



Gender and Agricultural Practice in Developing Countries: Literature Review

Oluwatoyin Bukola Chete^{1*}

¹*Adekunle Ajasin University, Ondo State, Nigeria.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/SAJSSE/2019/v5i230142

Editor(s):

(1) Dr. John M. Polimeni, Associate Professor, Department of Economics, Albany College of Pharmacy and Health Sciences, Albany, New York, USA.

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Complete Peer review History: <http://www.sdiarticle4.com/review-history/47352>

Review Article

Received 20 December 2018

Accepted 23 February 2019

Published 09 November 2019

ABSTRACT

Aims: This paper reviews the body of evidence on gender and agriculture and gender and enterprise (including farm enterprise) development in developing countries.

Results: The resurgence of interest on the influence of gender and its subsequent mainstreaming into social and economic programmes and in particular, agricultural policy and practice, is largely a development of the 1990s and beyond. The extant body of literature on gender and agriculture is dominated by the liberal feminist construction that women are the disadvantaged group regarding resources such as time, assets (particularly land and credit) and household burden. Agricultural development would be facilitated if both men and women have equal access to resources for use in agricultural work.

Conclusion: There is no unique pathway for bringing this about nor are there singular notions of success. Indeed, gender issues should be integrated into the agricultural enterprise from the beginning on the back of broad-based needs assessment schemes.

Recommendation: The range of gender issues requiring intervention should include progressive identification and systematic dismantling of socio-cultural, ideological, institutional and legal barriers to equal participation of men and women in agricultural enterprise, orientating and skilling extension workers on gender issues and developing women and men cadre in extension services to cater to the specific needs of each gender and creating equal opportunities in education, employment and politics taking account of the realities of both gender.

*Corresponding author: Email: cheteob@yahoo.com;

Keywords: Gender; livelihood; enterprise development; agriculture; developing countries.

1. INTRODUCTION

The resurgence of interest on the influence of gender and its subsequent mainstreaming into social and economic programmes and in particular, agricultural policy and practice, is largely a development of the 1990s and beyond. The context for this renewed awareness and its policy and programmatic applications, has been provided by a number of pivotal publications such as *Gender and Agriculture* by the World Bank in 2009 which cautioned that “failure to recognise the roles, differences and inequities (between men and women) poses a threat to the effectiveness of the agricultural development agenda”. The centerpiece of the gender debate in agriculture is that productivity, incomes and nutritional levels would be suboptimal in the presence of gender inequalities in access and distribution of assets [1]. This position is substantiated by the strong correlation between countries with huge gender gap, as tracked by the OECD’s Global Gender Gap Index, and those experiencing endemic hunger, as captured by IFPRI’s Global Hunger Index [2].

The theoretical anchor for this gender perspective is liberal feminism which assumes that both men and women are equally rational and that gender differences are the consequence of unequal access to resources or gender-based discrimination, the elimination of which would make women perform in a similar fashion as men (Yordanova, 2006). Much of the gender literature is dominated by the foregoing narrative, although a few people have attempted to put forward a counter-narrative by debunking some of the so-called ‘gender myths’ in the context of agriculture (e.g., [2]).

In the ensuing discourse, gender refers to socially constructed view of men and women, developed through time, reflecting each society’s perceptions of the predilections and capabilities of men and women. ‘It is a central organizing principle of societies, and often governs the processes of production and reproduction, consumption and distribution’ [3,4] Sex, by contrast, refers to permanent biological, physical and physiological features of peoples which are the same for all societies and cultures. Thus, while sex is fixed, gender relations change and evolve, shaped by ideological, cultural, religious, socio-economic and ecological influences [1]. Gender relations are societies’ conception of the

rights and responsibilities of men and women. It typically embodies determination of access to resources such as land, credit, education, training, etc [5].

In what follows, this paper reviews the body of evidence on gender and agriculture and gender and enterprise (including farm enterprise) development in developing countries.

2. REVIEW OF LITERATURE

2.1 Gender Inequalities in Agriculture

Men and women of all ages are engaged in agriculture and rural enterprises as producers, employees and entrepreneurs. However, relative to men, women are confronted with gender-related barriers that dampen their productivity, undermine their production and circumscribe sustainable livelihoods [6]. Specifically, women are more constrained than men in terms of access to resources across a spectrum of assets including land, extension services and technology. Thus, the “gender gap” in agriculture reflects the fact that women are less probable than men to possess land, embrace innovative technologies; get credit or access education and training [6]. In Nigeria for instance, Ajani [7] reported that patriarchal arrangements allot more productive resources including land to men, denying women of commensurate access.

