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GENDER STEREOTYPES, ADVOCACY AND LIVELIHOOD CHOICES: A CASE STUDY OF FARMERS IN THE UPPER EAST REGION

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DECLARATION

I, Dorcas Yingura Zoogah hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this University or elsewhere:

Dorcas Yingura Zoogah	.....	19/3/2026 .....
(Name of Student)	Signature	Date

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

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ABSTRACT

Gender stereotypes influence the livelihood choices of agricultural households in many developing countries, such as Ghana. Many gender-sensitive development organizations have recommended the need for advocacy campaigns and sensitizations as a means of addressing gender stereotypes in society. But empirical evidence of how advocacy efforts shape gender stereotypes and livelihood choices are scanty. The study sought to identify the factors driving gender stereotypical attitudes in farm and off-farm livelihood activities and evaluate the effect of stakeholders' participation in advocacy campaigns on those stereotypes. To achieve this objective, econometric approaches involving the ordered logit model as well as the endogenous switching regression models were fitted to both assess the drivers of gender stereotypes as well as the impact of participation in advocacy programmes on these stereotypes. Using primary data collected from 400 respondents from the Talensi and Nabdam districts, the results showed that individual and household-level factors such as age, education, and access to agricultural extension services substantially affect the degree of gender stereotyping. Specifically, the elderly and farmers with more agricultural extension contacts are associated with a reduction in gender stereotype scores, suggesting that exposure to progressive agricultural practices and education may challenge traditional gender roles. The study also showed that participation in advocacy campaign programmes has significant effect on reducing the incidence of gender stereotypes. Participants in advocacy groups demonstrate a notable average treatment effect on their gender stereotype scores compared to non-participants. Therefore, interventions should focus on enhancing access to education and advocacy programmes to further dismantle entrenched stereotypes and empower both men and women in their agricultural endeavours.

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DEDICATION

I dedicate this work to Almighty God, my parents and my family.

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ACRONYMS

CSO:	Civil Society Organisations
ESR:	Endogenous Switching Regression
FPE:	Feminist Political Ecology
GSS:	Gender Stereotypes Score
NGOs:	Non-governmental Organisations
PRM:	Poisson Regression Model
SRT:	Social Role Theory
YUWM:	Young Urban Women Movement

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

Gender stereotypes play a role in the selection of opportunities for men and women as they are somewhat enshrined in most societal norms and cultural beliefs (Gupta et al, 2014). In most societies, men are encouraged to pursue and take up leadership roles as well as physically demanding roles, while women are most often encouraged to take up caregiving or domestic responsibilities (Mutabai et al, 2016). This brings about inequalities and limits the potential of women within the society. Patriarchy is defined as a system where men are dominant and exploit women, restricting them from their rights and abilities to own property or be financially independent, thus excluding them from economic activities, of which farming is not an exception (Folbre, 2021).

Studies such as Abitbol and Sternadori (2016) have indicated that cultural traditions have very much widened inequalities, especially in rural areas where men dominate almost all economic and financial sectors. Women, on the other hand, are confined into either domestic roles or small-scale agricultural work, which is not as yielding as the roles men play. Inasmuch as there have been efforts to alleviate gender inequality, there are some barriers especially from the conservative and rural areas.

Although there have been some successes in creating gender equality, there are still issues pertaining to deep-rooted cultural beliefs. The aim of gender-responsive policies is to guarantee equivalent and equitable access to resources and opportunities for decision-making for men and women (Khalifa and Scarparo, 2021). To ensure gender-responsive policies successfully serve the

various communities they target, they need to be responsive to the particular socio-cultural contexts of their target communities. This study aims to provide insight into the gender inequities existing in rural livelihoods that limit women's participation in some farm and off-farm livelihoods in the Upper East Region of Ghana.

1.2 Problem Statement

Gender-inequitable access to resources, decision-making power, and economic opportunities remains deeply embedded in traditional socio-cultural systems, particularly in rural contexts (Galiè et al., 2022). In many such settings, poverty and patriarchy intersect to reinforce structural inequalities that constrain women's mobility, agency, and livelihood options. These inequalities are sustained by entrenched patriarchal systems that privilege male authority in both public and private spheres, limiting women's access to productive assets such as land, capital, and agricultural inputs (Folbre, 2021; Jaiyoela, 2020).

Gender stereotypes play a central role in reproducing these structural disparities. These stereotypes assign rigid roles and expectations to men and women, positioning men as primary breadwinners and decision-makers while relegating women to unpaid domestic and caregiving roles (Kray et al., 2017; Bojani et al., 2024). Such role prescriptions restrict women's participation in agricultural production, entrepreneurship, and skilled economic activities, thereby reinforcing economic dependency and marginalisation. In rural areas, where poverty and infrastructural deficits further limit access to education, healthcare, and markets, these constraints are especially pronounced (Briamah et al., 2019).

Access to land and other productive resources is central to economic independence, yet women in many rural communities are confined to subsistence farming or low-return off-farm activities (Adejo et al., 2021). Even where women contribute substantially to agricultural production, their

labour is often undervalued and excluded from formal decision-making processes. This systematic exclusion perpetuates a cycle of poverty and weakens women's capacity to transition beyond socially prescribed roles.

At the same time, poverty deepens gender inequality by constraining access to education and vocational training, thereby limiting the development of capabilities necessary for diversified livelihoods (Munoz Boudet et al., 2018). The result is a mutually reinforcing relationship between poverty and gender stereotyping: limited resources reduce women's opportunities, while restrictive norms justify their continued marginalisation.

In response, numerous advocacy initiatives have sought to promote gender equality in rural areas including the Talensi and Nabdam districts. Advocacy efforts typically focus on raising awareness, engaging community leaders, and promoting women's rights and access to resources (Almog-Bar & Schmid, 2014). However, these initiatives have yielded mixed results. In communities with strong patriarchal norms, advocacy interventions often encounter resistance from both men and women, particularly where such interventions are perceived as externally driven or culturally insensitive (Dichabe, 2017; Green, 2024). Women themselves may uphold gender norms when these norms are closely tied to identity and social belonging (Chigbu, 2019).

Okunade et al. (2023) indicated that advocacy programmes are more effective when they address not only gender inequality directly but also the underlying socio-cultural and economic conditions that sustain it. Yet, in many rural contexts like the Talensi and Nabdam districts, advocacy remains narrowly focused on awareness creation without systematically examining how poverty, gender stereotypes, and livelihood constraints interact at the local level.

The Upper East Region presents a particularly compelling case. High poverty rates, limited infrastructural development, and entrenched patriarchal norms combine to restrict women's access to land, credit, and decision-making authority (Ngulube, 2018; Awumbila, 2006). While women disproportionately bear the costs of rigid gender norms, men are also affected by prescriptive expectations to serve as sole providers, which may push them toward precarious or unsustainable livelihood strategies (Parker & Stepler, 2017; Harris, 2023). Despite these complex dynamics, empirical research has largely treated gender inequality either as a women-centred issue or as a policy implementation challenge, with limited attention to how gender stereotypes shape livelihood choices for both women and men within specific rural poverty contexts.

1.3 Research Questions

The main research question of the study is: how does gender stereotyping affect livelihood choices in the Talensi and Nabdam districts?

The study aims to respond to the following specific research questions:

1. What are the drivers of gender stereotyping in farm and off-farm activities among farm households?
2. How do advocacy campaigns aid in reducing gender stereotyping in the Upper East Region?
3. What is the effect of gender stereotyping on farm and off-farm livelihood choices?

1.4 Research Objectives

The main objective of the study is to assess how gender stereotyping and advocacy affect livelihood choices in the Talensi and Nabdam districts.

The study sought to address the following specific research objectives:

1. To study the drivers of gender stereotyping in farm and off-farm activities
2. To examine the effect of participation in advocacy programmes in reducing gender stereotyping
3. To estimate the influence of gender stereotyping on household livelihood choices.

1.5 Significance of the study

The result of the study is relevant for government and development organizations in their efforts to eradicate gender stereotyping thereby contributing to the achievement of the fifth sustainable development goal (SDG 5) which seeks to achieve gender equality and empower all women and girls.

Secondly, it will help to improve the activities of NGOs such as school for life and ActionAid Ghana whose activities include inclusive education thereby helping to promote girl child education in the Talensi and Nabdam districts.

The results will also guide the activities of the district assembly, proving them with empirical data of the state of gender stereotyping in the districts. This will help them adopt proactive measures aimed at curbing the menace.

1.6 Organization of the study

The rest of the study is organized into four chapters. Chapter two reviewed related and relevant literature on gender stereotyping and the effect of advocacy on gender stereotyping, chapter three presents the study area, methodology of the including the research design and analytical methods used for the estimation. Chapter four reports the study's results and the discussions while summary of findings, conclusions and recommendations formed the subject of chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing literature on gender stereotypes and livelihood choices among farmers in the Upper East region. The chapter begins with a conceptual review of various concepts related to the study, followed by an empirical review of literature and theoretical framework.

2.2 Review of concepts

Gender stereotypes shape how people live and work especially in rural areas. Gender stereotypes have, over time, transformed from just assuming how things are to be done into rules and guidelines which dictate the opportunities and resources that are available and accessible to an individual (Rudman & Glick, 2021). This is obvious in the Upper East Region of Ghana especially in farming activities. In farming in the region, men and women have been assigned specific roles and responsibilities through societal norms. For instance, in some rural areas, the women are in charge of planting, weeding, and harvesting. The men, on the other hand, are in charge of decision-making. Mostly, women do not own land because it is the property of men. They rely on the permission and authority of their husbands or fathers to access and use the land (Hirschon, 2023). Assigning roles and responsibilities based on gender stems from long-held beliefs.

Gender stereotypes may seem intangible, but their impacts can be very much felt. It dictates some major choices of people including their sources of income. The efforts of women to earn income in their communities are sometimes thwarted by some traditions and rules (Kumi & Owusu, 2023). For instance, in some rural communities, women have the overarching role of carrying out household chores as well as engaging in small-scale farming, which yields just enough to feed the family. Men, on the other hand, are often assigned roles such as commercial farming or rearing

and selling of livestock, which have higher returns on investment. This results in a cycle of inequitable wealth that establishes a dependence on men and prevents women from departing from traditional roles (Hunt & Samman, 2016).

Cultural traditions in which women are disadvantaged in the acquisition of land especially through inheritance for farming, are also part of the problem in the Upper East Region of Ghana (Hunt & Samman, 2016). For instance, in most cultures, men mostly inherit landed properties from their parents or families. Men control agricultural land for farming, most of which though inherited, structurally excludes the females. Thus, women are left to depend on male figures, either their fathers, husbands or other relatives when they want to access lands (Hirschon, 2023). Aside from access to land being an issue for women to engage in agricultural activities, there is also lower representation of women in supplementary agricultural activities such as provision and access to agricultural extension services (Davison, 2019).

These disparities are enforced by cultural norms where it is an acceptable practice for men to own and control productive resources. Nonetheless, advocacy efforts by women groups and cooperatives are challenging these traditions (Masabo, 2015). Advocacy (awareness and education) is a powerful tool in dismantling the stereotypes that hold women back and shows that women can be efficient leaders and workers in the communities (Chikwe et al, 2024). Training interventions build women's capacity to diversify their farming activities and increase their incomes. The importance of collaboration and relationship-building between the local government, NGOs, CSOs and international community can also help assist the development of policies and frameworks that will encourage inclusion (Brouwer et al., 2019).

In the proposed conceptual framework, "Gender Stereotypes in Farming" is at the centre of the framework, as it was identified as the issue that is critical in determining livelihoods and livelihood

decisions in the Upper East Region. Gender stereotypes outlined expectations of men's and women's roles and participation in agriculture and, in some cases, limited women to roles such as weeding or post-harvest processing. By contrast, men participated in land ownership and rights to growing cash crops as the primary means of income generation. Supporting gendered stereotypes in the Upper East Region are "Socioeconomic and Cultural Factors in Agriculture", which produced an indirect yet strong pressure to support gender inequalities in agriculture. In Upper East Region, socioeconomic factors which allowed women only limited access to land, credit and extension services, and a strong cultural expectation of male decision-making power in farming situations led to supporting traditional gender norms and limited women's choices to participate more broadly in agriculture. "Advocacy and Agricultural Interventions" were focused on formally challenging established stereotypes or were promoting gender-equitable practices in farming and included women's farming cooperatives, training programmemes in sustainable agriculture, or policies which mandated equal access to land or resources. By supporting cultural changes related to gender expectations and addressing socioeconomic barriers to women, it is through these interventions that expectations are changed or dismantled so that women and men can pursue farming roles based on ability rather than cultural norms. The conclusion is "Equitable Livelihood Opportunities in Farming", as it opens doors to a spectrum of agricultural employment opportunities for farmers in the Upper East Region, and it leads to improved economic condition while contributing to sustainable agricultural approaches. This cohesive framework illustrates the multifaceted nature of gender norms in agriculture, showing the extent to which socioeconomic and cultural conditions support inequitable outcomes and also showing how, through targeted advocacy, farmers might transform equitable livelihood opportunities.

