

A Review on Gender Socio-economic Attributes and the Adoption of Improved Oil Palm Production Technologies in Southern Region of Nigeria



Ekenta, C. M^{1*}, Obabire², I. E., Otegwu³, T. C., Adediran⁴, O. I., Ahmed⁵, S. and Abdullahi, M.⁵

¹Department of Agricultural Extension and Rural Development Ahmadu Bello University, Zaria – Nigeria

²Department of Agricultural Technology Federal Polytechnic Ado Ekiti, Ekiti State

³Department of Pharmaceutical Microbiology and Biotechnology Gombe State University, Gombe State

⁴Samaru College of Agriculture, Division of Agricultural Colleges Ahmadu Bello University, Zaria – Nigeria

ABSTRACT

Gender as a concept has gained a spectrum of analysis and discuss in recent times in various literatures and development studies. The emphasis is on the recognition of the roles and responsibilities of men and women and their contributions to social system and development process. In the field of agriculture, the complementary and or subordinate roles of each at different times have far reaching implications for the needed improvement and increased output through the adoption process. The adoption of innovation is a function of the characteristics of the innovation and the socio-economic attribute of the farmers who are the actual target of the technology. This review made an input in this direction – considering gender socio-economic attributes and the adoption of improved agricultural technologies in Nigeria. The review adopted a “desktop research” approach, making an evaluation of existing situations as reported in various literatures. Gender sensitivity in the design and implementation of projects allows for the identification of areas of gender imbalance and the root causes of existing inequalities if there are, so that they can be addressed in the project design. The review ended with recommendations on the way forward in mainstreaming gender in the agriculture sector in Nigeria.

Keywords: Adoption, Gender, Mainstreaming, Technologies, Nigeria, Oil, Attribute

1. Introduction

In the 1960s, Nigeria's agricultural sector was the most important in terms of its contributions to domestic production, employment and foreign exchange earnings. Nigeria before the discovery of crude oil in the 1950's was the world's largest producer of oil palm (*Elaeis guineensis*) a position now occupied by Malaysia [1]. Oil palm production was one of the vital areas of agriculture that attracted the foreign exchange earnings contributing 48 percent of GDP between 1980 and 1982 and falling to 45 percent by the end of the 1990's [2]. However, the figure of oil palm's contribution declined to about 40 percent of GDP and 2 percent of total export earnings by the end of the 1970s. This dwindling trend in the oil palm production is always attributed to the discovery of crude oil and governments shift of attention from the agricultural sector to crude oil exploration. This assertion cannot be overlooked but draws attention to the fact that other areas that are potential factors to improve the

dwindling trend, needs to be addressed. Areas such as the efficiency of the extension service delivery, lag in the dissemination of innovations from the research stations to the farmers, gender issues in agriculture and proper farmer education necessary for the adoption of improved technologies are important to be addressed. This review therefore draws attention to gender socio-economic attributes that are important to be considered in the adoption process in agriculture especially as it relates to oil palm production.

Oil palm production passes through activities that require the efforts and collaboration of both men and women for maximum output. The role of both genders could be either complimentary or supportive to achieve high productivity. According to [3], gender is a socially constructed role differences between men and women for the purpose of allocating powers, duties, status, responsibilities and role in any given social context. Gender is a result of socialization into a man or woman role which ascribes certain behaviours according to socio-cultural norms for one's sex [4]. According to [5], gender deals with the social relationship between men and women and how these relationships are negotiated in the production of goods and services. The social relationship between men and women will play out and complement each other in the adoption of improved oil palm technologies such as the adoption of the *Tenera* oil palm variety which is a hybrid of the *Pisifera* and the *Dura* varieties. The consideration of gender socio-economic attributes therefore becomes imperative.

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Corresponding Author: **Ekenta C. M**

E-mail address: **cmcekenta@gmail.com**

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2. Literature Review

This section provides a review of related literature on gender related concepts, gender in agriculture and socioeconomic attributes of gender and how it influences the adoption of improved oil palm production technologies in Nigeria

2.1 The Concept of Gender

According to [6], the concept of gender includes the expectations held about the characteristics, aptitudes and likely behaviour of women and men. Gender roles and expectations are learned and can change over time and vary within and between cultures. Systems of social differentiation such as political status, class, ethnicity, physical and mental disability, age and more, modify gender roles [7]. The concept of gender is vital because, applied to social analysis; it reveals how women's subordination or men's domination is socially constructed. As such, the subordination can be changed or ended UNESCO [6]. Gender is not biologically predetermined nor is it fixed forever. Sex describes the biological differences between men and women, which are universal and determined at birth and technically different from gender.

