, men and women exhibit dissimilarities because they have been influenced by distinct social influences and have undergone separate socialization experiences that impact their behavioral patterns differently. The disparity between men and women arises from gender inequality. This inequality is characterized by the domination of women by male authority, both within the family and in the broader community. It involves treating women as a form of property and imposing a division of labour in which women are primarily responsible for tasks like childcare, providing personal services for adult males, and engaging in specific forms of productive work. Social feminist theory examines the intersection of gender and social class, emphasizing the ways in which patriarchal structures intersect with other systems of oppression, such as capitalism and racism (Fraser, 2013). In the context of studying the gender agricultural productivity gap, social feminist theory is relevant as it provides insights into how broader social and economic structures shape and perpetuate gender disparities in agriculture.

Empirical Review

Ojo and Baiyegunhi (2023) investigated gender disparities in rice farming productivity in southwestern Nigeria using the Oaxaca-Blinder decomposition method. Their findings revealed an unequal situation, with a gender productivity gap of approximately 29% in favor of men. This means that female-managed rice plots were 29% less productive than those managed by men. Consequently, the study concludes that gender productivity inequalities exist in the Nigerian agricultural sector, emphasizing the importance of addressing these gaps and related factors in the formulation of policies aimed at empowering women.

Burke et al. (2018) found that the gender yield gap resulted from unequal access to resources rather than inherent gender differences. Their study on common bean cultivation in Uganda revealed no significant yield differences between plots owned by men, women, or jointly. For women-owned plots, the average yield was 1239.18 kg/ha, while it was 1315.65 kg/ha for men-owned plots. Jointly owned plots had an estimated yield of 1285.02 kg/ha (PABRA, 2017). Access to resources like training, credit, land, and varieties showed no significant gender disparities. The absence of gender-based yield differences was attributed to efforts by organizations who provided seed loans, connected farmers with input suppliers, and offered intensive bean production training. Weather patterns and management practices were identified as factors narrowing the yield gap.

Fukase et al (2022) explored the sources of the agricultural productivity gender gap using evidence from Sri Lanka. The researchers employed detailed data on individual farmers and their agricultural activities from the Household Income and Expenditure Survey 2016. The study found out that productivity gap was 25.4% in favour of female farmers. A limitation of the study is its reliance on data from a single country, Sri Lanka, which may limit the generalizability of the findings to other contexts and regions necessitating further studies.

Donald, Lawin and Rouanet (2020) conducted a study on gender disparities in agricultural productivity in Côte d'Ivoire. This research employed decomposition methods to analyze gender-based agricultural productivity gaps. Their analysis reveals a 14 % reduction in the unconditional gender gap between households led by males and those led by females during the past decade. Furthermore, the conditional gender gap diminished by 32 % and becomes statistically insignificant when considering whether households engage in the cultivation of export crops. However, female-headed households in the lower half of the productivity spectrum continue to face disadvantages. The findings suggest that the most promising policy options to achieve gender equality in agriculture in Côte d'Ivoire involve helping these female-headed households gain access to agricultural labour, strengthening their land tenure rights, and promoting the adoption of export crops. This analysis focuses on mean decomposition to assess the gender gap.

Singbo, et al. (2020) explored the gender-based agricultural productivity gap in Mali across various crops. They used the 2014 World Bank LSMS-ISA data, focusing on farmers' gender as the unit of analysis within agriculturally active households during the rainy season.

Productivity was assessed in terms of harvest value (in FCFA) per hectare. Their analysis initially indicated a significant gender productivity gap, with female farmers being 20.18% less productive than their male counterparts. However, after accounting for factors like farmer characteristics, labour utilization, plot attributes, and other inputs, the gender productivity gap reduced to 11.29%.

Kane and Aidara (2022) assessed gender disparities in agricultural productivity in Senegal using 2018 Annual Agricultural Survey (AAS) data from the FAO Integrated Agricultural Survey Program (AGRISurvey) across various crops. They employed OLS regression, with the plot farmer's gender as the sole variable against plot harvest value. Initially, the results revealed a 69.6% productivity gap in favor of plots managed by women. However, when control variables were included, this gap increased by 33.31 percentage points to reach 101.17%. Even after accounting for region-fixed effects, plots managed by women remained 10.73% more productive, and these differences were statistically significant. Nevertheless, the agricultural productivity gap significantly decreased when fixed effects were controlled in addition to other variables.