2.3 Review of Empirical Studies: Factors involved in Gender Stereotyping in farm and non-farm practices

Gender stereotypes are strongly embedded in societal contexts such that they are likely to determine how much a person participates in farm and non-farm activities (Mbagee, 2020). They also dictate people's access to, use of, and role in decision-making, more so in contexts with historically entrenched patriarchal systems. Gender stereotyping in many rural contexts is engendered by a combination of socio-cultural, economic, and institutional factors. Culturally defined norms and traditions are mostly determinant of gender roles in the agricultural livestock production system (Lambrecht et al., 2018). For instance, men are considered primary breadwinners in many rural contexts, including the Upper East Region of Ghana, because of which they continue to dominate decisions about and access to resources, such as land, credit, and training programmemes (Abbey, 2017). On the opposite side, women are usually involved in unpaid activities and domestic work that are, in practice, treated as less valuable than paid employment (Abbey, 2017). The opportunity for and access to education also compound these stereotypes in these cultures, such that women face greater constraints than men that often preclude them from fully participating in and benefiting from agricultural practices and entrepreneurial endeavours (Obi et al., 2017). This reaffirms the idea entrenched in society that women are incapable of managing productive pursuits and therefore have to be designated certain roles regarded as more appropriate and easier for them to manage. The majority of customary laws in Ghana still favour male inheritance; therefore, kinds of resources such as land for farming and accessing products are contingent upon women relying primarily on their male relatives (either fathers, brothers, uncles or husbands) (Lambrecht, 2016). In addition to traditional beliefs and cultural customs, economic factors also account for further entrenchment of these gender stereotypes (Akaenyi, 2024). In most societies, men control most high-value and profit-generating activities, such as cash crops that

require significant amounts of financial resources and engagement with the market. The exclusion of women from these activities largely comes from the fact that women do not have financial resources and networks to engage effectively in these activities (Greguletz et al., 2019). Most agricultural extension services are designed to suit the needs of male farmers, which further sidelines women and continues to exacerbate the issue.

2.4 Effects of Advocacy in Reducing Gender Stereotyping

Advocacy interventions have been effective in addressing and mitigating gender stereotyping in farming communities (Hillenbrand & Miruka, 2019). Advocacy interventions through raising awareness, facilitating equal access to resources, and encouraging women to become decision-makers will eradicate gender stereotypes. The Upper East Region experience speaks to the transforming impact advocacy programmemes (education and training) from non-governmental organisations (NGOs) and women's groups have initiated (Akurugu et al., 2023). Women with knowledge and skills in modern farming techniques, agribusiness, and leadership challenged norms and developed confidence. Training programmemes that utilised a gender-sensitive approach increased women's engagement in cash crop farming and allowed access to markets (Vetrivel et al., 2024). Training programmemes often strategically included men to develop a more inclusive understanding of gender roles.

Policy advocacy is another component of advocacy, which can disrupt gender stereotypes (Blasi, 2017). Policy advocacy on land tenure systems and women's land ownership rights has been discussed and implemented, which has highlighted some level of success. Moreover, the active participation of stakeholders such as traditional leaders and individuals in important decision-making roles in communities has contributed to changing attitudes and advancing policies that promote gender equity (Shinbrot et al., 2019). For example, some shifts in customary practices—

like the inheritance of land—have enabled women to also inherit and have full access to land for their personal use. Such change occurred through interactions with the community and traditional leaders.

In addition, women's participation in cooperatives and community groups is important to changing stereotypes. Women participating in farming cooperatives have had new voices, resources, and networks in which to build (Kaaria et al., 2016). These groups also serve as a stepping stone for broader advocacy movements to strengthen women's voices at their community levels. Studies show that communities with established women's groups are more likely to engage in gender-equitable practices, reflecting the ripple effect of collective agency.

2.5 Effects of Gender Stereotyping on Farm and Off-farm Livelihood Choices

Gender stereotyping has substantial effects on women's livelihood decisions, both in terms of economic outcomes and social wellbeing (Tantoh et al., 2021). In the Upper East Region of Ghana, men and women are assigned to activities that are congruent with gendered beliefs about what is suitable for men and women, while creating separate livelihood patterns for the two genders. Men's predominance is built upon beliefs that they possess more strength, expertise, and savviness in the marketplace regarding commercial farming and livestock trading. In contrast, women remain constrained to subsistence farming and other low-income-generating activities, complete with gratis domestic responsibilities (Jerumeh, 20-24). According to Jerumeh (2024), a significant contributing factor to women in rural communities not achieving transferable levels of income continues to perpetuate a cycle of poverty. This further exacerbates the earning differences between men and women. Nuhu and Matsui, (2022) indicate that women's farmlands or land borrowed to farm are usually smaller, less than an acre of farmland, than men's crops in the Upper East Region

of Ghana. This doesn't mean that women do not work hard on the farm, but women face structural challenges that inhibit access to the important resources they need.

Dzanku, (2018) showed that gender stereotypes also indicate notable differences in off-farm activities. Men can pursue entrepreneurship opportunities or formal employment, while women's off-farm activities are largely informal and lowly paid economic activities. This suggests that women's off-farm economic activities are often based on women's roles in the home over women's economic contributions. The barriers women face in taking advantage of more economic activities other than what is allocated to them traditionally could often lead to retaliation, which can serve as a disincentive to access different livelihood opportunities (Abakah, 2018). Furthermore, societal thought processes can influence women's behaviours. Many women will internalise social norms regarding women's work and roles, and that can have a direct impact on the aspirations and confidence of women. It is unlikely women will maximise activities that peddle against these preconceived stereotypes in the workplace, perpetuating the cycle of inequity. On the other hand, men might be pressured by societal default to adhere to masculinity norms, therefore making them less likely to share household responsibilities or provide economic support for women (Meeussen et al., 2020). The relationships between the drivers of gender stereotyping, advocacy efforts, and livelihood choices are constantly changing and yet related. Advocacy efforts often point to underlying root causes of stereotypes, with framing that looks at socio-cultural, economic, and institutional aspects that cause or perpetuate stereotypes. Initiatives that promote gender sensitisation have both an effect on changing the mindset of gendered norms and educating women to improve their capability in decision-making about engaging in multiple livelihoods (Newton, 2016). Similarly, policy reforms that provide equal access to resources create a modicum of gender balance to allow women to engage equally in farm-related and non-farm-related activities. These

advocacy efforts to shift gender norms also have an effect on gendered societal attitudes and expectations of the people living in the identified community. The success of women in activities often dominated by men is a reflection that women, in fact, can do any work they choose to embrace (as long as they are provided/have appropriate coverage) (Wright, 2016); this transformation will also give a viewpoint for future generations. This is especially evident in communities where sustained advocacy has continued over time. CARE International Ghana, (2021) conducted research across the Upper East Region) and provides evidence for the claim that rural activities and advocacy carry long-term positive results in women's gender equity in access to resources and participation in decision-making.

Comprehensive, continuous action is required to alleviate gender stereotyping in farming communities (Jost et al., 2016). Policy investing in gender equity in agricultural programming must be prioritised in agriculture to ensure women's equal access to land, credit, and training. Legislative changes that secure women's rights to inheritance, ownership and access must precede all other initiatives to remove all barriers. Ground-level initiatives that engage men and women in discussions about gender roles can begin to create more equitable and inclusive communities (Lwamba et al., 2022). Interventions that take a practical approach should also invest in women's capacity through training and education, especially in high-value agricultural practice. Providing more opportunity to women's cooperative and advocacy groups increases their visibility and provides an opportunity to engage in collective efforts. More broadly, targeted approaches that implement gender equity training programmes for men will not only serve to change stereotypes but also task them with considerations that lend to shared responsibility in domestic and economic economies.

Gender stereotypes play a crucial role in shaping people's livelihood choices, particularly with respect to women in the Upper East Region of Ghana (Mensah, 2019). It intensifies the economic imbalances and restricts women's opportunities, if and when they exist to begin with. By exploring the roots of these stereotypes, evaluating the effect of advocacy campaigns, and testing these campaigns against the livelihoods' realties, this review emphasises the complexity of the subject as well as the need for a multifaceted approach to responses to gender stereotypes. Advocacy, awareness raising and policy are all core elements of a more equitable and inclusive agricultural sector (German et al., 2020), particularly when we think about or discuss women. It will take sustained efforts from all advocacy sectors, organisations, and funders to effectuate challenging of stereotypes, influence women's empowerment, and bring sustainable development to the livelihoods of farming communities.

2.6 Theoretical Framework

2.6.1 The Social Role Theory (SRT)

Social Role Theory, championed by Alice Eagly, is a theoretical framework for understanding how societal norms and cultural expectations manifest into beliefs about gender-appropriate behaviour (Eagly & Wood, 2016). Social Role Theory suggests that when individuals enter farming communities in the Upper East Region, they are socialised to fulfil roles and levels of responsibilities that are considered appropriate for their gender. This socialisation process has important implications for lifestyle choices or livelihood in agriculture (Eagly, 1987). These roles are established and approved based on cultural tradition and economic need, defining behaviours and opportunities that are acceptable for men and women and creating a resistance to change in particular structures or systems. For example, men are usually expected to perform tasks that are physically taxing and require strength, such as land preparation and ploughing, whereas women

are expected to carry out seed sowing, weeding and post-harvest tasks (Eagly, 1987). The theory notionally emphasises that societal systems assign roles based on gender, informed by the historical division of labour and distribution of resources (Sneider & Bos, 2019). For a long time, in the Upper East Region, traditional agrarian societies divided tasks that involved physical strength—such as clearing land, crop production, or tending to livestock—among men, while responsibilities of domestic work and supportive agricultural activities—such as gathering water or caring for small domestic animals—have been assigned to women (Bonvillian, 2020). The divisions of labour in the Upper East Region are not only the result of biological differences, but they are also supported by cultural beliefs, and these distinctions have been maintained over time. The practice of roles that men and women take in farming has led members of the community to adopt expectations about contributions to the farming operation, which have been internalised and transmitted down through generations, further perpetuating gendered patterns of livelihood (Rudman & Glick, 2021). For example, women's associations of managing crops or maintaining family food security have been shaped by their association with nurturing and caregiving, while men have typically owned land and striven to maintain a position of authority within farming households.

At its core, Social Role Theory posits that social roles lead to behaviours which emphasise that both cultural norms and economic structures, such as the nature of subsistence agriculture, construct these roles (Eagly, 1987). The current division of labour for agriculture in the Upper East Region shows how historical and economic situations, such as labour based on manual labour, have reinforced gender roles. These roles, which have been instituted over generations, create gender norms: men as strong and independent providers and women as nurturing and cooperative support (Ibid). Gender norms dictate livelihood choices, such as who should grow cash crops rather

than food crops or who should control agricultural income. For example, it is often assumed that men are the agents of market-orientated farming, and the economic worth of women's subsistence efforts is less valued (Nikiema & Bitibale, 2024).

The theory also looks at the nuances of behaviour adaptation, where people will take on tasks and roles based on social norms and normative expectations, which can arise from both external pressures and internalised beliefs about the way that gender roles should be defined. In the Upper East Region, it is not uncommon for women to be socialised to prioritise the family diet, which may produce a skill set surrounding crop preserving and small-scale trading; similarly, men employ characteristics such as assertiveness to negotiate land use and market values (Savoy, 2024). Role congruity is another important concept, where adherence to gender roles is in congruence with behaviour and earns social acceptability. Farmers that are in congruence with those roles, in a more traditional treatment of roles that sees men as producers and women as support (i.e., secondary), are socially acceptable; however, women leading enterprises toward commercial farming while men engage in more domestic roles may create tensions, scrutiny and stigma, resulting in a constrained livelihood possibility.

Social Role Theory clarifies differences in gender farming practices and preferences within the Upper East Region as learnt behaviours rather than inherent characteristics (Schmitt et al., 2017). Women's collective activities, such as working together in plantings, and men's agentic behaviour, such as competition for resources, are expressions of the socially constructed roles they occupied rather than biological innate characteristics (op. cit.). The theory also sheds light on the reasons for ongoing gender imbalances in agricultural livelihoods. Men as leaders and controllers are often still stereotyped to be engaged in the decisions of resources. This stereotype not only leads to women's absence from corporative-like decisions; it also diminishes their status when participating

in such roles. Moreover, women's labour in farming is often undervalued, which perpetuates economic differences (Nuhu & Matsui, 2022). Incorporating intersectionality, as these theories do, offers the opportunity to consider how gender intersects with other social variables associated with identity, including ethnicity. In terms of social role theory, this compounded stereotype may limit their access to things like land or extension services. This intersectional lens is essential in understanding the myriads of situations farmers face and the possibility of designing advocacy options that are fully inclusive of all farmers.

Ultimately, Social Role Theory provides an understanding of facilitating change in farming communities. Gender roles in the Upper East Region are very fixed; however, changes in the economic circumstances women face – such as access to mechanisation tools or access to markets – can change the labour division (Boso, 2017). Promotional initiatives, such as providing training programmemes for women to assist with cash crop production and policies to promote equal access to land, can serve to challenge these stereotypes and increase livelihood options (Quintana, 2024). After addressing structural barriers, whether it is education or discrimination based on sex, there is the potential to promote neighbourly expectations which are not always in line with women's and men's abilities and talents, promoting gender relations in agriculture (Eagly, 1987).