Gender systems are institutionalized through education systems, political and economic systems, legislation, culture and traditions. In utilizing a gender approach, the focus is not on individual women and men but on the system which determines gender roles and responsibilities, access to and control over resources, and decision-making potentials. It is also important to emphasize that the concept of gender is not interchangeable with women. Gender refers to both women and men, and the relations between them.

2.2 The Concept of Adoption

Adoption means that a person does something differently than what they had previously (purchase or use a new product, acquire and perform a new behavior, etc.) done. The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible [8]. Adoption of a new idea, behavior, or product (innovation) does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population.

2.3 Gender and Technology Adoption

In addressing the influence of gender in the adoption of agricultural technology, it is pertinent to consider the material factors that could possibly influence gender in making the decision to adopt or reject an innovation. Genders' access to power and authority, and control over such factors may determine the extent of adoption. Such material factors as access to land, credit facility; access to other inputs as fertilizer, labour and extension contact are vital in the adoption decision. The feminine gender, most often than not, have less access to these material factors compared to the masculine gender. According to [9], women in Nigeria form an active and reserve labour force but rarely own the means of production. Furthermore, [10] reported that men and women maize farmers in Ghana do not enjoy equal access to land and to agricultural extension services. This suggests that disparity in the genders' ownership and access to these production resources may restrict adoption of innovation by the feminine gender. Gender roles are crucial for agricultural development and the

attainment of the Millennium Development Goals (MDGs). The definition of gender used in this research is the economic, social, political, and cultural attributes and opportunities associated with being man or woman. This review also uses the definition in the Global Monitoring Report 2007 on gender, which means equal access to the "opportunities that allow people to pursue a life of their own choosing and to avoid extreme deprivations in outcomes," highlighting gender equality in rights, resources, and voice [11]. Gender issues must be addressed in development studies for various and obvious reasons. First, gender dimension is crucial for economic reasons and from the efficiency point of view. This is especially true in the agriculture sector, where gender inequalities in access to and control over resources are persistent, undermining a sustainable and inclusive development of the sector. Second, equity or distributional issues are related to gender differences in outcomes.

3. Gender Socio-economic Attributes and Adoption of Improved Oil Palm Technologies

Socio-economic characteristics explain the attributes (age, sex, household size, education, literacy, income, farm size, land ownership, marital status, farming experience etc) of the farmer that have influence on the activities of the farmers in their local environment. Aside sex, all other attributes of the farmer are acquired directly or indirectly and are subject to change over time. Socio-economic characteristics like education, income, farm size, land ownership and marital status posits an individual in a rural community as responsible, respectable, influential and has the potentials of bringing positive change. Examining the socioeconomic characteristics of farmers in a research gives the researcher a clear profile and a better perspective of the farmers that should not be neglected as possible influential factors. They bring to the fore the background, affiliations, dispositions and orientations of the farmers who are the major focus of agricultural research. Socio-economic characteristics in a gender study will point out areas of disparity in gender issues that need specific attention.

In some culture, women are not allowed to own some input resources as against their men counterparts. According to [12], women in Arochuku Local Government Area of Abia State are not allowed to own oil palm plantation. This therefore prevents mostly women in that area from owning land and other resources. This single social misjudgment leads to the loose of valuable contributions and benefits that would have accrued to the community if both men and women are given equal freedom to exercise and explore their potentials.

3.1 Age and Adoption

Age is an important attribute of the farmer. Age measured by the number of years from birth a farmer has spent alive, influences the level of thought and disposition. An older farmer is expected to have more experience in farming and therefore the possibility of accepting innovation. The age of the farmer will also dispose him to acquisition of material resources. In their report, [13] revealed that the mean age of the farmers in oil palm production in Nigeria was about 45 years and explained that this may be attributed to the fact that oil palm production is land intensive and only older farmers may have acquired the size of land needed for its production. In separate reports [14] and [15] confirmed that Nigerian farmers are within the age bracket of 40-60 years. This could adversely affect the level of output

because of the inactive nature of the elderly. They further noted that young farmers are needed on farms because agricultural production is energy demanding especially oil palm production. [16], asserted that the ability of a farmer to take risk and be innovative decreases with age. This implies that younger farmers by virtue of their strength and ability will have higher prospect for increased adoption of technology and enhanced productivity.