Kanesathasan, et al. [8] outlined potential areas in which gender norms influence smallholder farmers across the enterprise chain of crop production, processing and storage and marketing (Table 1). For instance, land ownership by both gender are affected by gender-based constraints. This effect can be direct (e.g. land inheritance laws that discriminates against women or favour male ownership of land) or indirect (lack of financial leverage by women to purchase land or lack of collateral to support loan applications for land purchase). Similarly, there are gender dimensions to production and marketing decisions regarding how much to produce or sell or how to utilise household incomes.

The most significant areas where gender inequality exists in agriculture are in regard to access to and control over resources and income [9]. Beginning with land, women typically lack statutory land rights or merely own relatively

small plots of land due to patriarchal land systems [10]. Conversely, men own about 70 to 90 percent of farmland in several countries in South America [11], as well as in Africa [12,13]. Women agricultural land owners range from less than 5 per cent in Mali and several countries in North Africa and West Asia to more than 30 per cent in Malawi, Botswana and Cape Verde [14]. Only 10 per cent of women held land in Ghanaian households and only 5 per cent of women in Kenya are registered landholders [15]. On average, men hold three times more land than women [16].

2.2 Gender and Inheritance

In Indonesia, most of the women participants at an Focus-Group Discussion (FGD) forum claimed they owned the land resource on which rice was cultivated, although they were uncertain if the respective land titles were registered in their names [9]. The predominant position at these FGDs was that of joint ownership of all family resources by both husbands and wives. In Myanmar, except in a few cases, most of the women contended that their land titles were registered in their husbands' names although there was usually implicit understanding that the lands were owned by the households. The same tradition obtains in the Philippines, where in most instances, formal ownership rests with men even though women have a say on the use to which land is put. In up to 40 percent of the FGDs conducted in Thailand, women participants could not categorically confirm the formal ownership status of their lands although they had unhindered access and exercise decision-making powers over them. However, in 30 percent of the FGDs, participants stated that new property titles contain the wives' names because men would rather head to the farm than go through cumbersome administrative processes involved in registering titles on property. Overwhelmingly, participants across the various FGD locations confirmed that decisions about purchase and utilization of land and other household assets, had inputs of both husbands and wives [9].

2.3 Gender and Farm Labour

In Afghanistan, women's roles in agriculture are constricted by sociocultural factors including age, marital and income statuses, asset size and structure of households [17]. Age differentiation is more prominent in activities involving women than men. Since many women are restricted to

stay within the compound ostensibly to "preserve the family honour," their involvement on the farm is limited. Women rarely co-own land with their husbands and hardly inherit land from parents. Where, in the case of widows, women are ascribed some rights to land, they are not allowed to sell the land and they typically sharecrop it out to male relatives and receive a fair share of crops cultivated in return [17]. In some villages of Afghanistan, while men's involvement including landowners pervades all kinds of agricultural endeavours, women who own lands and therefore considered rich are much less involved. Men essentially take responsibility for marketing or selling of farm produce, except in certain cases when elderly women especially those that do not have a male child travel to the *bazaar* to sell [17].

Aside outright land ownership by men, inequalities exist in size of landholdings by men and women. Female-headed households tend to have access and control over relatively smaller land portions than male-headed households. This is especially so in Pakistan, Ecuador and Bangladesh, where the mean landholding by men more than double that of women [6]. Farm labour availability (both family and hired labour) is more constrained for women and female-headed households than for men or male-headed households. Women's labour productivity in agriculture is affected by low levels of education, health and nutrition (Behrman et al., 2004). Moreover, women spread their time between farm duties and household chores [13]. Compared to male-headed households, female-headed households may experience shortage of family labour, because they generally tend to have leaner household size. For example, Takane (2008) found that male small-scale maize farmers in Malawi use 10 percent more total labour per hectare than female. Due to cultural factors some farm activities such as ploughing (e.g., maize farmers in Malawi and Ethiopia) and spraying require male labour. Female-headed households may not have male family members to accomplish these tasks and may also not have money to hire male labour. The end result is that they are forced to cultivate smaller plots and thereby realise lower yields [18,19]. Women employed in agriculture receive lower wages than men for similar tasks. This is 30 percent lower for agricultural casual workers in India compared to men and 20 percent lower for the same piece of work (World Bank 2007). In Armenia, significant gaps exist in wages between men and women due to horizontal and vertical

segregation in the labour market, with women's average wage less by about 34 per cent [20].