2.6.1.1 Limitations of the Social Role Theory

While Social Role Theory has brought much to the understanding of gender roles and behaviours, it is not without its criticisms. One criticism is its tendency towards using a macro-level analysis overlooks variables such as agency and individual differences (Jackson, 1998). While acknowledging that there are influences of the social role, it does not underscore the possibility of resisting these roles or redefining them as one sees fit. Another critique of social role theory is that it assumes that gender is a binary concept (Jackson, 1998). Now that society in some regions has

come to accept a wider understanding of gender, the theory itself must develop to recognise all forms of gender and the complexity of gender identities and gender expressions. Nevertheless, Social Role Theory continues to be a valuable framework in considering the relationship between structures in society, cultural standards and beliefs, and individual behaviours. It provides a strong rebuttal to the extreme position of biological determinism from a feminist perspective, and it demonstrates forces for the possibility of change within society. Social Role Theory provides a strong theoretical framework for understanding the development and maintenance of gender roles and their contributions to behaviour and social interactions. By highlighting the contributions of society and culture, it creates a counterpoint to the inclination of some theorists to dismiss gender differences. This also provides a starting point from which to promote equality. Although there are limitations to the theory, its discussions spanning the division of labour, stereotype development, and social change potential make it a useful tool for understanding and changing the complexities of gender in modern society. As we continue to navigate problematic themes tied to inequality and inclusion, social role theory provides a framework for the contributions of everyone, potentially creating a more just and inclusive world.

2.7 Female Political Ecology Theory

Feminist Political Ecology (FPE) provides a theoretical framework to analyse the interconnections between gender, the environment, and power relations through an explicit focus on how gendered identities and inequalities shape livelihood strategies in communities of farmers, such as in the Upper East Region (Elmhirst, 2015). FPE stems from political ecology, which emerged in the 1990s as an extension of political ecology with feminist foundations to consider the important role of gender in access to resources, agricultural activities, and decision-making. While explicitly linking feminist theory to political ecology, FPE draws attention to how gender produces and

intersects with class, ethnicity and other social categories that shape farmers' experiences in the Upper East Region (Elmhirst, 2015).

Feminist political ecology builds upon political ecology's attention to the social, political, and economic structures shaping human-environment relations (Myers et al.; Rocheleau et al., 2013) and offers a critique of conventional approaches that do not take gender relations into consideration. Feminist theory builds on this foundation to uncover structural inequalities women farmers face, including restrictions to land ownership and acknowledgement, in the context of the Upper East Region. At its core, FPE engages with how relations of power – often grounded in patriarchal relations – shape access to and control of agricultural resources in these communities (Clement et al., 2019). In this area, land ownership and decision-making in farming are often dominated by men, while women are relegated to supporting roles (such as weeding or harvesting) that reinforce gender stereotypes and limit livelihood options in general (Bieturu, 2019). An important idea in FPE is that of situated knowledge, which entails knowledge particular to context and based on lived experience (Rocheleau, 1995). In the Upper East Region, women farmers have developed extensive knowledge about soil fertility, which seeds to plant, and, importantly, how to preserve stored crops because they are historically responsible for subsistence farming and food security for the household. Yet, this type of knowledge is oftentimes excluded from formal agricultural knowledge systems. Formal agricultural knowledge systems continue to stereotype women as secondary participants in farming. FPE recognises that farming practices and policies could be improved when the situated knowledge of women farmers is integrated into the frameworks of equity and sustainability. Similarly, a multi-scalar approach in FPE ties local farming experiences in the Upper East Region to wider phenomena, such as climate change and market forces, that shape local farming contexts. For example, women endure disproportionate

impacts from global forces, such as drought or agriculture focused on exports. Women adapt to livestock keeping and continue to produce food for their families amid resource scarcity and food production pressure. Intersectionality also provides complexity to such analyses, as gender does not exist in isolation with respect to livelihood challenges. Gender and ethnicity or gender and poverty, for example, could shape the effects of livelihood challenges. Moreover, women from marginalised groups may experience additional barriers in university or access to land tenure or extension services and subsequently increased hardships from exclusion.

The theory examines central components regarding the Upper East Region: access to resources, environmental knowledge, division of labour, and environmental change implications. Patriarchal systems and customary law generally limit women's access of land, forcing them to rely on male family members for access to farmland and to continue gender stereotypes that men are the primary producers (Elmhirst, 2015). This means that women experience limited economic freedom due to their inability to adopt new practices in farming and production. Women's knowledge regarding managing precious resources, such as scarce irrigation water or local genetic diversity of crops, does not receive value, despite the influence on agricultural resilience (Ray & Mukherjee, 2022). Gendered divisions of labour in the Upper East Region dictate that women perform unpaid or low-status labour such as collecting water or processing crops, while men participate in cash cropping or livestock (Sirianni & Negrey, 2000). Environmental factors, such as desertification, increase the burden faced by women as they must allocate more time acquiring resources at home and spend less time either earning income or pursuing more education. FPE illustrates that these changes disproportionately affect women, as they depend on an environment for their livelihood; thus, they are in need of targeted advocacy (Parekh, 2023).

In relation to agriculture in the Upper East Region, FPE illustrates how stereotypes embedded in gender shape people's choices in their livelihoods (Elmhirst, 2015). For climate adaptation, it highlighted women's vulnerability to shocks such as unpredictable rainfall and their capacity as counter-actors of vulnerability when empowered to have access to resources and decision-making. Advocacy strategies, e.g., women-led cooperatives or training in regenerative practices, challenge stereotypes and impact flooding outcomes (Parekh, 2023). For example, when women were included in farmer groups, it improved soil conservation and food security. The FPE also provides support to gender-equitable agricultural governance in the Upper East Region. Policies that value women's agency, e.g., land rights or amplifying women's voices in communal planning, shape a new balance of power and encourage the practices that lead to a more sustainable farming future for the community (Elmhirst, 2015). Lastly, in combination with the sustainable development goals, FPE presents a framework for significantly enabling structural inequalities, and advocacy in the Upper East Region should use this framework to support women farmers so they may break through stereotypes and into livelihoods based on capability instead of gender norms.

2.7.1 Limitations of the Female Political Ecology Theory

While FPE makes substantial contributions, it is not without critiques and difficulties. There are arguments from scholars that the focus on gender may not consider other important aspects of environmental inequality that relate to class and ethnicity (Sundberg, 2015). Prominence on local, context-specific knowledge can make it difficult to generalise findings or use the findings in broader policy settings. Another challenge has potential for essentialism, in that women can be seen as closer to nature or more natural caretakers of the environment (Sundberg, 2015). This way of thinking runs the risk of reinforcing stereotypes and is uninformed by the diversity of women's experiences and perspectives. Feminist political ecology offers a viable framework to investigate

the complicated relationship between gender, environment, and power. By observing the gendered implications of environmental change, not only related to resource access but also to knowledge construction, FPE can provide critical observations of structural inequality and how that condition affects human-environment relationships. The multi-scalar, intersectional approach ensures that the voices and experiences of diverse customs are regarded, making FPE a powerful and impactful way to approach contemporary environmental and equity issues

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section provides an overview of the methods and procedures that shaped the research. It commenced with the profile of the research context in order to establish a more detailed understanding of the research. Following the profile of the research site, the report also presents the research design, data sources, sampling strategies, data collection techniques and tools, and a brief justification for the data collection resources. The procedures and methods of data analysis, as well as elements of the ethical considerations that were taken into account throughout the research process, were also dealt with in this chapter.

3.1 Study Area

The Upper East Region of Ghana was the focal point of the research, specifically the Nabdam and Talensi Regions, with Bolgatanga as the regional capital. According to the Ghana Statistical Service's Population and Housing Census (2020), the regional population is 1,301,000 (GSS, 2020). The region is ranked as one of the smallest regions by land size in Ghana and is mostly rural and agricultural (GSS, 2020). The 2021 Census reported the population of the Nabdam District in the Upper East Region of Ghana as 51,861, consisting of 25,552 males and 26,309 females while that for Talensi district is 87,021, consisting of 43,849 males and 43,172 females (GSS, 2021).

The Talensi and Nabdam Districts are part of the poorest districts in the Upper East Region of Ghana, a predominantly rural zone characterized by subsistence agriculture, high poverty incidence, and limited access to infrastructure and economic opportunities (GSS, 2021).

Agriculture forms the backbone of local livelihoods, with most households engaging in crop farming and livestock rearing. However, gender roles remain deeply entrenched: men are generally associated with cash crop cultivation and market-oriented activities, while women frequently engage in subsistence farming and unpaid labour, reflecting broader gender stereotypes that shape economic participation. These culturally rooted norms limit women's access to productive resources such as land, credit, and extension services constraints that depress women's capacity to diversify into higher-income farm and non-farm livelihood activities. Efforts to address gender inequality in these districts have included advocacy interventions by local NGOs including ACTIVISTA and Young Urban Women Movement, initiatives of ACTIONAID Ghana.

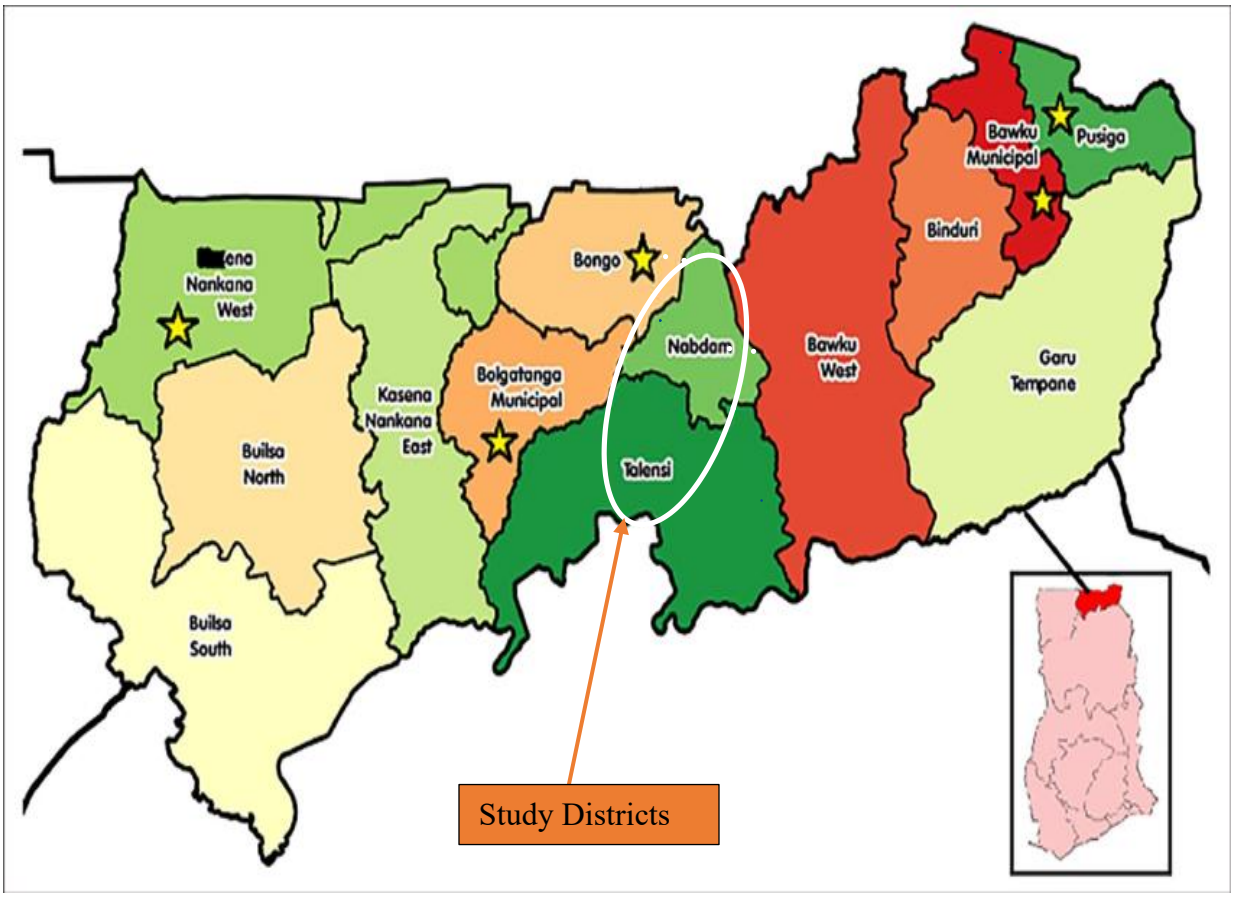

Figure 3.1 Map of the Upper East Region of Ghana

Source: GSS, 2021

3.2 Research Approach

The research takes a quantitative research approach to investigate the relationships of determinants of gender stereotyping amongst farming households. The quantitative approach enables systematic measurements of variables that support statistical analyses to discern patterns and connections to the data (Creswell, 2009).

3.3 Research Design

The approach to collecting data on gender stereotyping and related household and farm characteristics entailed a cross-sectional survey design. A structured questionnaire was administered to collect information from respondents. The analysis was conducted exclusively from a quantitative perspective with an aim to determine links to advocacy participation, gender attitudes, and livelihoods. A stratified random sampling strategy was implemented to identify respondents. The population of interest was individuals located in the Talensi and Nabdam districts. Stratification was undertaken based on key characteristics of location and farm type to ensure representation from varied subgroups in the population. Random selection of households was made within each stratum, resulting in an overall sample size of 400 respondents. This sample provides sufficient statistical power to detect significant relationships among the variables of interest.