According to [17], agriculture in Africa is dominated by old people whom he explained lack enthusiasm and strength which results to them engaging in traditional subsistence cultivation that gives poor returns. Furthermore, [18] and [19] agreed that more of the younger women than the men are involved in agricultural production in the southeast agro-ecological zone of Nigeria. The study further explained that 52% of men and 13.40% of women were above 59 years of age. This implies that majority of the women were in their economic productive age and as such will be stronger and effective in the adoption of innovations. In addition, since the ability of a farmer to take risk and be innovative decrease with age as asserted by [16], the women farmers according to their study will be more innovative in adopting improved agricultural technology. On the contrary to the findings above, [20] and [21] found that there is no significant relationship between the age of the respondents and the level of adoption of improved oil palm production practices. They explained further that age is a personal characteristic of farmers and does not influence the rejection or adoption of improved oil palm production practices in the study area.

3.2 Sex and Adoption

Sex identifies the status of the farmer as male or female. The assertion that women are more active in agriculture and their involvement have generated significant recognition is not in doubt [9]. In agreement, [22] reported in their study that 72% of women were more involved in oil palm production in the study area of their research, while [23] observed that women recorded higher adoption of cassava production technologies than men in his study.

It is important to note that involvement of men and women depends on the agricultural activities involved. This idea is supported by [24] who posited that impact of sex on technology adoption is technology specific. Agricultural activities that require more physical energy will have more male participation as against women. According to [20], found that more male farmers were involved in oil palm production in his study. This they asserted was because of the drudgery nature and physical energy demand, and large financial investment needed for plantation establishment which could discourage women. In separate reports [25] and Ade [26] found that men are more involved in agriculture in their study area in Western Nigeria. Similarly, [27] reported that sex distribution of palm oil processors in the study area showed that out of the 120 respondents, 98 (81.7%) were males, while 22 (18.3%) were females. This they explained could be attributed to the fact that majority of the respondents used the traditional method of processing which is more strenuous than the modern method.

Furthermore, [28] indicated that females are less likely to adopt improved technologies. On the other hand, [21] found that sex has no significant influence on the adoption of improved oil palm production practices. This finding contradicts the earlier thoughts. Being a male or female therefore does not influence the adoption behaviour of the farmer. The adoption of improved agricultural technologies by men or women will therefore depend on the nature of the technologies involved.

Technologies that are strenuous require more energy and are drudgery in nature will be adopted mostly by men while technologies that are of the reverse nature may have more females adopting such technologies. Therefore, the adoption of improved oil palm technologies may favour men because of the physical strength involved in the activities and the huge financial requirements to begin an oil palm business in Nigeria.

3.3 Level of Education and Adoption

Education as a process of acquiring knowledge through teaching, learning, observation and socialization is an important attribute that influences the activities and behaviour of individuals. Adoption is a continuous process which begins with the initial knowledge of an innovation to the constant application of the innovation in everyday life. As such, the extent or level of education of the respondent will have influence on the adoption behaviour of the farmer (positively or negatively). Therefore, the education level of the male or female farmer plays significant role in his or her adoption behaviour. Also, [21] found that level of education has significant influence on the level of adoption of improved oil palm production practices. This they explained implies that farmers with higher level of education are likely to fully adopt the improved oil palm technologies than those with low educational status.

In a positive proposition, [29] highlighted the significant role of farmers' education in raising farming efficiency in Ethiopia and Bangladesh. However, there is some agreement in literature that education significantly influences adoption of technological innovations in agriculture [30] and [31]. These findings are contrary to the finding of [32] that education has no significant impact on farmers' efficiency in Indonesia. In a similar report, [19] reported that 90.90 and 92.10% of female and males respectively had one form of education in the area of the research. Further, the study reported that the average years spent by the farmers in formal education for female and male farmers were 7.33 and 8.10 years respectively. This means that though the farmer groups generally were not well educated, the male farmers who are more educated than their female counterparts, are expected to have more ability and willingness to adopt improved agricultural technologies. On the other hand, [33] reported that 51.30% and 17.50% of male and females respectively had formal education while 31.30% and 40.00% of men and women did not have formal education in their study. In the traditional Nigerian society, men are accorded with the opportunity of going to school as against their female counterparts. This is as a result of the belief that the males will continue the family lineage. The young girls often drop out of school to help in the farm, engage in trading and other ventures to help the family finance. Most often, they are married off to ease the burden of responsibilities on the parents. Closely related to this is the incidence of girl-child pregnancy. The occurrence of this will affect the social life of the young girl particularly her education. Men therefore acquire more education and will certainly be more disposed to the adoption of improved technologies.