The studies conducted by Ojo and Baiyegunhi (2023), Burke et al. (2018), Fukase et al. (2022), Donald, Lawin, and Rouanet (2020), Singbo et al. (2020), and Kane and Aidara (2022) provide valuable insights into gender disparities in agricultural productivity across different contexts, methodologies, and regions. While these studies contribute valuable insights into gender gap in agricultural productivity, limitations such as the generalizability of findings and the need for comprehensive data collection and analysis methodologies was considered in this research and policy development efforts aimed at addressing gender inequalities in agriculture.

METHODOLOGY

The study adopted pragmatism research philosophy and correlational research design was used. The study focused on smallholder farmers in Busia County Kenya. The research used multistage sampling technique. This technique was preferred because it ensured every smallholder crop farmer had a chance of being included in the sample, aligning with the research's aim to generalize findings to the population. The respondents were 384 smallholder farmers in Busia County Kenya. Data collection was done using structured questionnaire from farmers. Gender agricultural productivity gap was estimated using simple linear regression. According to Field (2013), simple regression can be employed to test for mean differences, especially when the grouping variable is categorical. The coefficient associated with the categorical variable in simple regression represents the difference in means between groups (Howell, 2012).

Before estimating the gender agricultural productivity gap, the researcher assessed the distribution of observed productivity variable using histogram. Gaining insights into the distribution of productivity variable was essential in determining the appropriate method in estimating gender agricultural productivity gap and interpreting results accurately (Feng, Wang, Lu, Chen, He, Lu and Tu, 2014).

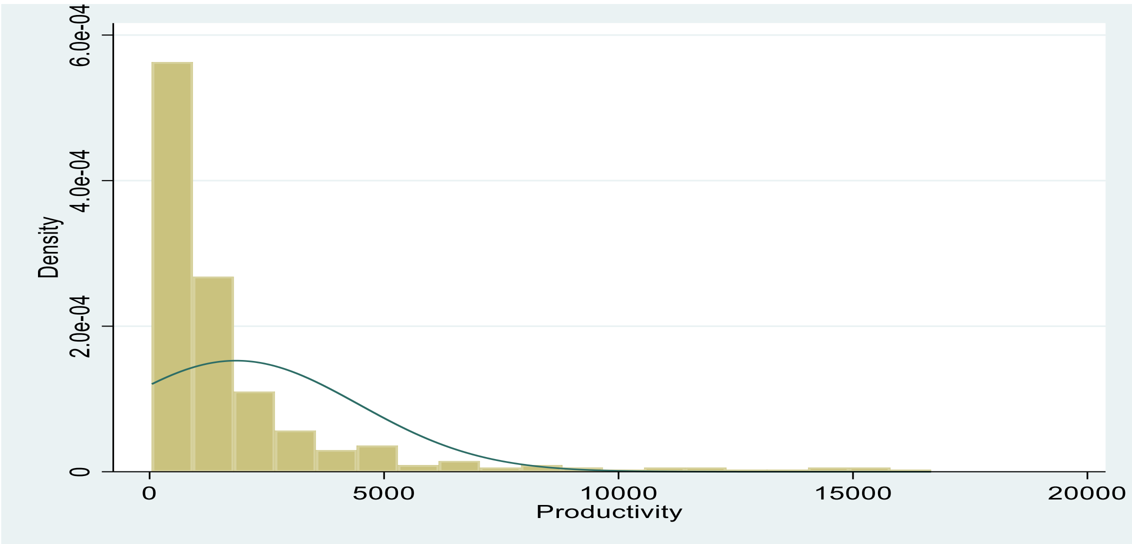

Figure 1: Productivity Distribution

Source: Author, (2024)

The assessment of distribution of productivity variable indicated that the observed variable was highly skewed to the right. The researcher was therefore confronted with two options either to abandon traditional estimation methods of dealing with skewed data like log-transformation or, use newer analytic methods that are not dependent on the distribution of the data, such as generalized estimating equations (Tang, He and Tu, 2012). However, as Feng et al (2014) noted, generalized estimating equations is appropriate for skewed data, only if the data cannot be reasonably modelled by a parametric distribution such as the normal distribution. Feng et al (2014) noted that when the distribution of the continuous data is non-normal, log-transformations of data are applied to make the data as "normal" as possible and, thus, increase the validity of the associated statistical analyses. Therefore, in this study, productivity was log-transformed to a normal distribution since it was reasonable to model the distribution as normal as indicated in figure 2.