3.4 Theoretical Framework

This study is grounded in two complementary theoretical frameworks: Social Role Theory and Expected Utility Theory, which together provide a basis for understanding both the persistence of gender stereotyping and individual responses to advocacy interventions.

Social Role Theory posits that gender stereotypes emerge from socially constructed roles and expectations assigned to men and women within a given society (Eagly and Wood, 2012). These roles are reinforced through cultural norms, institutions, and everyday practices, leading to the internalization of beliefs about what men and women can or should do. In agricultural contexts, this often manifests in the perception that men are primary decision-makers and landowners, while women are confined to supportive or subsistence roles. Such socially defined roles shape access to productive resources, participation in markets, and decision-making power, thereby sustaining gender inequalities. The theory is particularly useful for explaining how community norms and institutional structures drive gender stereotyping over time.

Expected Utility Theory, on the other hand, explains individual decision-making regarding participation in gender advocacy programmes. It assumes that individuals make rational choices by comparing the expected benefits and costs of participation (Azari et al., 2012). In this context, farmers—both men and women—are more likely to engage in advocacy or gender-transformative interventions when the perceived benefits, such as improved access to resources, increased income, or enhanced social recognition, outweigh the potential costs, including time, social resistance, or cultural backlash. This framework helps explain variations in participation levels and the conditions under which advocacy programmes are more likely to succeed.

Together, these frameworks provide a holistic understanding of gender stereotyping by linking structural and cultural drivers (Social Role Theory) with individual behavioral responses

(Expected Utility Theory). While social norms shape and reinforce gendered expectations, individual decisions to engage with or resist change are influenced by perceived incentives and constraints. This combined approach is particularly relevant for designing and evaluating gender advocacy interventions aimed at transforming norms and promoting equitable participation in agricultural systems.

3.5 Conceptual Framework

Figure 3.2 presents the conceptual framework of the study. Gender stereotypes are at the centre of society. It displays stereotypes that could be related to farm and off-farm activities and are influenced by a wide range of factors, including contextual, cultural and socioeconomic factors. On the other hand, there are movements and campaigns that advocate against these stereotypes. The effort of these campaigns is hypothesized to influence household on-farm and off-farm livelihood choices.

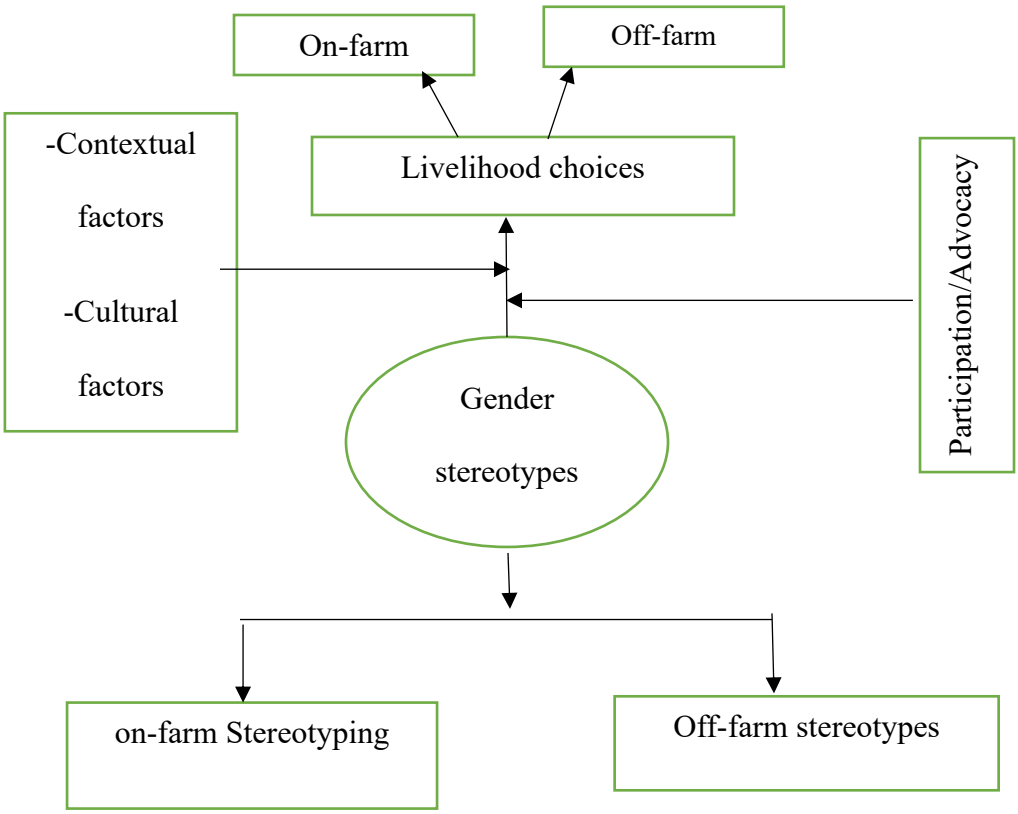

Figure 3.2: Conceptual Framework of the Study
Source: Authors own construct

3.6 Analytical Framework

3.6.1 Ordered Probit Model

The ordered probit model was employed to estimate the factors influencing gender stereotyping in farm and off-farm activities in the Upper East Region of Ghana (i.e., objective 1). This is because the dependent variable is ordinal. A set of Likert-scale type questions related to gender stereotyping in farm and off-farm activities will be asked and transformed into a measure called Gender Stereotype Score (GSS) through factor analysis.

The GSS was then ordered such that, scores below the 25th percentile was considered less stereotypes, those between the 25th and 50th percentiles considered as moderate while those above

50th percentile described as high stereotypes. The ordered probit model for estimating the factors affecting gender stereotypes is expressed as:

$$G = x'\beta + e \qquad (1)$$

where x' is a vector of explanatory variables postulated to have an influence on gender stereotyping in farm and off-farm activities, β is a vector of covariates to be estimated and e is the error term.

Hence for Gender Stereotyping on-farm, $G = \begin{pmatrix} 0\ if\ GSS < P25 \\ 1\ if\ P25 < GSS < P50 \\ 2\ if\ GSS > P50 \end{pmatrix}$

Following Danso-Abbeam et al. (2023), for m-ordinal categories

$$y_{c=}\, j/X) = \Pr(m_1 < x'\beta + e < m3) = F(m_3 - x'\beta) - F(m_1 - x'\beta)$$

$$P_{i0} = \Pr(GSS = 0) = F(m_1 - x'\beta)$$

$$P_{i1} = \Pr(GSS = 1) = F(m_2 - x'\beta) - F(m_1 - x'\beta)$$

$$P_{i2} = 1 - F(m_3 - x'\beta)$$

3.6.2 Endogenous Switching Regression Model (ESR)

The ESR model was used to estimate the effect of advocacy (participation) on gender stereotyping. Participation in advocacy campaigns or movements is measured as a dummy variable coded 1 if a household member belongs and participates in the activities of the Young Urban Women Movement (YUWM) or Women Groups Alliance or ACTIVISTA. Participation in these advocacy movements is random, and a household could choose to participate if the expected utility for

participation is greater than not participating. Y_{iP} is the utility of household i for participation and Y_{iN} is the utility for not participating. The two regimes could be modelled as.

$Y_{iP} = X_j\beta_P + \varepsilon_{jp}$ Regime 1 (Participation)

$Y_{iN} = X_j\beta_N + \varepsilon_{jN}$ Regime 2 (non-participation)

Where, X_j is the vector of explanatory variables postulated to affect participation, β_P and β_N are parameters to be estimated and ε_{jp} and ε_{jN} are the error terms for each regime. The household will thus choose to participate in advocacy campaigns or movements if and only if $Y_{iP} > Y_{iN}$ (Pitt, 1983).

The net benefit for participation is latent and could be expressed as

$P^* = X'b_i + e_i$, where $P_i = 1\ if\ P^* > 0$

However, selectivity bias may occur such that certain underlying latent factors may cause households to participate in advocacy campaigns or movements, this could lead to endogeneity where the errors terms of the adoption decisions and the outcome are correlated. The three error terms, $e, \varepsilon_{p,}\varepsilon_N$ are thus assumed to have a trivariate normal distribution with means zero following the covariate matrix;

$$Cov(e, \varepsilon_{P,}\varepsilon_N) = \begin{bmatrix} {\sigma^2}_P & \sigma_{PN} & \sigma_{P\varepsilon} \\ \sigma_{PN} & {\sigma^2}_N & \sigma_{N\varepsilon} \\ \sigma_{P\varepsilon} & \sigma_{N\varepsilon} & {\sigma^2}_\varepsilon \end{bmatrix}$$

Following Johnson and Kotz (1970), the expected values of the truncated error terms are expressed as;

$E(\varepsilon_P|P = 1) = E(\varepsilon_P|\varepsilon \leq -X'b) = \sigma_{P\varepsilon}\frac{\varphi(X'b/\sigma)}{1-\Phi(X'b/\sigma)} = \sigma_{P\varepsilon}\lambda_P$ and

$$E(\varepsilon_N|P=0) = E(\varepsilon_N|\varepsilon \leq -X'b) = \sigma_{N\varepsilon}\frac{\varphi(X'b/\sigma)}{1-\Phi(X'b/\sigma)} = \sigma_{N\varepsilon}\lambda_N$$

where φ and are the probability density and Φ cumulative distribution function of the standard normal distribution, respectively. The ratio of φ and Φ evaluated at $X'b$ is referred to

as the inverse Mills ratio λ_P, λ_N (selectivity terms).

The estimation of the ESR model involves first estimating the selection equation (participation) followed by the outcome equation (Gender stereotyping score). The expected values of the outcome variable (G) is expressed as;

$E(G_P|P=1) = X\beta_P - \sigma_{P\varepsilon}\lambda_P)$and

$E(G_N|P=1) = X\beta_N - \sigma_{N\varepsilon}\lambda_N)$

The change in the outcome (reduction of stereotypes or otherwise) due to participation in advocacy campaigns can then be specified as the difference between participation and nonparticipation, termed as the average treatment effect on the treated (ATT) in the impact assessment literature (Lokshin and Sajaia 2004). Mathematically,

$$E(G_P|P=1) - E(Y_N|P=1) = X(\beta_P - \beta_N) + (\sigma_{P\varepsilon} - \sigma_{N\varepsilon})\lambda_P$$

The ESR model was estimated using Full Information Maximum Likelihood (FIML), which jointly estimates the selection and outcome equations and produces consistent and efficient parameter estimates. Identification of the model relies on exclusion restrictions. At least one variable influencing advocacy participation but not directly affecting gender stereotyping was included in the selection equation and excluded from the outcome equations to ensure proper identification. In this study VSLA was used as the instrument.

3.6.3 Poisson Regression Model (PRM)

The Poisson Regression Model (PRM) was used to assess the influence of gender stereotyping on farm and off-farm livelihood choices. The main dependent variable is the number of farm and off-farm activities a household engages in, which is count in nature. The dependent variable thus assumes a Poisson distribution of the form

$$\Pr(y_i = j/x_i) = \frac{\exp(-u_i)u_i^{y_i}}{y_i}$$

Where $u_i = E(y_i/x_i) = var(y_i/x_i)$ and x_i is the vector of independent variables. The Poisson regression model is the starting point of count data modelling, among others such as negative binomial, zero-inflated Poisson, zero-inflated negative binomial, gamma count and endogenous switching Poisson models, depending on the nature of the data. The standard Poisson model requires that the equi-dispersion assumption be met. In other words, the variance of the distribution must equal the mean. When the variance is greater than the mean, we have overdispersion or an extra-poisson variation, and when it is less, then there is under-dispersion in the data (Gurmu & Trivedi, 1996).

The model to be estimated is expressed as:

$$Y = X\beta + \gamma G + \varepsilon$$

Where Y is the total number of livelihood choices, X is a vector of regressors, β is a vector of parametric constants to be estimated, G represents the gender stereotype score and its effect is shown by γ while ε is the error term.

CHAPTETR FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and discussion of the findings of the study. The section begins with descriptive statistics of relevant variables used in the estimations, followed by the description of respondent's gender stereotyping scores as well as their participation in advocacy programmes. The further assessed the factors influencing gender stereotyping as well as participation in advocacy programs, Finally, the study shows the impact of participation in advocacy campaigns on their gender stereotyping.

4.2 Descriptive Statistics

This section presents the descriptive analysis of the key variables in the study.

Table 4.1: Demographic Characteristics of Respondents

Variable	**Frequency**	**Percentage**
Gender		
Female	111	27.8
Male	289	72.2
Level of Education		
No Formal	109	27.2
Primary	123	30.8
Secondary	130	32.5
Tertiary	31	7.8

Others	7	1.8
Occupation		
Farmer	177	44.2
Off-farm Worker	89	22.2
wage labourers separate from direct farming	11	2.8
	123	30.8
Marital Status		
Single	89	22.2
Married	271	67.8
Divorced/Separated	15	3.8
Widowed	25	6.2
Access to Extension		
No	228	57.0
Yes	172	43.0
Membership of FBOs		
No	228	57.0
Yes	172	43.0
Membership of VSLA		
No	182	45.5
Yes	218	54.5

The results in table 4.1 shows the sample is predominantly composed of male respondents (72.2%, N=289), while females make up a smaller share (27.8%, N=111). This demographic composition is typical of many patriarchal rural communities, particularly in Ghana, where defined gender roles allow men have greater access to resources than women. With regards to level of education, 27% of the respondents have no formal education and this suggests that the majority of the respondents have received some form of formal education. Specifically, it is observed that 31% of the respondents have completed primary education; 33% have received secondary education; 8% have completed tertiary education and about 2% have other forms of education.