2.4 Gender and Extension Service

Educational attainment typically proxied by educational level of household head is a strong correlate of agricultural outcomes and household welfare (World Bank, 2007b). In many developing countries, female heads tend to be less educated than male heads which mirrors the lingering effects of age-long bias against education of the girl-child [6]. Agricultural information and extension service provision can potentially improve yields, raise agricultural productivity and enhance welfare of rural populations. However, women seem to access extension services less than men due to time constraints and generally lower level of education [21]. In societies where cultural or religious norms bars women from meeting with male 'visitors', they are effectively excluded from extension services. In Ghana, female-headed households have much less contact with extension officers [22], while in Tanzania, many female farmers favour discussing with female extension agents. Moreover, most extension personnel are males and have tended to provide more services to male than female farmers [23].

The access to financial services especially credit has the capacity to improve overall farm investment outlay, promote uptake of innovative solutions and consequently, boost productivity and incomes of farmers [6]. Women are crowded out of credit access or receive smaller amounts relative to men due to prejudices by private and public lending institutions [24,16]. In Nigeria, Saito, et al. [25] reported a proportional share of formal credit of 14 and 5 per cent for males and females respectively, and 14 and 4 per cent respectively for Kenya. In Uganda, women entrepreneurs only access a mere 1 per cent of credit in rural areas [26]. In China, de Brauw et al. [27] found identical access to credit by male- and female-headed households. FAO and UNDP [28] revealed that in Vietnam, households headed by males and females do less borrowing and have difficulty accessing formal credit while Fletschner [24] reported that in Paraguay, women farmers patronise cooperatives rather than formal institutions.

There are gender inequalities in access and adoption of a broad array of agricultural technologies including machines, improved crop

varieties and fertilizers. Several assets such as land, education and extension services are complementary to the use of new and existing technologies, all of which are more constrained for females than males [6,16]. Agricultural mechanisation is often not gender-sensitive and induces unemployment and dislocation among rural women [23]. Indeed, agricultural technology transfer policy often fails to target the specific needs of women on the presumption that the knowledge shared with men would percolate down to them. In the end, the technology may turn out inappropriate for women's needs and may be jettisoned by them [16]. For instance, women do a lot of on-farm processing of their produce than men, a procedure that has attracted little technological research [16].

Gender differences are evident in the use of fertilizers by male headed versus female headed farming households, with the disparity more marked in West Africa (Ghana and Nigeria) and Southern Asia (Bangladesh and Pakistan) [1]. Similarly, Doss and Morris [22] reported 39 per cent adoption rates for improved crop varieties for female smallholders relative to 59 per cent for male smallholders in Ghana, due to land, labour and other constraints women face. Credit constraints hinder access of women to fertilizers in Benin and Malawi [29], while women apply less fertilizer per hectare than men in Burkina Faso [30]. The proportion of farmers using mechanical equipment is appreciably lower for female-headed farming households. Similarly, poor access to transportation technology undermines women's capacity to convey produce to the market [6].

Women face greater challenges connecting to local market or transporting food crops from the farm gate to buyers relative to men and these are typically done by headloading in Africa. Women are averse to travelling long distances to faraway markets that offer better deals due to cultural inhibitions and safety concerns [31]. It is estimated that women transport 26 metric tonne kilometers per year relative to about seven for men while time spent by African women on transportation - related duties can reach 2,000 hours per year which quadruples that of men [32,33]. In the process, they might lose income and control and experience difficulty keeping a lucrative market niche as men might 'hijack' traditional "women's crops" if they become profitable [34].

2.5 Gender and Enterprise Development

Enterprise development contributes to improving livelihoods and creating wealth in the economy as new enterprises generate employment, open new markets frontiers and inspire innovations that foster economic growth and reinforce social welfare [35,36]. The ramifications of the positive impact of entrepreneurial activities on a nation includes raising living standards [37] spurring economic and job growth, empowering underprivileged groups including women and the poor [38,39] and stimulating national development [40,41].