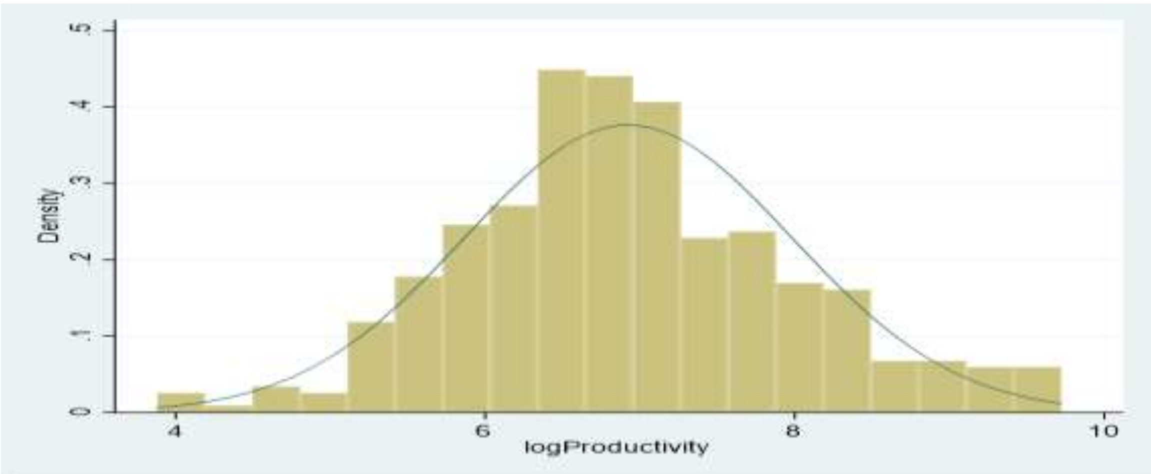

Figure 2: Log-Productivity Distribution

Source: Author (2024)

The study aimed to estimate the gender gap in agricultural productivity by analysing the relationship between productivity and gender using simple linear regression (Cook, Dixon, Duckworth, Kaiser, Koehler, Meeker and Stephenson, 2001). This method was preferred in estimating gender agricultural productivity gap because it allowed for extrapolation of the estimated gap to the 384 observations. Additionally, this approach is commonly employed to estimate gender agricultural productivity gap. It provided the link in estimating the gender agricultural productivity gap for each sub-county in Busia County. The model utilized a binary dummy variable representing the gender of farmers as the predictor. By fitting an ordinary least squares (OLS) regression, the study sought to determine if there was a significant difference in mean productivity between female and male farmers within each sub-county.

It is important to note that productivity was log transformed since the data on productivity was skewed and because log-transformation provided a normal distribution.

$$\text{Log } (Y_i) = \alpha_0 + \beta g_{ij} + \varepsilon_i \qquad (1)$$

$$g = \begin{cases} 0, & if\ Male \\ 1, & if\ \ female \end{cases}$$

Where: log (Y_{ij}) = log of productivity of plot of farmer *i* in sub-county *j*

g= gender of farmer j of plot i

α_0 = the mean value of productivity of male farmers

β = differential intercept coefficients (the gender agricultural productivity gap)

i= 1, 2, 3…

ε_i = error term

The existence of a gender productivity gap was then assessed by checking the significance of the coefficient β in (3.2). A negative and significant estimated coefficient of gender variable indicated that plots of female farmers are less productive.

RESULTS

Descriptive Analysis

Descriptive statistics of mean scores was used to describe the characteristics of the variables. Descriptive statistics provide the basic features of the data collected.