Equally, the results show majority of the respondents were working within the agrarian economy with 44% of the respondents reportedly farmers and 3% working as wage labourers separate from direct farming. Off-farm work constituted about 22% of the sampled respondents while a petty trading and mobile money vending. The results show that though the region is dominantly agrarian, some households rely on income from non-agricultural sources such as mining. Most of the youthful population are engaged in mining activities around Gbani in the Talensi district. Furthermore, the results detail the marital status of the respondents. With the cultural significance for family in the region, it was not surprising to find that 68% of the respondents were married. Meanwhile, 22% were reported being single, 4% were divorced or separated and 6 were widowed. This result suggests that the institution of marriage is revered in the region.

In addition, with regards to access to agricultural extension services, it is revealed that 57% of the respondents had no access whilst 43% reported accessing the services. This marginal difference suggests that not all households have access to the resources provided by the extension services within the region. This reflects broader trend of poor access to extension services due to fewer extension officers for farmers. Anang and Asante (2020) report that as at 2019 the ratio of extension

offers to farmers was 1:1300. This ratio and the existing limited resources of the extension services could help explain the marginal access for farmers in the sample.

Finally, the study explored respondents' participation in group activities. Specifically, it is revealed that 57% of the respondents did not belong to farmer-based organizations (FBOs). This suggests that a marginal majority of the respondents did not belong to groups that advocated for forms of collective actions within the agricultural sector. In contrast, it is observed that 54% of the respondents were members of Village Savings and Loans Associations (VSLAs). VSLAs serves as platforms for accessing financial resources as such respondents engage with them to supplement their resources in supporting their livelihood.

Table 4.2: Demographic statistics for key variables

Variable	Min	Mean	SD	Max
Age	*19*	*37.97*	*9.66*	*70*
Years of Education	*0*	*6.54*	*6.12*	*24*
Household size	*1*	*6.16*	*2.21*	*15*
Farm size	*2*	*8.22*	*7.11*	*30*
Number of Agricultural Extension Agent (AEA) visits	*0*	*2.91*	*1.44*	*12*

Table 4.2 details additional demographic statistics of the respondents. The results revealed that the average age of the respondents is 38 years old with the youngest interviewed being 19 years while the oldest, 70 years. This indicates that on average, respondents are young adults with experiences that have defined their views on gender. Similarly, the results indicate that on average, a respondent spent about 7 years in school which is within the 9 years required to complete basic education in Ghana. In addition, it is observed that on average a household has about 6 members. This is consistent with the regional average of 6 members (GSS, 2021).

Similarly, it is reported that the average farm size among the sampled households is 8.22 acres. It suggests that while there are households with relatively small landholdings, there are also a considerable number with much larger farms. Overall, households have received an average of 2.91 (about 3) visits from Agricultural Extension Agents (AEAS) in a year. This indicates a relatively low average duration of engagement with extension services in comparison with the regional farm size. This suggests that sustained, long-term interaction with AEAs is not universal across the sampled households. The moderate standard deviation implies some variation in the duration of these visits among households that have received them.

The study further disaggregated key socioeconomic variables by gender. The results that, both men and women exhibit relatively low levels of tertiary education. However, men are more represented at the primary education level (35.29%) compared to women (18.92%), while women are more concentrated at the secondary level (45.05%) relative to men (27.68%). The proportion with no formal education is relatively similar across genders (28.03% for males and 25.23% for females), suggesting that educational deprivation affects both groups, though women appear to have progressed relatively more at the secondary level.

Table 4.3 Disaggregated analysis of key socioeconomic variables by gender

Variable *Educational Level*	**Male**		**Female**	
	Freq	Percentage	Freq	Percentage
No formal education	81	28.03	28	25.23
Primary education	102	35.29	21	18.92
Secondary education	80	27.68	50	45.05

Tertiary education	22	7.61	9	8.11
Others	4	1.38	3	2.7
Occupation				
Agricultural worker	10	3.46	1	0.9
Farmer	162	56.06	15	13.51
Off-farm worker	46	15.92	43	38.74
Others	71	24.57	52	46.85
Extension services				
No	131	45.49	96	86.49
Yes	157	54.51	15	13.51
VSLA Membership				
No	120	41.52	62	55.86
Yes	169	58.48	49	44.14

Occupational distribution shows clearer gender segmentation. A majority of men (56.06%) identify as farmers, compared to only 13.51% of women. Conversely, women are more concentrated in off-farm work (38.74%) and other livelihood categories (46.85%) than men. This pattern suggests that farming remains male-dominated, while women are more engaged in diversified or non-farm livelihood activities, potentially reflecting land access constraints or socially defined gender roles in agricultural production.

Significant disparities are also evident in access to extension services. While 54.51% of men reported having access to extension services, only 13.51% of women did so. The high proportion of women without extension access (86.49%) indicates a substantial institutional gap that may limit women's productivity, innovation uptake, and agricultural decision-making capacity.

Regarding VSLA membership, participation is relatively high for both groups but remains higher among men (58.48%) than women (44.14%). Although VSLAs are often considered pro-women platforms, these figures suggest that women may still face barriers to full participation in financial inclusion mechanisms within the study area.

4.3 Gender Stereotype Score Distribution

Figure 4.1 presents the distribution of the Gender Stereotype Scores (GSS). Exactly half of the sampled households (50.0%, N = 200) fall into the high category of gender stereotyping. This category reflects households that strongly endorsed traditional views, such as believing that farm decisions should be made by men or that household chores and petty trading are exclusively women's work. The other half is split evenly with 25% of the respondents each having either moderate or less stereotypical views. This suggests that 25% of the respondents expressed some stereotypical views on these statements but not enough to be regarded as possessing conservative views. On the other hand, the remaining 25% of respondents consistently disagreed with the stereotypical views within these statements and reflected possessing egalitarian views on gender. The results show that within the Upper East region, views on gender and livelihoods are dominated by conservative voices, however, there are growing dissenting voices with moderate and egalitarian views.

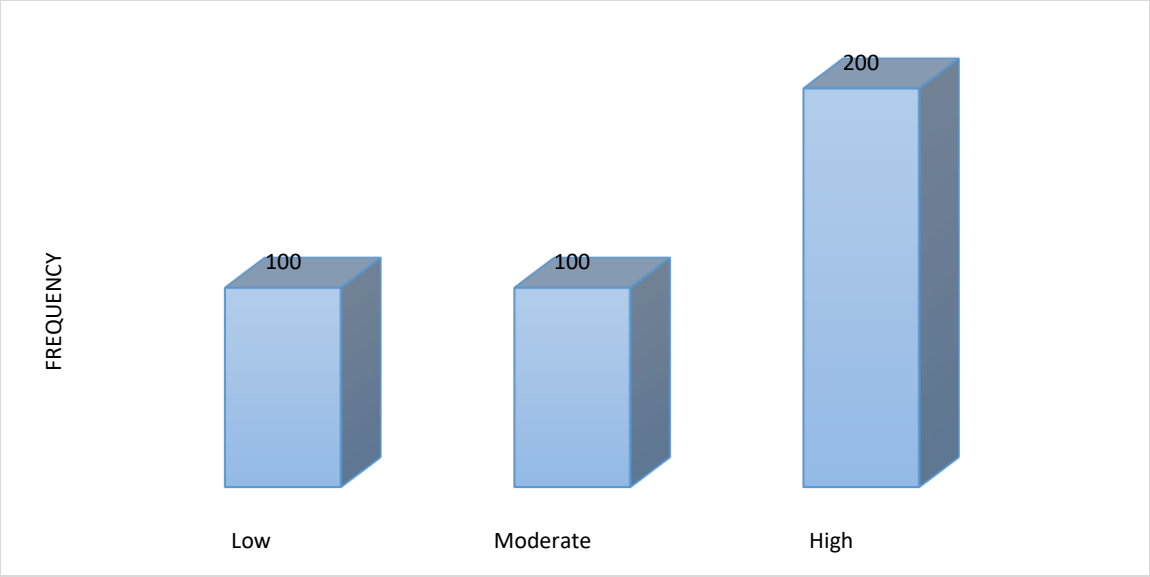

Figure 4.1: Gender stereotype score distribution

The results suggests that gender stereotyping is still deeply rooted in the Upper East Region, with half the population strongly adhering to rigid gender divisions. Simultaneously, the presence of households in the moderate and less clusters suggests the beginning of shifts: some communities are challenging or relaxing rigid gender boundaries around economic activities and management of the household. This could be ascribed to the activities of government and non-governmental organization's activities that seek to empower women including school for life and ActionAid programs such as young urban women movement and ACTIVISTA. This suggests that strategies to challenge deeply entrenched attitudes are still needed.

4.4 Participation in Advocacy

Figure 4.2 details the results of respondents' participation in gender-focused initiatives such as the Young Urban Women Movement (YUWM) or ACTIVISTA. Participation in these advocacy campaigns was defined by either belonging to the group or engaging in their activities. The results show that 61% of the respondents did not participate in these campaigns whilst 39% participated

in such initiatives. The low level of participation indicates that these initiatives: Young Urban Women Movement (YUWM) or ACTIVISTA are not popular among respondents. This lack of popularity suggests that respondents are not interested in actively engaging in organized efforts to challenge traditional gender norms or promote women's rights. The limited participated in advocacy initiatives may contribute to entrenched conservative gender views at the expense of egalitarian viewpoint. A similar study by Ba–an et al. (2022) found that respondents in the Nabdam district were hesitant to participate in advocacy campaigns against widowhood rites.

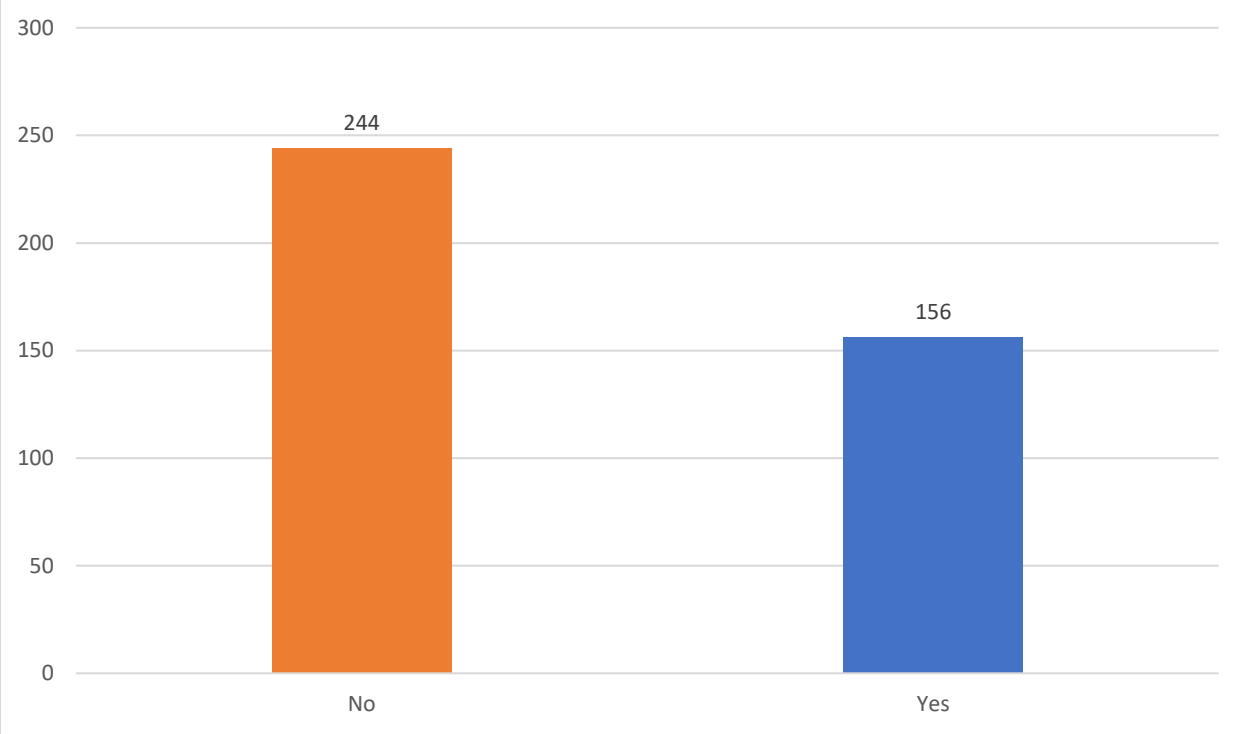

Figure 4.2: Participation in advocacy

4.4 Participation in Livelihood Activities

Figure 4.3 presents the results of respondents' engagement in multiple livelihood activities. It is observed that majority of the respondents engage in on-farm and off-farm activities. Specifically, 52% of respondents reported engaging in crop and livestock farming and 53% also reported

engaging in off-farm work, including casual labour and small service activities. This suggests that whilst agriculture remained the primary source of income, households occasionally supplement farm income with off-farm activities. On the other hand, respondents reported limited engagement in the remaining livelihood activities. 27% of respondents reported owning shops or engaging in petty trading whilst 20% reported engaging in in shea butter or dawadawa processing. Finally, 11% of the respondents were employed formally, reflecting limited formal opportunities in rural areas.