In Nigeria, enterprise development is germane to employment creation, poverty reduction and growth of Gross Domestic Product (GDP) [41]. Women's mostly produce at subsistence level and only make modest contribution to the GDP [42]. This is attributed to women lower entrepreneurial capacities compared to men [43] and their limited access to resources as a result of cultural factors and discriminatory traditions regarding rights to own property [44,45].

A strand of the entrepreneurship literature hinges on the fundamental premise that men and women are different which manifests in different entrepreneurial rates for both gender [46,47, 48]. This gender difference has ignited interests of scholars and policy makers and permeated analyses of entrepreneurial behaviours, informing research and policy [49]. The overarching message from this gendered perspective is that female-owned enterprises would likely underperform relative to those of men [50,51]. Indeed, "women are, on average, about half as likely as men to start businesses and much less likely to start high-growth, high-profit firms" [52,53]. This apparent dominant perspective has been described as "mythical" [54]; based on "fragile evidence" and "consistently exaggerated" [55].

Globally, male average involvement in entrepreneurship outstrips female involvement with male participation rates estimated at 50 per cent more than female rates [56]. Several researches conceive entrepreneurship in terms of men while drawing inferences and making deductions about women-led businesses and women entrepreneurship [57]. Despite its lower rates, women's entrepreneurial activity is a major driver of growth and employment provider for women according to a research by Global Entrepreneurship Monitor (GEM) [58, 59]. FAO

[60] for instance, reported that about 70 per cent of women residing in rural communities supply approximately 44 per cent of family incomes through the running of agricultural enterprises.

Women entrepreneurship is not fully exploited as a source of growth [36]. Aside creating new jobs, women entrepreneurs also offer society imaginative solutions to challenges of operating businesses coupled with strategies for tapping entrepreneurial opportunities [61].

Gender-based practices and attitudes weigh heavily against women entrepreneurs (Botha, 2006; Clones, 2003; [62,63]). This, gender-based practices that neglect or limit women's venturing into entrepreneurship, diminish economic growth and erode their living standards [62,64]. Indeed, there is prospect for female entrepreneurs to fast-track growth and development with higher rates of involvement in business [65].

Mabogunje [66] described as "petty" women's involvement in food production, food processing, trading or service provision; in the sense that these enterprises are typically small-scale or small-size, have low capital base and are technologically backward. In general, enterprises headed by females do not perform as well as those led by men and are usually smaller in size [67]. Women often operate in sectors with limited obstacles to entry, little returns and intense competition [68]. Similarly, females are relatively less experienced in business which are typically undercapitalized [69,70]. Female-led businesses are typically "younger" than enterprises headed by males [67]. Moreover, females opt for a gradual growth trajectory for their businesses or set conservative growth targets which may not correspond with the size of their businesses (Jennings and Cash, 2006; Minniti and Naudé, [35]. There are gender gaps in start-ups (Naudé and Minniti, 2012). Overall, women owned and managed enterprises are not as many as those run by men, have lesser earnings and are more susceptible to shutting down or insolvency [71].

Folayan, et al., [72] underscored women's underwhelming position in participation, production and ownership of farm enterprises. According to them, while women are rampant in cassava and vegetable production, men dominate tree and food crop production and livestock rearing. Charmas [73] however submitted that women's contribution to manufacturing and food processing may be underreported because these interests are mostly secondary and often masked by agriculture.