3.4 Farm Size and Adoption

Different factors determine the adoption of different agricultural innovations and technologies. Much empirical adoption literature focuses on farm size as the first and probably the most important determinant [34]; [35]; [36]; [37]; [38]; [39]; [40]; [41]; [42] and [43]. Farm size defines the farm land available for farmers to farm. Farm size can affect and in turn be affected by the other factors influencing adoption. The effect of

farm size on adoption could be positive, negative or neutral [44]. In most African rural communities, farm lands are measured using local measurements. Most often farm size is apportioned in plots within the local communities. In cities and sub-urban areas, farm size is measured in acre and hectare. Culturally, an individual that has large plots of farm size is revered, honoured and respected because it is considered as a status symbol within the cultural setting. It is believed that the larger the farm size of an individual, the more the possibility of accepting innovations that could increase productivity. According to [45], large farm size in terms of hectares and labour are significantly related to farmer's utilization of improved farm practices applicable to their farm enterprise.

According to their report, [46] categorized farmers who had a mean of 2 hectares of farm land as subsistence. Their finding is in line [47] who reported that vast majority of farmers work at near subsistence level of productivity. This they explained will often have negative effects on farmers' access to credits due to lack of economics of scale. Further, [48]; [49]; [50]; [51] and [52] found farm size to be positively related to adoption.

On the other hand, [53] and [35] found negative relationship between adoption and farm size while [54] found that the relationship between farm size and adoption is a neutral one. With small farms, it has been argued that large fixed costs become a constraint to technology adoption [49], especially if the technology requires a substantial amount of initial set-up cost. In this regard, [50] noted that only larger farms will adopt these kinds of innovations. With some technologies, the speed of adoption is different for small- and large- scale farmers which is critical for policy makers and implementers. According to [55], farm size has a negative and significant effect on technical efficiency, implying that farmers who have relatively large farms are less efficient relative to their counterparts with smaller farms. This result though is contrary, however, to the expectations that large farms benefit from increased economies of scale and hence are more efficient. Farm size may act as a proxy for other socio-economic indicators such as access to credit because the larger farm has, the more the collateral value. From the gender point of view, the restriction of access and ownership to land on women, affects adoption of improved agricultural technologies and agricultural output in general. The problem arises from the traditional land ownership structure which is dominated by inheritance as the major source of ownership. Women who by virtue of social construct and tradition, do not inherit land in most African society are disadvantaged.

The FAO report of 2010 indicated that inheritance is still the most common system to obtain land in most developing countries. FAO's gender and land rights database of 2010 revealed the existence of gender disparities in land holdings in all regions of the world. Mali is a case in point where only 3% of the country's land owners are women, whereas less than 2% of the available land worldwide is owned by women [56]. Further, [56] confirmed that land rights in many communities are governed by both statutory and customary laws. Many of these traditional customary laws especially in Nigeria and Africa in general deny women right to land. By tradition, men inherit land and women gain user rights through their relationship with a male relative [57]. The implication is that men with the advantage of having more farm size will consider adoption of improved technologies more than women.

3.5 Level of Income and Adoption

Access to finance is just as important as access to land in

agricultural development [58]. Income and finance opportunities have been widely documented as an important strategy for overcoming constraints faced by the rural farm households in many developing countries [59]; [60]; Barrett, [61] and [62].

Income is expected to provide farmers with liquid capital for purchasing productivity enhancing inputs such as improved seed and fertilizers [58]. According to [63], fund is a major threat to the adoption of oil palm production. Income plays an important role in the adoption of improved agricultural technology. Access to fund and credit facility facilitate the procurement of agricultural inputs, labour engagement and daily farm expenses. In his report, [64] identified credit facilities provision as one of the most important priority areas to be considered in repositioning the oil palm production sector for sustainable economic development. Credit facilities such as grants and low interest loans, subsidized input provision, land acquisition facilitation and procurement of equipment and machineries for processing are incentives for increased production.

There is a strong association between the gender of the household head and adoption of technological recommendations [65]. In some countries female-headed households are discriminated against by credit institutions, and as such they are unable to finance yield-raising technologies, leading to low adoption rates [66]. There is clearly a case for improving current smallholder credit systems to ensure that wider spectrums of smallholders are able to have access to income, especially female-headed households [66]. This may, in certain cases, necessitate designing credit packages that are tailored to meet the needs of specific target groups [66].