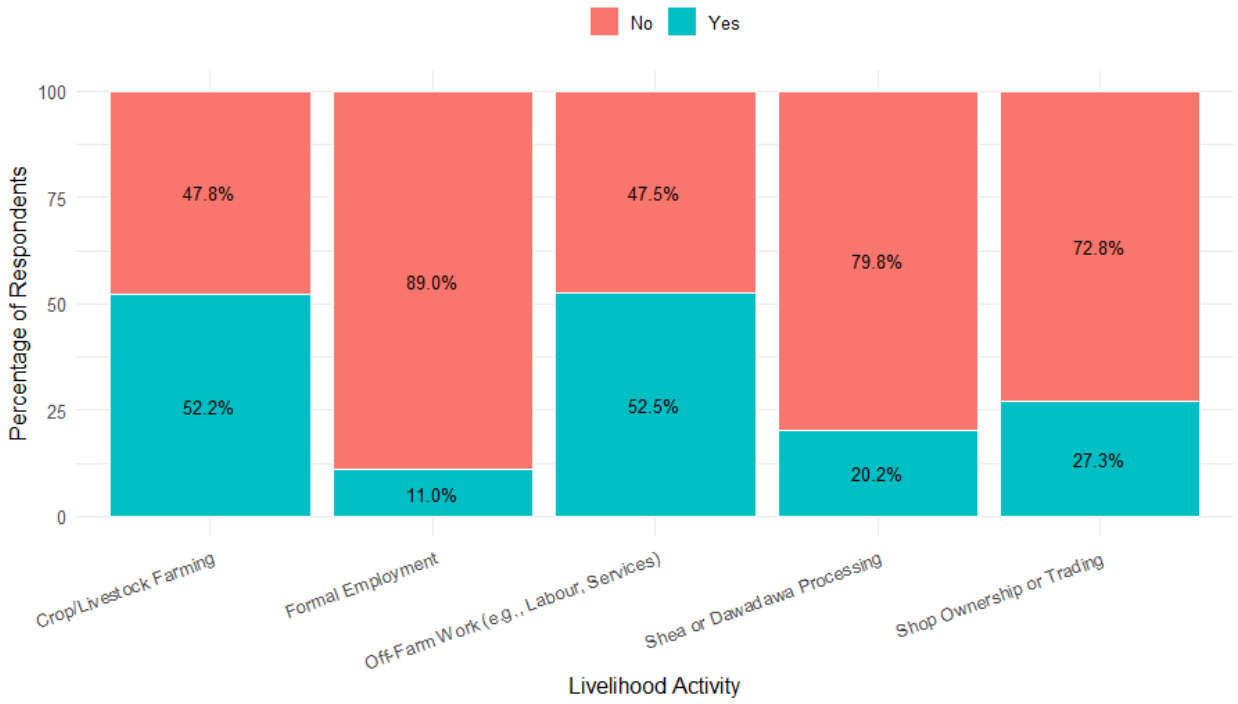

Figure 4.3: Participation in Livelihood Activities among Respondents

4.5 Factors Influencing Gender Stereotyping

This study sought to explore the factors influencing gender stereotyping among the respondents. Gender stereotyping is defined based on expressing agreement or disagreement to statements on specific domestic or economic roles of men or women. Respondents were asked questions to illicit

responses in assessing their stereotypical views on on-farm activities (e.g., farm decisions should be made by men" and "household chores are women's work) and off-farm activities ("trading is men's work" and "petty trading is women's work.").

The Gender Stereotyping Score (GSS) was derived from the composite measure of responses. This score was grouped into three categories based on percentile cut-offs, specifically, scores within the bottom 25th percentile were considered to have less stereotype; 25th to 50th percentile were moderate whilst above 50th percentile were classified as having high stereotypical views.

Table 4.4 presents the results of the regression assessing the influence of respondents' individual and household factors on their likelihood of expressing less, moderate or high stereotypical views on on-farm and off-farm roles within the Upper East Region.

Table 4.4: Factors Influencing Gender Stereotyping in Farm and Off-Farm Activities

	Gender Stereotype Scores	**Marginal Effects**		
Predictors	***Coefficient***	***Low***	***Moderate***	***High***
Age	-0.04 ***	0.0067 ***	0.0021***	-0.0087 ***
	(0.01)	(0.00012)	(0.00014)	(0.0001)
Household Size	0.04	-0.0062	-0.0020	0.0082
	(0.05)	(0.00010)	(0.00013)	(0.0001)
Years of Education	-0.00	5e-04	2e-04	-7e-04
	(0.02)	(1e-05)	(1e-05)	(1e-05)
Farm Size	0.02	-0.0029	-0.0010	0.0039
	(0.02)	(5e-05)	(6e-05)	(4e-05)
Gender (Male)	0.09	-0.0155	-0.0048	0.0203
	(0.25)	(0.00792)	(0.00263)	(0.00911)

	Gender Stereotype Scores	Marginal Effects		
Predictors	***Coefficient***	***Low***	***Moderate***	***High***
Extension (Yes)	-1.52 ***	0.2537 ***	0.0502 ***	-0.3039 ***
	(0.41)	(0.01048)	(0.00315)	(0.00898)
FBO (Yes)	1.78 ***	-0.2642 ***	-0.0596 ***	0.3238 ***
	(0.44)	(0.00666)	(0.00466)	(0.01085)
VSLA (Yes)	-1.09 ***	0.1779 ***	0.0556 ***	-0.2335 ***
	(0.27)	(0.00873)	(0.00285)	(0.00898)
Observations	400			
R^2 Nagelkerke	0.192			
				**** p<0.05 ** p<0.01 *** p<0.001***

Source: Author's construct, 2025

The results show that there is a statistical negative relationship between age and the likelihood of an individual holding high gender stereotypical views ($\beta = -0.04$, $p < 0.001$). This implies that as an individual gets older, their stereotypical views reduce by 4 units. This result is confirmed by the marginal effects as it is observed that with each passing year, the probability of an individual holding low gender stereotypical views increases by 0.0067 ($p < 0.001$); holding moderate views increases by 0.0021 ($p < 0.001$); and holding high stereotypical views decreases by -0.0087 ($p < 0.001$).

This result suggests that as an individual gets older, they are more likely to get rid of their conservative views on gender for a more moderate or egalitarian views. This implies that older individuals adopt more egalitarian views and this could be related to their lifelong experiences or blurred opinion on gender specific roles. Hence older individuals may consider these agricultural

and other livelihood activities as opportunities for generating income and the gender of the individual performing such roles does not matter. This view could be held purely based on economic reason, in the sense that it is better not to go hungry than to bar people from earning income based on their gender. This finding adds to established positions in literature where pervasive cultural norms have defined high stereotypical views (Lambrecht et al., 2018; Akaenyi, 2024). This finding suggests that individuals' high gender stereotypical views can evolve to moderate or low even within conservative cultures.

The results revealed that access to agricultural extension services has a significant and negative association with expressing gender stereotypical views ($\beta = -1.52$, $p < 0.001$). The results suggest that access to agricultural extension services reduces an individuals' gender stereotypical views by 1.52 units. This is confirmed by the results of the marginal effects as it is observed that the probability of having low or moderate stereotypical views increases by 0.2537 ($p < 0.001$) and 0.0502 ($p < 0.001$) respectively whilst having high stereotypical views decreases by -0.3039 ($p < 0.001$). Thus, there is a need for consistent promotion of egalitarian views within the extension services even at the cost of cooperation. This will allow for a continued challenge of the conservative gender views on division of labour and access to resources.

In addition, differences are observed in the influence of membership in community-based organizations on expressing stereotypical gender views. The results revealed that membership in Farmer-Based Organizations (FBO) had a significant and positive association with expression high gender stereotypical views ($\beta = 1.78$, $p < 0.001$). This means that when an individual is a member of an FBO, the likelihood of them holding high gender stereotypical views increases by 1.78 units. This position is reiterated by the marginal effects as being an FBO members have reduced

probability of having low (-0.2642, $p < 0.001$) or moderate (-0.0596, $p < 0.001$) stereotypical views, but an increased probability (0.3238, $p < 0.001$) of having high stereotypical gender views.

FBOs serve as social networks for the farmers and advance the collective conservative views of the groups. Thus, as a member of these groups, an individual is exposed to support for conservative views usually expressed as following traditions or cultural attitudes. Kaaria et al (2016) suggests that women's involvement in cooperatives can provide platforms for voice and access to resources. However, this is not the case for FBOs in the Upper East region as the result show that they maintain their conservative views instead of the touted gender-transformative practices associated with community-based organization. This shows that FBOs maintain the status quo and give support to the finding that institutions can reinforce conservative gender views (Abbey, 2017).

On the other hand, it is observed that membership in Village Savings and Loan Associations (VSLA) has a significant and positive association with expressing lower gender stereotyping ($\beta = -1.09$, $p < 0.001$). This implies that being a member of a VLSA will make an individual express low stereotypical views by 1.09. The marginal effects reinforce this position as the probability of an individual expressing low stereotypical views increases by 0.1779 ($p < 0.001$); expressing moderate views also increases by 0.0556 ($p < 0.001$) whilst holding high stereotypical views decreases by -0.2335 ($p < 0.001$).

This indicates that VSLAs promote more egalitarian views as members access financial resources. This could be because VSLAs, though voluntary organizations like the FBOs, are not directed by underlying need to adhere to traditions but are purely driven by economic reasons VSLAs seek to provide financial resources to the members and will be at their detriment if they are selective about the members that can access these resources. As such, women can equally access these resources from the VSLAs and use them to start or support their livelihood activity. This financial inclusion

serves as a means to empower the women (Adatuu et al., 2022; Lwamba et al., 2022; Lee et al., 2025), hence they are able to oppose stereotypical ideas. This ultimately contributes to fostering egalitarian views within the groups as equal access to the resources.

Finally, it is observed that other individual characteristics such as gender, years of education, household and farm size are not significantly associated with expressing stereotypical views. This suggests that being male or female does not in itself influence whether an individual will express low, moderate or high stereotypical gender views. This could suggest that both men and women have similar views which could suggest entrenched views due to the cultural values within the community. Equally, it is revealed that years of education is not significantly related to expressing these stereotypical views. This diverts from established position that education leads to developing egalitarian views (Obi et al., 2017). As such it was expected that there would be differences in views between individuals based on how many years they have been in school (attained higher education). But most of the respondents had just basic education which might not significantly change their views about certain cultural norms. The R^2 from the regression model was about 0.192 suggesting that the model was able to explain about 19% of the variation in gender stereotyping.

4.4 Determinants of participation in gender advocacy

The second objective sought to explore the factors influencing individual's decision to engage in advocacy campaigns. The study focused on respondents' involvement in the Young Urban Women Movement (YUWM), Women's Groups Alliance and (or) ACTIVISTA. Table 4.5 details the individual and household characteristics driving participation in advocacy groups. The results indicate that age has a significant and negative association with participation in advocacy campaigns ($\beta = -0.03$, $p < 0.001$). This suggests that as an individual gets older their likelihood of participating in advocacy campaigns decreases by 3 units. This means that as individuals ages,

they may be less inclined to participate in advocacy campaigns. This less desire to participate could be explained by older individuals limited time to engage in extracurricular activities and or their view that the advocacy campaigns have no relevance for them. On the other hand, younger individuals may be more open to participating as they are open to new ideas than the older group.

Table 4.5: Results of the advocacy participation selection equation for the ESR

		Participation in Advocacy	
Variables		*Coefficient*	*Std. Error*
Constant		0.54	0.36
Age		-0.03 ***	0.01
Household Size		-0.01	0.04
Years of Education		0.04 **	0.01
Farm Size		0.03 *	0.01
Years of AEA Visits		-0.04	0.06
Gender		-0.56 **	0.17
Extension		-0.26	0.25
VSLA		0.78 ***	0.19
FBO		0.59 *	0.27
Observations	400		
R^2 Nagelkerke	0.272		

** p<0.05 ** p<0.01 *** p<0.001*

Equally, it can be observed that years of education have a significant and positive relationship with participation in advocacy campaigns ($\beta = 0.04$, $p < 0.01$). This means that with each additional year an individual spends in school, the likelihood of them participating in advocacy campaigns increase by 4 units. This implies that education makes the individual more open to participating in

advocacy campaigns. This finding aligns with existing studies like Nikiema and Bitibale (2024) that advance that education makes individuals open to assimilating and engaging with new ideas.

Furthermore, the results show that gender, specifically being male has a significant and negative relationship with individuals' decision to participate in advocacy campaigns ($\beta = -0.56$, $p < 0.01$). This implies that men are not open to participate in advocacy campaigns that champion women's right as they believe these campaigns challenge their status quo within society. The advocacy groups seek to empower women and let them have a seat in determining their livelihood and this is in direct conflict with the conservative men who believe this will affect their standing in society. As such they would not be open to engaging in the advocacy campaigns.