Table 1. Potential gender influences across the rice enterprise

Gender domains	Production	Processing and Storage	Marketing
Assets and resources	Ownership of or access to: <ul style="list-style-type: none"> • Land • Farming inputs • Information technology (radios, cellphones) • credit 	Ownership of or access to: <ul style="list-style-type: none"> • land • information and processing technology (equipment) • credit 	Ownership of or access to: <ul style="list-style-type: none"> • Markets (and market information technology) • Transport • Credit
Decision making	Intra-household communication, negotiation and decision making about: <ul style="list-style-type: none"> • production roles (vary by crop) • purchase/use of inputs • obtaining or use of credit • land allocation/use • what to grow • expenditures and savings 	Intra-household communication, negotiation and decision making about: <ul style="list-style-type: none"> • processing roles • obtaining or use of credit • land allocation/use • expenditures and savings 	Intra-household communication, negotiation and decision making about: <ul style="list-style-type: none"> • marketing roles • what/when/how much to sell • what market or sellers to access • price setting and negotiation • expenditures and savings • communication and negotiation with marketing agents
Access and Participation	Access to information and skill building opportunities (via mass media, trainings, etc.): <p>Competing demand for time and resources:</p> <ul style="list-style-type: none"> • Different agricultural priorities (e.g. food versus cash crop) • Different gender roles/responsibilities with family/ community • Different 'incentives' (or threshold of benefits needed to warrant participation) 	Access to information and skill building opportunities (via mass media, trainings, etc.): <p>Competing demand for time and resources:</p> <ul style="list-style-type: none"> • Different agricultural priorities (e.g. food versus cash crop) • Different gender roles/responsibilities with family/ community • Different 'incentives' (or threshold of benefits needed to warrant participation) 	Access to information and skill building opportunities (via mass media, trainings, etc.): <p>Access to market information</p> <p>Mobility:</p> <ul style="list-style-type: none"> • Norms restricting travel to market • Lack of finances for transport • Safety concerns <p>Competing demand for time and resources:</p> <ul style="list-style-type: none"> • Different agricultural priorities (e.g. food versus cash crop) • Different gender roles/responsibilities with family/ community • Different 'incentives' (or threshold of benefits needed to warrant participation)

Source: Kanesathan, et al. [8]

Women's effective participation in enterprises is bedevilled by a plethora of constraints which include inadequate access to information and finance and stifling operating environment [74]. Moreover, Kitching and Woldie [74], from found that "for a female business owner in Nigeria, the process of starting and operating a new enterprise can be difficult because they lack the skills, education and support system that can expedite their business pursuit". They recognised the following constraints: poor education and training, inadequate capital, and excessive competition, poor access to technology, obstructive government policies, competing household responsibilities and prejudice from men as constraining to women entrepreneurs.

Many women entrepreneurs lack necessary resources including skills, credit and technology compared to their male counterparts [44]. Relative to men, basic entrepreneurial skills for originating a business idea, developing and organizing a business and marketing are lacking [75,45]. There are no business incubation centres, no mentoring facilities to guide women in business resulting in lower productivity and poor profitability [75].

Thus, entrepreneurial initiatives are a male-dominated field especially in developing countries, as women entrepreneurs operate within gender bias among other constraints that imperils engagement or narrows opportunities [76]. This forces women into the margins of informal sector enterprises even as lingering barriers preclude them from growing or formalizing their business to enhance productivity [77]. In their study, Abimbola and Agboola [78] posited that gender intersects either in a positive or negative way with entrepreneurial activities in the society. They surmised that relative to developed countries, gender biases against women entrepreneurs are more acute in Africa and more generally, in developing countries, due to cultural prejudices and other discriminatory practices, religious bigotry and patriarchal structures. For instance, ethnic traditions by the *Igbos* of South-eastern Nigeria consciously nurture, orientate and coach the male child from infancy toward entrepreneurial endeavours while the female child is positioned for a supportive role to the home and the family business [79]. This practice which transfers control to the eldest male child irrespective of ability and talent, and perpetuated for generations constitutes a bias against women entrepreneurs [79].

Despite patriarchal systems that constrict or disadvantage women and limit the realization of their full potentials, the number of women-owned enterprises has expanded [64]. Moreover, some studies [80] report comparative evidence showing that female operated enterprises perform as well as male-managed ones.

3. CONCLUSION

The extant body of literature on gender and agriculture is dominated by the liberal feminist construction that women are the disadvantaged group regarding resources such as time, assets (particularly land and credit) and household burden. This normative analytical frame neglect that gender vulnerability or social relations is context-specific, intersecting with community, economic, cultural, institutional and political environment in which actors operate. Agricultural development would be facilitated if both men and women have equal access to resources for use in agricultural work. This necessitates inclusive and gender-responsive agricultural development policies, programmes and strategies. There is no unique pathway for bringing this about nor are there singular notions of success. Indeed, gender issues should be integrated into the agricultural enterprise from the beginning on the back of broad-based needs assessment schemes. The range of gender issues requiring intervention should include progressive identification and systematic dismantling of socio-cultural, ideological, institutional and legal barriers to equal participation of men and women in agricultural enterprise, orientating and skilling extension workers on gender issues and developing women and men cadre in extension services to cater to the specific needs of each gender and creating equal opportunities in education, employment and politics taking account of the realities of both gender.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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