Table 1: Descriptive Statistics of Resource Endowments

Variables (Mean Values)	Male	Female	Total
Farm size (in acres)	0.4	0.4	0.44
Total harvest (in Kgs)	430	249	340
Productivity (kgs/acre)	2299	1396	1847

Source: Author (2024)

On crop harvest and land management: on average, male farmers harvested 430kgs of crops, while female farmers harvested a lower average of 249kgs. This suggests that male farmers may have higher crop yields compared to female farmers. Both male and female farmers managed the same average land size of 0.4 acres. On productivity: male farmers had a

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significantly higher productivity rate, with an average of 2,299kgs per acre, compared to female farmers, who had an average productivity of 1,396kgs per acre. This indicates a substantial productivity gap between male and female farmers. This substantial difference in productivity highlights potential inequalities in access to resources, knowledge, and opportunities between male and female farmers, which can impact agricultural output and livelihoods

Empirical Findings

Inferential statistics were used to conclude the findings of test done on a population by taking a sample of an information from the large population. The inferential statistic techniques were used to measure the significance of the relationship while the bivariate regression was employed to find the gender gap in agricultural productivity. The results of the study were presented using tables and figures.

The first step in the regression analysis was to estimate the gender agricultural productivity gap in Busia County. To achieve this, the study adopted model 3.2 to estimate the gap using ordinary least squares regression. The dependent variable in the model was the logarithm of the agricultural productivity for each farmer, while the independent variable was the gender of the farmer. The gender variable =1 if female and 0 otherwise. This simple regression model was then estimated to determine if there was a significant mean agricultural productivity gap between female and male farmers in each sub-county. The results of the estimated agricultural productivity gap per sub-county are presented in Table 2.

Table 2: Gender Agricultural Productivity Gap

Sub-County	Gap	Std. Error	T	P-Value
Teso North	-0.43	0.213	-2.01	0.049*
Teso South	-0.63	0.3	-2.1	0.040*
Bunyala	-0.67	0.303	-2.2	0.035*
Butula	-0.47	0.147	-3.17	0.002*
Matayos	-0.72	0.35	-2.1	0.041*
Nambale	-0.63	0.3	-2.1	0.041*
Samia	-0.67	0.312	-2.16	0.036*

** Significance level at 0.05*

Source: (Author, 2024)

The findings highlight significant gender gaps in agricultural productivity within Busia, with female farmers consistently experiencing lower productivity compared to male farmers across different sub-counties. This observation is based on the results from Table 2, which indicate that plots farmed by female farmers are less productive compared to those farmed by male farmers, with a statistically significant gap observed in each sub-county.

In Teso North: the coefficient (β) of -0.43 with a p-value of 0.049 suggests that the productivity gap between male and female farmers is statistically significant. A negative coefficient indicates that, on average, plots farmed by female farmers yield lower productivity compared to those farmed by male farmers. The magnitude of the coefficient (-0.43) implies that, on average, plots farmed by female farmers are 43% less productive in Teso North.

In Teso south, the coefficient (β) of -0.63 with a p-value of 0.040 indicates a statistically significant productivity gap between male and female farmers. A negative coefficient suggests that, on average, plots farmed by female farmers are less productive compared to those farmed by male farmers in this specific sub-county. The magnitude of the coefficient (-0.63) implies that, on average, plots farmed by female farmers are 63% less productive than those farmed by male farmers in Teso South.

In Bunyala, the coefficient (β) of -0.67 with a p-value of 0.035 suggests a statistically significant productivity gap between male and female farmers. Like the previous discussions, a negative coefficient indicates that, on average, plots farmed by female farmers yield lower productivity compared to those farmed by male farmers in this particular sub-county. The magnitude of the coefficient (-0.67) implies that, on average, plots farmed by female farmers are 67% less productive than those farmed by male farmers in Bunyala.

In Butula, the coefficient (β) of -0.47 with a p-value of 0.002 indicates a significant productivity gap, where plots farmed by female farmers are, on average, less productive compared to those farmed by male farmers. However, it's worth noting that while the magnitude of the coefficient in sub-county 4 (-0.47) is not as high as in sub-counties 2 and 3, it still signifies a substantial productivity gap. This suggests that, although the extent of the gap may vary across sub-counties, the overall pattern of gender gap in agricultural productivity persists throughout Busia County. The lower p-value (0.002) in sub-county Butula compared to the other sub-counties further emphasizes the robustness and significance of the observed productivity gap. This indicates a higher level of confidence in the statistical significance of the findings in Butula.