In addition, the results show that membership in organizations had a significant and positive association with individuals' decision to participate in advocacy campaigns. Specifically, it can be observed that membership in the Village Savings and Loans Association (VSLA) was significant and positively associated with participation in advocacy campaigns ($\beta = 0.78$, $p < 0.01$). This implied that the likelihood of an VSLA member participating in advocacy campaign on average increases by 78 units. The VSLA as a group in itself plays a small role in advocacy as it promotes women empowerment. Thus, members of the VSLA will be equally open to engaging in the activities of advocacy groups.

Similarly, it is observed that membership in Farmer-Based Organizations (FBOs) was significant and positively associated with the decision to participate in advocacy groups ($\beta = 0.59$, $p < 0.05$). This implies that as an individual with FBO membership, the likelihood of participating in advocacy campaigns increases by 59 units. This implies that as members of FBOs, individuals are already exposed to the processes of organizational engagements and as such are more likely to participate in advocacy groups. These individuals may view the advocacy campaigns as their

regular FBO groups and consider participating in the advocacy campaigns to champion their causes and concerns.

Finally, it is observed that farm size was significantly and positively associated with participating in gender advocacy campaigns ($\beta = 0.03$, $p < 0.05$). This implies that individuals larger farm sizes were open to participating in these campaigns. With the average farm size of 8 acres, the results shows that respondents with larger control of agriculture land would be open to protecting their investments and this would be realized in their participation in these groups. For instance, their participation in these groups will mean that when actions are being taken against their interests they can engage with opposition to address their concerns. Equally, having larger farm sizes translates into enhanced capacity for production which would reduce any economic barriers to participation.

4.5 Effects of Advocacy Participation on Gender Stereotyping

Table 4.6 details the results of the FIML Endogenous Switching Regression (ESR) on the effects of advocacy participation on gender stereotyping. It is observed that there is selection bias in advocacy participation as the model reports a significant inverse Mills ratio for the participant regime ($\lambda = -1.89$, $p < 0.01$). This means that individuals engaging in advocacy differ and are likely to have low stereotypical views on gender. Equally, the error variances and correlations suggest that the unobserved factors influencing participation are inversely related to the factors affecting gender stereotyping (error variances: $\sigma_1^2 = 0.855$; $\sigma_2^2 = 0.678$ and negative correlations: $\rho_1 = -1.746$; $\rho_2 = -0.518$). The ESR specified is validated by the Wald test of independence ($\chi^2 = 8.584$, $p = 0.014$), leading to the rejection of the null hypothesis of no selection bias and confirming the use of ESR over ordinary least squares estimation.

From the FIML ESR, it is observed that gender had a positive and statistically significant relationship with advocacy participation on gender stereotyping ($\beta = 0.71$, $p < 0.05$). The results indicate that, in comparison with women, men in advocacy groups were 71% more likely to hold gender-stereotypical views. This suggests that even though some men engage in advocacy campaigns, the campaigns are not enough to successful alter their conservative views as these groups of men are likely resisting the transformative message of the advocacy groups. This could be because changing from conservative to egalitarian views will threaten their status quo within society. This aligns with existing studies which show that men often maintain traditional gender norms despite participation in development initiatives (Cornwall, 2016).

Table 4.6: FIML ESR Results on effect of Advocacy Participation on Gender Stereotyping

	Participants (Regime 1)		**Non-Participants (Regime 2)**	
Predictors	*Estimates*	*std. Error*	*Estimates*	*std. Error*
Constant	1.23	0.65	-0.38	0.52
Age	0.03	0.02	-0.01	0.01
Household Size	-0.02	0.04	0.03	0.02
Years of Education	-0.03	0.03	-0.02	0.01
Farm Size	-0.01	0.02	-0.02	0.01
Years of AEA Visits	0.12	0.07	0.22 ***	0.05
Gender	0.71 *	0.28	0.26	0.18
Extension Access	-0.31	0.20	-0.19	0.15
VSLA Membership	-1.34 **	0.46	-0.59 *	0.25
Inverse Mills Ratio (λ)	-1.89 **	0.72	-0.63	0.48
Observations	156		244	
R^2 / R^2 adjusted	0.124 / 0.070		0.172 / 0.141	
			** p<0.05 ** p<0.01 *** p<0.001*	
Variance (σ^2)	*$\sigma_1^2 = 0.855$*		*$\sigma_2^2 = 0.678$*	

Correlation (ρ)	$\rho_1 = -1.746$	$\rho_2 = -0.518$
Wald Test for Independence = Statistic = 8.584 | p-value = 0.0137		

In addition, the results show that membership in VSLAs was strongly and negatively associated with expressing high gender stereotyping among advocacy participants ($\beta = -1.34$, $p < 0.001$). This suggests that advocacy participants who were members of VSLAs were likely to hold low stereotypical gender views. This suggests that members of VSLA are exposed to calls for equality to resources which ultimately reduce members' stereotypical views. The role of VSLA in reducing stereotypical views is pronounced even among non-participants in advocacy groups (-0.59, $p < 0.05$). This adds to the view that as a financial institution, VSLA offer opportunities for women empowerment which challenges the established status quo and drives the charge for increased women involvement in household and community decision-making (Ksoll et al., 2016; Brody et al., 2017).

Finally, it is observed that among non-participants, years of AEA visits was positively and significantly associated with expressing high stereotypical gender views (0.25, $p < 0.001$). This implies that repeated yearly interactions with extension office exposed a non-participating individual to possess high gender stereotypical views. This could be because the yearly AEA visit are reinforcing conservative gender views so as to engage the individuals. This association is negated when the individuals participate in the advocacy programmes as they are made aware of the present selective opportunities for women. The results also show that demographic and household variables such as age, household size, years of formal education, and farm size were not statistically associated with expressing stereotypical gender views either for participating or non-participating individuals.

Furthermore, to verify the validity of the ESR model, a falsification test was conducted using a placebo outcome (household size), which theoretically should not be influenced by participation in advocacy activities. The results, presented in Appendix A, show that advocacy participation has no statistically significant association with household size across both regimes. Moreover, the inverse Mills ratio (λ) in the falsification regressions is statistically insignificant in both cases, indicating the absence of selection bias for this outcome. This confirms that the observed selection effects in the main ESR model are not artefacts of model specification but are genuinely linked to the advocacy participation mechanism.

Table 4.7: Effect of Advocacy Participation on Gender Stereotyping

Gender Stereotyping	Decision Stage		Treatment Effect	% Δ in treatment
	Advocacy participants	Non-advocacy participants		
Advocacy participants	-0.0219	-1.0877	ATT =1.0658	97.99%
Non-advocacy participants	3.1653	0.0140	ATU = 3.1513	22492.51%
Heterogeneity effect	BH_1= -1.102	BH_2= -3.187	TH = -2.0855	-66.17%

Source: Author's Analyses, 2025. BH_1 = the effect of base heterogeneity for Advocacy, participants (a-d). BH_2 = the effect of base heterogeneity for Advocacy, non-participants (c-b).

Table 4.7 details the results of the effects of advocacy participation on gender stereotyping. The ESR results demonstrate that advocacy participation meaningfully reduces gender stereotyping among engaged households. The Average Treatment Effect on the Treated (ATT = 1.066) indicates that, for households participating in advocacy, gender stereotyping is reduced by about 1.07 units relative to what it would have been without advocacy. When expressed as a percentage relative to

the counterfactual ($E(Y_0|D=1) = -1.088$). This translates to a 98% reduction in stereotyping compared to the baseline. This suggests that advocacy almost fully mitigates the stereotyping tendencies of participants.

In addition, the Average Treatment Effect on the Untreated (ATU = 3.151) shows that non-participating households would experience a larger absolute reduction in stereotyping if they were exposed to advocacy. This indicates variability in response. Though the relative %Δ for ATU is quite large due to the near-zero counterfactual ($E(Y_0|D=0) = 0.014$), the important point is that the potential influence of advocacy is great for non-participants. This connotes that the programme is generally effective. Similarly, we might view the findings of Base Heterogeneity (BH1 = -1.102), which indicated that participants were more likely than non-participants to have lower levels of stereotyping. In contrast, the findings of Transitional Heterogeneity (TH = -2.086) reveal differences in the degree of advocacy's benefits. This indicates advocacy to be generally beneficial and also that advocacy affects households differently.

The results show that advocacy participation leads to less gender stereotyping of participating individuals with different effects, influenced by participants' characteristics. These findings both emphasise the potential when advocacy programmemes successfully confront exaggerated stereotypical gender opinions, especially when combined with other activities such as participation in VSLA programmemes, which are known to challenge stereotypical opinions. However, the significant selection bias emphasizes the need for careful consideration in selecting which individual participates in the advocacy programmes in order to help reduce stereotypical gender views.

These results align with existing studies which established the role of advocacy interventions in minimizing and define gender stereotyping (Hillenbrand & Miruka, 2019). Thus, it can be

advanced that participating in advocacy campaigns such as raising awareness about the presence and impact of stereotypical gender views as well as existing inequalities will increase awareness about these social injustices. This will draw the attention of the individuals to try to help identify the source and address the pervasive existence and impact of stereotypical gender views in their daily lives.

4.6 Influence of Gender Stereotyping on Livelihood Choices

The study conducted a Poisson regression to establish the extent to which individuals' livelihood choices are influenced by gender stereotyping. The results are presented in Table 4.8.

Table 4.8: Determinants of Household Livelihood Diversification

		Livelihood_Count	
Predictors		*Coefficient*	*Std. Error*
Constant		-0.62 **	0.21
GSS		-0.11 *	0.04
Age		0.01 **	0.00
Household size		0.00	0.02
Years of Education		-0.01	0.01
Farm size		0.01 *	0.01
Number of AEA visits		-0.03	0.03
Gender		-0.20	0.11
Extension		0.24	0.14
FBO		-0.06	0.14
VSLA		0.95 ***	0.12
Observations	400		
R^2 Nagelkerke	0.511		

** p<0.05 ** p<0.01 *** p<0.001*

It is observed that the Gender Stereotype Score (GSS) was statistically significant and negatively related to individuals' livelihood choices ($\beta = -0.11$, $p < 0.01$). This means that an individual expression high stereotypical gender views were 11 units less likely to participate in the livelihood activities. This implies that people who defined roles based on gender were selective about their engaging in economic activities. Specifically, an individual who expresses the idea that roles are job defined will not engage in an economic activity that they deem reserved for the opposite gender. This aligns with the observation that stereotypes define economic activities along gender lines and creates distinct livelihood opportunities (Jerumeh, 2024). For instance, a conservative man will not engage in shea butter processing because they regard the livelihood activity as reserved for women. This finding aligns with Tantoh et al (2021) position that gender stereotypes influence the livelihood choices of women and dictates their socio-economic wellbeing.

Furthermore, it must be stressed that the restriction to engage in the economic activity does not only rest with the individual, but they can also be enforced by an authority figure such as a husband or the community in general. This is especially true for women who are often marginalized in the society and their lives are dictated by conservative views coloured as tradition. For instance, women are supposed to engage in activities such as petty trading, processing shea butter among others and leave the other opportunities such as farming and formal employment as the reserve for men. It must be stressed that with farming, they can provide manual labour usually as support for their husbands but are not supposed to be the owners of the farms. Thus, this restriction affects their ability to engage in this economic activity leaving them at the risk of being impoverished.

In addition, the results reveal that age is significantly and positively associated with individual's choice of livelihoods outcomes ($\beta = 0.01$, $p < 0.001$). This suggests that as an individual gets older, their choice of livelihood diversification increases by 1 unit. With an average age of 38 years, the

results show that young adults in the region are slightly more likely to engage in a greater number of likelihood activities. The desire of the young adults to engage in additional activities could be sourced from their developed personal and professional experiences which arms them with the necessary resources to engage in additional activities. For example, a young adult with years of experience as farmer will have the resources and understanding of the risk to explore the additional livelihood activity of being a livestock owner. On the other hand, a much younger individual will be sceptical about exploring additional livelihood activity.

Furthermore, the results show that farm size had a significant and positive relationship with choice of livelihood activities ($\beta = 0.01$, $p < 0.01$). This implies that individuals with large acres of farmland were 1% more likely to explore additional livelihood activity. This is because they have the land and resources to diversify their current portfolio to include additional on-farm activities. For instance, an individual with large farmland could explore planting more diverse crops and even including varying livestock as additional livelihood activity. This indicates that even if the individual has already begun to cultivate millet and sorghum, they can also grow additional crops such as corn, tomatoes, or onions or even start a cattle operation on their available land. This is an added source of income. The results also show that participation in VSLAs was positively and strongly correlated with individuals' choice of livelihood activities ($\beta = 0.95$, $p < 0.001$). In particular, individuals that participated in savings and loans groups had a 95% greater likelihood to engage in additional livelihood activities. The VSLA provides members with financial capital to invest in and pursue additional economic activities. This supports established research that demonstrates the influence of financial inclusion efforts on investment in diverse income streams (Ksoll et al., 2016; Brody et al., 2017; Lwamba et al., 2022). The findings demonstrate that VSLAs are important enablers of investment in the study area. For example, people can source the more

appealing loans that are possible within the group and leverage this to pursue new/other economic opportunities. Finally, the findings suggest that the other individual and household variables, specifically sex, years of education, household size, the number of years making Extension Agent (AEA) visits, extension access, and membership in Farmer Based Organisations (FBOs), did not have a significant relationship with individuals' diversification choices.