According to [67], income credit facilities available to farmers affect expenditure on the use of mechanical equipment, working capital as well as improved seeds. This explains that credit and funds in the form of income to the farmer improves the expenditure outlay of the farmer especially in the procurement of needed farm inputs.

3.6 Extension Contact and Adoption

Agricultural extension and rural education have been emphasized by development experts as crucial in achieving agricultural development, poverty reduction, and food security [68]; [69]; [70]; [71] and [72]. However, empirical evidence shows mixed results in terms of the relevance, cost-effectiveness, and equity dimensions of different approaches of agricultural extension service provision [72] and [73]. On one hand, rates of return and the economic contribution of agricultural extension are estimated to be high [74]; [68]; [75].

In Uganda, [76] estimates an 8 – 49% rate of return in the agricultural extension reform while [69] show that receiving at least one extension visit per year reduces the likelihood of being poor by 10 percent in Ethiopia. On the other hand, extension systems and delivery methods in many developing countries have been critiqued as ineffective in responding to the demands and technological challenges of various types of clients and in reaching poor men and women farmers [77]; [73] and [70].

According to [78], agricultural extension is a mode by which the latest information is communicated to the farming community. The effective extension services can help in the adoption of new agricultural technologies which can lead to higher crop yields and more household incomes. In addition, the agricultural extension services can help in reducing poverty levels and ensure household food security especially among small and resource poor farmers. Similarly, [28] found that Extension

service provision, in the form of advice received, is a significant factor that explains whether farmers adopt fertilizer or improved seed, and the rate of use of these inputs. Other extension variables, such as frequency of visit, access to radio, or attendance at community meetings were not significant. A major problem in sub-Saharan Africa is that year after year extension workers who are hardly afforded in-service training, and loosely linked to research, continue to disseminate the same messages repeatedly to the same audience [66].

A situation has consequently arisen where the disseminated messages to the majority of the extension audience, have become technically redundant and obsolete [66]. Additional problem is that most extension services tend to focus on the well-resourced, wealthier farmers and perceive farmers as simply agents of change [66]. This situation results to monotony of the information provided and lead to diminished interest of the farmers in having contacts with extension officers.

The gender equity dimension of agricultural extension service provision is an aspect that is widely addressed in the literature. From the global survey of 115 countries by FAO in the 1980s to the micro-studies by World Bank and IFPRI in 2010, numerous studies show access to extension services is lower for women as compared with men [79]; [80] and [28]. When other factors are controlled for, the results are mixed in terms of whether women are disadvantaged or not in access to extension services. According to [28] fewer women (20%) were visited by development agents compared to their male counterparts (30%) in Ethiopia. The results show a clear difference between female and males in access to visits and advice from development agents (male are about 5 percent more likely to be visited by development agents compared to female), as well as other channels of information. Male are more likely to attend community meetings and visit demonstration plots or research centers more than women. In Nigeria, the story is not different. The level or religious practices, tradition and the dominance of the male folk in politics and other areas of administration in the country inhibit the level of access to extension services by women compared to men.

3.7 Years of Farming Experience and Adoption

The years of experience of the farmer is counted as advantage in the adoption process. Experience disposes the farmer to different agricultural techniques, use of material inputs, extension and farm networks and maturity in handling and overcoming difficult situations. The experience of men and women in the farming process is vital in the adoption of improved agricultural technology. Various researchers have commented on the years of experience of men and women in their different findings. In a research finding, [19] reported that the average farming experiences for both male and female farmers were 30.09 and 24.22 years respectively in Southeast agro-ecological zone of Nigeria. The study further revealed that 70.50% of females and 55.40% of males respectively had farming experiences of between 11 to 30 years. Similarly, [81] posited that men had more farming experiences than women. They reported that 70% of the women have been involved in farming for 15 years or less. This could be due to the fact that women spent part of their productive years in child bearing which will not only limit women's level of involvement in agricultural production but also limit their income as they will not be able to work during the child bearing periods.

4. The Way Forward in Mainstreaming Gender in Nigerian Agriculture

Gender mainstreaming is a gender concept with an approach that ensures that women and men equally participate in every aspect of a program or project both as beneficiaries and decision makers. This requires that attention is given to gender perspectives as an integral part of all activities across all programmes. It involves making gender perspectives – what women and men do and the resources and decision-making processes they have access to – more central to all policy development, research, advocacy, implementation and monitoring of norms and standards, planning, implementation and monitoring of projects.