In Matayos, the coefficient (β) of -0.72 with a p-value of 0.041 indicates a significant productivity gap, where plots farmed by female farmers are, on average, less productive compared to those farmed by male farmers. Similar to the other sub-counties, the negative coefficient (-0.72) in sub-county 5 suggests a substantial productivity gap, with female farmers experiencing lower productivity levels compared to their male counterparts. The statistical significance of the coefficient, as indicated by the p-value of 0.041, further strengthens the evidence supporting the observed productivity gap in Matayos.

One notable difference compared to some of the other sub-counties is the higher magnitude of the coefficient (-0.72) in Matayos, indicating a relatively larger productivity gap. This suggests that female farmers in Matayos may face particularly pronounced challenges in achieving high levels of agricultural productivity compared to male farmers. However, it's important to note that despite the higher magnitude of the coefficient, the statistical significance of the productivity gap in Matayos is comparable to that of other sub-counties where the coefficient values were slightly lower. This indicates that, while the extent of the productivity gap may vary across sub-counties, the overall pattern of gender disparities in agricultural productivity remains consistent throughout the region.

Comparing the findings from Nambale with those from the previous sub-counties, a consistent pattern of a statistically significant productivity gap between male and female farmers is observed. In Nambale, the coefficient (β) of -0.64 with a p-value of 0.041 indicates a significant productivity disparity, with plots farmed by female farmers being less productive on average compared to those farmed by male farmers. Similar to the other sub-counties, the negative coefficient (-0.64) in Nambale suggests a substantial productivity gap, highlighting the challenges faced by female farmers in achieving high levels of agricultural productivity. One notable similarity compared to some of the other sub-counties is the magnitude of the coefficient, which is comparable to those observed in sub-counties where similar productivity gaps were identified. This suggests that female farmers in Nambale may face similar challenges to those experienced by female farmers in other parts of the region.

In Samia, a coefficient (β) of -0.67 with a p-value of 0.036 highlights a significant productivity gap, indicating that plots farmed by female farmers are, on average, less productive compared to those farmed by male farmers. This negative coefficient underscores the substantial gap in productivity, emphasizing the challenges female farmers face in achieving high agricultural productivity levels. The statistical significance of the coefficient reinforces the evidence of the observed productivity gap in Samia.

This finding mirrors similar patterns seen in other countries within the SSA. Studies conducted in various SSA countries have consistently shown significant productivity differences between male and female-managed plots. For example, female-managed plots were found to be, on average, 37.5% less productive in Malawi, 34.9% less productive in Uganda, 25% less productive in Malawi again, 23.4% less productive in Ethiopia, 20% less productive in Mozambique, and 11% less productive in Nigeria.

Despite potential variations in the magnitude of productivity gaps within and across different countries, the overall trend of gender gaps in agricultural productivity remains consistent throughout the region. Addressing these disparities is critical for promoting gender equality and empowering female farmers, which in turn contributes to inclusive and sustainable agricultural development and improved livelihoods for rural communities.

CONCLUSION AND RECOMMENDATIONS

Summary

The findings from multiple sub-counties within Busia County, Kenya, consistently reveal statistically significant productivity gaps between male and female farmers. Across various sub-counties such as Teso North, Teso South, Bunyala, Butula, Matayos, Nambale, and Samia, negative coefficients ranging from -0.43 to -0.72 indicate that, on average, plots farmed by female farmers exhibit lower productivity compared to those farmed by male farmers. The magnitude of these coefficients implies productivity gaps ranging from 43% to 72%, highlighting substantial disparities in agricultural output. Notably, while the extent of the gap may vary across sub-counties, the overall pattern of gender inequality in agricultural productivity persists throughout Busia County

Conclusions

His study concludes that female smallholder farmers in Busia County Kenya are less productive compared to male farmers

Recommendations

Governments and agricultural stakeholders should prioritize the development and implementation of gender-responsive policies that aim to address gender gaps in agricultural productivity.

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