CHAPTER FIVE

SUMMARY OF KEY FINDINGS, CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the key findings from the study based on the research objectives, and presents the conclusion and recommendation based on these findings.

5.2 Summary of Key findings

5.1.1 Objective 1: Drivers of Gender Stereotyping in Farm and Off-Farm Activities

The findings reveal that gender stereotyping remains strongly entrenched in the Talensi and Nabdam districts, with 50% of respondents classified as holding high stereotypical views. However, the regression results show that these views are not uniform and are shaped by identifiable structural and institutional factors.

Age is negatively associated with high gender stereotyping, indicating that older respondents are more likely to hold moderate or egalitarian views. This suggests that lived experience and economic pragmatism may weaken rigid gender role prescriptions over time.

Access to agricultural extension services significantly reduces the likelihood of holding high stereotypical views. Individuals with extension exposure are substantially more likely to express low or moderate gender stereotypes. This highlights the transformative potential of institutional contact beyond purely technical agricultural support.

Membership of Village Savings and Loans Associations (VSLAs) significantly reduces gender stereotyping, indicating that financial inclusion platforms serve as important spaces for gender norm transformation.

Other variables, including gender, education, household size and farm size, were not statistically significant predictors. This suggests that gender stereotyping in the study area is more institutionally and socially mediated than purely demographic.

5.2.2 Objective 2: Effect of Participation in Advocacy Programmes on Gender Stereotyping

Participation in advocacy initiatives is influenced by age, education, gender, farm size and group membership. Younger, more educated individuals and VSLA members are more likely to participate, while men are significantly less likely to engage in advocacy programmes.

The Endogenous Switching Regression confirms the presence of selection bias, justifying the use of ESR. After correcting for this, the results show that advocacy participation significantly reduces gender stereotyping. The Average Treatment Effect on the Treated (ATT) indicates that participants exhibit substantially lower stereotypical views than they would have in the absence of advocacy exposure.

The Average Treatment Effect on the Untreated (ATU) further suggests that non-participants would experience even larger reductions in gender stereotyping if exposed to advocacy programmes. This demonstrates that advocacy interventions are generally effective but uneven in reach.

However, an important nuance emerges among participants, men are still more likely to retain stereotypical views. This suggests partial resistance to norm transformation and highlights that advocacy exposure alone may not be sufficient to shift deeply entrenched patriarchal beliefs.

Overall, the findings confirm that advocacy programmes play a meaningful role in reducing gender stereotyping, particularly when reinforced by participation in inclusive financial institutions such as VSLAs.

5.2.3 Objective 3: Influence of Gender Stereotyping on Household Livelihood Choices

The Poisson regression results demonstrate that gender stereotyping significantly constrains livelihood diversification. Higher Gender Stereotype Scores are negatively associated with the number of livelihood activities undertaken. Individuals with stronger stereotypical views are less likely to diversify across farm and non-farm activities.

This suggests that rigid gender norms limit economic participation by defining certain activities as inappropriate for specific genders. Such normative restrictions reduce households' ability to diversify income sources, thereby potentially increasing vulnerability to economic shocks.

Age and farm size positively influence livelihood diversification, indicating that experience and resource endowment facilitate broader economic engagement. Most notably, VSLA membership strongly increases livelihood diversification, reinforcing its dual role in promoting both gender norm transformation and economic empowerment.

Taken together, the findings demonstrate a clear pathway: institutional exposure (extension and VSLA membership) reduces gender stereotyping; advocacy further weakens conservative norms; and lower stereotyping is associated with greater livelihood diversification. Gender norms therefore function as structural constraints on economic behaviour in the study area.

5.2 Conclusion

This study examined the relationship between gender stereotyping and livelihood diversification in the Talensi and Nabdam Districts of the Upper East Region of Ghana. The findings confirm that gender stereotypes remain deeply embedded in the study area, with a significant proportion of individuals expressing high stereotypical views. These views shape participation patterns across both on-farm and off-farm activities, reinforcing gender-defined economic roles and limiting livelihood flexibility.

The results show that gender stereotyping is neither uniform nor immutable. Older individuals were less likely to hold rigid gender views, suggesting that social norms can evolve over time through lived experience and economic engagement. Institutional exposure also plays a transformative role. Access to agricultural extension services and participation in Village Savings and Loans Associations (VSLAs) were associated with lower levels of stereotyping. In contrast, membership in Farmer-Based Organisations (FBOs) was associated with higher stereotypical views, indicating that some local institutions may unintentionally reinforce conservative gender norms.

Participation in advocacy programmes significantly reduced gender stereotyping, particularly when combined with engagement in inclusive financial platforms such as VSLAs. However, the persistence of some conservative views especially among certain demographic groups suggests that normative change requires sustained and targeted engagement.

Importantly, the study establishes that gender stereotyping significantly constrains livelihood diversification. Individuals who strongly believe that economic roles are defined by gender are

less willing to engage in, or permit others to engage in, activities perceived as belonging to the opposite sex. This restricts households' ability to diversify income sources and potentially weakens their economic resilience.

Overall, the study concludes that conservative gender norms function as structural constraints on economic participation in the region. Addressing gender stereotyping is therefore not only a social imperative but also an economic necessity for promoting inclusive and diversified rural livelihoods.

5.3 Recommendations

Based on the findings, the following policy recommendations are proposed for policymakers, development practitioners, and community stakeholders:

First, agricultural extension services should be restructured to adopt a gender-transformative approach. Training programmes for Agricultural Extension Agents (AEAs) should integrate gender-equitable principles alongside technical content. Extension delivery should actively promote shared decision-making within households and encourage participation in agricultural activities irrespective of traditional gender prescriptions.

Second, Village Savings and Loans Associations (VSLAs) should be expanded and strengthened as platforms for both financial inclusion and gender norm transformation. Beyond savings and credit, VSLA programmes should incorporate financial literacy, enterprise development training, and structured dialogue sessions on gender norms. These platforms can serve as safe spaces for challenging restrictive social expectations while promoting income diversification.

Third, targeted advocacy initiatives should be intensified within rural communities. Advocacy programmes should be tailored to different age groups and household structures to maximise

impact. Engaging men and community leaders is particularly critical to accelerating normative change and reducing resistance.

Finally, development interventions aimed at strengthening household resilience should explicitly address gender-defined economic roles. Policies and programmes should support women's entry into traditionally male-dominated economic activities and encourage men's participation in roles commonly assigned to women. Promoting cross-gender economic engagement will enhance income diversification and improve household adaptive capacity.

5.4 Directions for Future Research

The current study provides evidence for the impact of gender stereotypes on the defined pathways of livelihood diversification. However, much work is left to be done.

- Future studies should investigate how conservative views of gender change over time and across generations. For example, longitudinal studies can then track households and communities and allow change to be measured over time, assessing whether participation in Village Savings and Loans Associations or advocacy programmeming resulted in inclusivity in gender perceptions and behaviours.
- Just as important is understanding exactly how financial inclusion and social exposure produce egalitarian views of gender. This study shows that advocacy and VSLAs reduce stereotyping, but it's unclear how financial empowerment manifests itself into decision-making either at the household or community level. Future studies could use qualitative methods to understand these pathways – for example, how women used their autonomy to affect how resources are allocated or how men change their views of constructs as their roles in the household change.

- An additional avenue to pursue is the comparative examination of contextual factors across different districts or regions; examining how differences in cultural, economic and institutional contexts affect the effectiveness of advocacy and inclusion programmemes was another matter that could provide an understanding of when these interventions occur most effectively.
- Finally, researchers could examine the relationship of gender with their age, education, socio-economic status, family structure and other household characteristics to further explore variations in responsiveness.

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APPENDICES

Appendix A

Falsification Test - Outcome Unaffected by Advocacy Participation

	Participants (Regime 1)		Non-Participants (Regime 2)	
Predictors	*Estimates*	*std. Error*	*Estimates*	*std. Error*
Constant	5.48 ***	1.12	5.08 ***	1.32
Age	-0.00	0.03	0.00	0.02
Education (years)	-0.06	0.05	0.08 *	0.04
Farm Size	0.10 **	0.03	0.08 *	0.03
Years of AEA Visits	-0.15	0.12	0.37 **	0.13
Gender (Male=1)	0.32	0.53	-0.04	0.49
Extension Access	0.23	0.38	-0.00	0.40
VSLA Membership	0.26	0.86	0.98	0.64
Inverse Mills Ratio (λ)	0.30	1.35	2.66	1.25
Observations	156		244	
R^2 / R^2 adjusted	0.229 / 0.187		0.198 / 0.171	

** p<0.05 ** p<0.01 *** p<0.001*

Appendix B

UNIVERSITY FOR DEVELOPMENT STUDIES

SURVEY QUESTIONNAIRE

I am a student of University for Development Studies conducting a research thesis on the topic "GENDER STEREOTYPES AND LIVELIHOOD CHOICES: A CASE STUDY OF FARMERS IN THE UPPER EAST REGION". The study is for academic purposes towards the fulfilment of the requirements of my programme. Participation in this study is entirely voluntary, and you have the option to decline participation. All household identifying information will be held in strict confidence and used only for research purposes. No identifying information (e.g., respondent name) will appear in data report. In the process of the interview, you are free to interrupt me and ask for any clarification. I appreciate your cooperation. Do you consent to participate in this study Yes [ ] No [ ]

A. COVER PAGE

District
Community
GPS location of household

B. Demographic and Socioeconomic Factors

S/N	RESPONSE	QUESTION
1.	Please what is your age (years)	
2.	Please indicate your gender	Male
		Female
		Others (please specify)
3.	Marital status of respondent	Married [ ] Divorced [ ] Widowed [ ] Single/Not married [ ]
4.	Indicate your years of education	
5.	Please indicate your highest level of education completed	No formal education

		Primary education
		Secondary education
		Tertiary education
		Others (please specify)
6.	Please indicate your primary occupation	Farmer
		Agricultural worker
		Off-farm worker
		Others (please specify)
7.	What is your household size?	
8.	What is the total farm size of your household (acres)?	
9.	Do you have access to agricultural extension services?	YES [ ] NO [ ]
10.	How many times in a year do AEAs visit you?	
11.	Do you belong to any FBO?	YES [ ] NO [ ]
12.	Do you belong to a VSLA group?	YES [ ] NO [ ]
13.		
C. Gender Stereotypes in Farming and Off-Farm Activities		
14.	In your opinion, what roles are traditionally assigned to men in farming (Select all that apply)	Crop production
		Livestock management
		Equipment operation
		Financial management
		Others (please specify)
15.	In your opinion, what roles are traditionally assigned to women in farming? (Select all that apply)	Crop production
		Livestock management
		Household chores related to farming
		Marketing and selling produce

		Others (please specify)
16.	To what extent do you agree with the following ON-FARM statements: i. "Men are better suited for crop farming than women." ii. Livestock rearing is men's work iii. Home gardening is men's work iv. Household chores are women's work v. Farm decisions should be made by men vi. Fishing is men work	Strongly Disagree Disagree Neutral Agree Strongly Agree
17.	To what extent do you agree with the following OFF-FARM statements: i. Trading is women's work ii. Men should not be selling food crops iii. Men should migrate to other areas in search of greener pastures iv. Petty trading is women's work v. Shea processing is women work	Strongly Disagree Disagree Neutral Agree Strongly Agree
18.	Have you ever felt limited in your farming or off-farm activities due to your gender?	Yes No No idea
	D. ADVOCACY AND PARTICIPATION	
19.	Are you a member of Young Urban Women Movement?	YES [ ] NO [ ]
20.	Are you a member of ACTIVISTA?	YES [ ] NO [ ]
21.	Have you participated in any activity by YUWM or ACTIVISTA?	YES [ ] NO [ ]
22.	How many times did you participate in the activities of YUWM or ACTIVISTA in a year?	
23.	Have you participated in any other advocacy programs aimed at reducing gender stereotypes in agriculture?	YES [ ] NO [ ]
24.	If yes, how effective do you think these programs have been in changing perceptions about gender roles in farming?	Very effective Somewhat effective Somewhat ineffective Very ineffective

25.	What types of advocacy activities have you participated in? (select all that apply)	Workshops or training sessions
		Community meetings
		Campaigns or awareness programs
		Networking events
		Others (please specify)
	E. FARM and OFF-FARM Livelihood Choices	
26	Do you earn income from a farm-related enterprise?	
27	On average how much do you earn from your farm related activities in a year (GH₵)?	
28	Which of the following on-farm sources do you earn income from? i. Crops ii. Livestock iii. Economic trees (eg. Shea, mango, cashew) iv. Fishery	Select multiple
29.	Do you earn income from **off farm**-related enterprise?	
30.	On average how much do you earn from your **off-farm** related activities in a year (GH₵)?	
31	Which of the following **off-farm** sources do you earn income from? i. Petty trading in a local market ii. Owns a shop iii. Shea/Dawadawa processing iv. Formal work	
32	Have you ever chosen not to pursue a specific farming or off-farm activity because or gender stereotypes?	
33	If YES, which activity?	
34	In your opinion, how do gender stereotypes affect the overall livelihood choices of individuals in your community?	Very positively
		Somewhat positively
		Neutral

		Somewhat negatively
		Very negatively
35	Are you someone who can advocate or defend yourself when you know you are being cheated?	

Thank you for your time!