This review makes inputs as the way forward in mainstreaming gender in the agriculture sector in Nigeria through the following processes:

4.1 The Process of Developing National Agricultural Development Policies and Plans

Policy which is often seen as a program of actions or set of principles in setting a development agenda together with planning which bridges the gap from where we are and where we want to be through charting future course of actions are very vital in every development process. Both general and specific rural agriculture sector policies should from the drawing board embrace gender by specifying the roles of men and women. Equal participation of men and women in the selection of committee members and or constituting a board to draft policy for the sector should be encouraged. In Nigeria, agriculture is a family business involves all members of a household (men and women) inclusive and in most cases more participation from the women that the men especially in the rural areas. To that effect, policies aimed at sustainably developing the sector should be all embracing and gender sensitive.

4.2 The Process of Budgeting and Agricultural Financing

Gender-responsive budgeting aims at mainstreaming gender into public finance. Gender-responsive budgeting does not imply having separate budgets for women and women but connotes a general budget that are planned, approved, executed, monitored, and audited in a gender-sensitive way. The agriculture sector in Nigeria is an area that requires massive funding especially with the agricultural transformation agenda of the Federal Government. The agenda laying emphasis on commercial agriculture and a more articulate strategy to reach out to the farmers promptly requires an all embracing approach that will recognize gender issues. Areas of impediments to accessing agricultural finances for both men and women should be jettisoned.

4.3 Process of Employment

Globally, women and girls are underrepresented in almost all sectors of development including education and employment opportunities despite the fact that women constitute more than half of the world's population [82]. Employment in most countries is characterized with a lopsided approach were more men or women have more or less advantage in certain areas of opportunity. In Nigeria, to forge a meaningful agricultural development process employment in different areas of the sector should be gender sensitive. Particularly to mention is the imbalance across the states of the Federal in the employment of

extension agents. Most Agricultural Development Project (ADP) staffs are men with a staggering number of women in their mist. This will not make for good extension service delivery especially in the Northern part of the country where men have restrictions in entering some households because of religious practices.

4.4 Abolition of Cultural Land Inheritance Practices

Across the traditions, cultures and customs of the different ethnic groups in the country, land ownership is by inheritance. Aside the Hausa custom which allows a woman to inherit from both parents and most often half of the share of the male sons, all other customs are skewed against women. The customary land ownership structure ensures that all areas of land holding, women are excluded as land passes from the father to the male children. An unmarried daughter has a right to live in her father's house, but is not allowed to cultivate the land as her own. Land as the most important factor in agricultural production and development requires that its acquisition be legislated upon to give equal opportunity to both men and women to have land for agricultural production. The 1999 constitution of the Federal Republic of Nigeria chapter 2, section 43 provides that "every citizen of Nigeria shall have the right to acquire and own immovable property anywhere in Nigeria". The acquisition of land as provided by the constitution is a right and a privilege.

5. Conclusions

This review examined by making technical analysis of the views of different authors presented in gender disaggregated data of the socio-economic attributes of gender as it relates to the adoption of improved agricultural technologies. The studies looked at gender differentials in the adoption of various technologies and innovations in agriculture. There were variations in the findings of these studies with regards to inputs, crops, area of the study, technology examined, as well as the research designs, sampling frame, sample size, quality of data collection, tools and analytical techniques adopted. However, the studies unanimously recognized and emphasized areas of gender imbalance in various aspects of agriculture which need to be addressed for increased output and efficiency.

In their reports, [83]; [84]; [85] and [86] recognized the heterogeneous nature of women farmers from different cultural background, orientation and religion. According to them, there is need to collect different indicators of gender for a robust analysis or proper targeting of beneficiaries and end users. This implies that data collected on gender indicators (socioeconomic factors), methods of data collection and analysis they are subjected to are very vital and determines to a large extent the results.

The relevance of gender roles in agriculture, general life activities and project design cannot be over-emphasized. Basically, in designing and implementing public projects meant for the benefit of the masses, taking a gender sensitive approach allows for the rudimentary understanding of gender roles in the projects, identify areas of gender imbalance and the root causes of existing inequalities if there are, so that they can be addressed in the project or activity design. The review further identified the short and long term differential needs and priorities of men and women and how to harmonize these needs for efficiency and growth. Therefore, national government at all levels should mainstream gender in all administrative activities – politics and

policy, economic, social cultural and environmental issues for the sustainable development of the society.

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