



ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

**GENDER DIFFERENTIATED OUTCOMES OF SMALL
HOLDER AGRICULTURE COMMERCIALIZATION:
SYSTEMATIC REVIEW OF EVIDENCE FROM AFRICA**

BY

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ADDIS ABABA, ETHIOPA

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SCHOOL OF GRADUATE STUDIES

CENTER FOR AFRICAN AND ORIENTAL STUDIES



**GENDER DIFFERENTIATED OUTCOMES OF SMALLHOLDERS'
COMMERCIALIZATION: SYTEMATIC REVIEW OF EVIDENCE
FROM AFRICA**

By

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**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
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LIST OF ABBREVIATIONS AND ACRONYMS

AAU	Addis Ababa University
AfDB	African Development Bank
AGRA	Alliance for Green Revolution in Africa
FAO	Food and Agricultural Organization
FHH	Female headed households
GDP	Gross Domestic Product
HCI	Household Commercial Index
IFAD	International fund for Agricultural Development
IFPRI	International Food Policy and Resource Institute
ILRI	International Livestock Research Center
IOSR	International Organization for Scientific Research
IWEERC	International Women Economic Empowerment Research Center
ODI	Overseas Development Institute
OPHI	Oxford Poverty and Human Development Initiative
SLA	Sustainable Livelihood Framework
UN	United Nations
UNDP	United Nations Development Program
WB	World Bank
WEAI	Women's Empowerment in Agriculture Index
WEDGE	Women's Entrepreneurship Development and Gender Equality
WEF	World Economic Forum

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ABSTRACT

A systematic review on gender differentiated smallholders' commercialization has come into consideration owing to prevailing situation in Sub-Saharan Africa and observing the existing body of research both in gender inequality and smallholders' commercialization. The region is at the bottom list in the human development and gender equality index. 65% of the population leads subsistence agriculture, and around 33% are still under extreme poverty. It is widely believed that smallholders' commercialization has the potential to curb the situation. In view of this, the presentsystematic review is an undertaking to increase the evidence base of smallholders' commercialization outcomes from the perspective of gender equality and women empowerment. A collection of relevant studies on smallholders' commercialization, gender equality and gap in the agriculture sector were collected from the open knowledge sources using key words, geographic bound, and timeframe criteria. The review has covered 24relevant works from academic centers, international research centers, and studies commissioned by multilateral and UN agencies. All reviewed studies were conducted in Africa within the time frame of 2002 to 2019. Both published and unpublished, peer reviewed and not reviewed by peers are covered in this systematic review. The results show that the positive outcomes of smallholders' commercialization are largely eschewed towards men rather than women, but a pronounced negative impact on gender equality is rather rarely evidenced. On the contrary addressing the multifaceted structural issues affecting the participation of women, and particularly the multiple drivers of gender gap in the agricultural sector can render increased participation of women in smallholders' commercialization, and benefit from it.

Key Words:

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Extreme poverty, subsistence agriculture and gender inequality are persistently dominating the social and economic situation of Sub-Sahara Africa. The human development index of the region is globally the lowest¹; while 65% population leading subsistence agriculture; with 33% living under absolute poverty, and where gender equality index remains at the bottom list (UNDP 2014, World Bank 2008; World Economic Forum 2014.). Whereas eliminating the gender inequality and empowering women could raise the productive potential of billion Africans and providing a huge boost to the continent's development potential (African Development Bank,2014).

There is a wider recognition of smallholders' commercialization of being an effective path way out of poverty and bridging the apparent gap in agricultural sector in sub-Sahara Africa. Smallholders' Commercialization is an effective instrument for curbing the situation of smallholders living in poverty and serving as an indispensable path way towards inclusive economic growth and transformation [Kristen et al 2012; Moti et al., 2009]. The transformation of the subsistence agriculture to an agri-food system, commercialized and more productive can greatly advance to economic transformation that could be instrumental in addressing the prevailing poverty (Timmer 1998). In Africa, growth in the agriculture sector 2-4 times more effective than in other sectors in reducing poverty (Meinzen-Dick 2019); andthe multiplier effect of smallholders is particularly high in rural Africa because of the additional income is spent in the local rural economy (Wiggins et.al., 2011).

Realization of the benefit, however, requires streamlining into policy and program interventions. Harnessing the potential of women during smallholders' commercialization is imperative; given the existing inequality at one hand; and positive multiplier effect when fostering women equity to market-based opportunities, access to finance and technologies, and ownership and control of economic and natural resources. Increasingly, women and children are strongly affected by the design of development policy options and development

¹0.502 against the world average 0.702

programs (Todaro and Smith 2012, BMGF 2019). To improve the living conditions for the poorest individuals' women must be drawn into the economic mainstream. The Global Gender Gap Report (WEF, 2018) revealed that within the broader economic power across the globe, , gaps in control of financial assets and time spent on unpaid tasks continue to preserve economic disparities between men and women. Globally, women do three times more unpaid care work than men, and the unpaid care work is valued at \$10 trillion per year, (BMGF 2019). As a crucial and critical stage towards addressing the gender gaps in paid and unpaid work, the international definition of "work" was refined to recognize unpaid care work since 2013.

Despite the tremendous potential of smallholders' commercialization in Africa as a path out of poverty and bridging the existing gender gap; the path appears to be also full of hurdles at operational level; whilst several empirical issues are prevailing in the existing body of literature. Many of the studies done in the content in the area need to be systematically reviewed to inform better program and policy planning and contribute to the existing body of literature in smallholders' commercialization. And this is what this systematic review has attempted to do.

1.2.STATEMENT OF THE PROBLEM

Determinants and outcomes of stallholders' agriculture commercialization in Africa appears to be well researched. Among others, the works of Gebre-ab (2001) Bernard et al (2007), Hebridean and Jalleta(2010) Gebersilassie and Sharp (2008) , Pender and Alemu(2007), Tufa et al, (2014) offer much evidence both for the body of literature and for informing effective programs and policy options supporting smallholders' commercialization. Likewise, the works of other researchers and scholars provide useful insight on gender differentiated agricultural productivity and cropping systems, access to credit and extension systems, and women's control over assets for development. Fitscher (2008), Guyer(1991), IFPRI (2007) Thapa (2009), and Tesfaye (2009) to mention few.

Despite the abundance of works in the above areas, evidence on gender differentiated outcomes of smallholders' commercialization of agriculture is very little. Moreover, studies appear to exist in piecemeal, needing consolidation and synthesis in order that they have the potency to better inform policy and programs, and have the validity to enrich the exist body of literature in the area. The fact that women and men have different level of access to assets,

credit and technology, and important elements of market systems underpins the need for in-depth gender lensed look at the outcome of smallholder commercialization.

The systematic review has looked deep into 24 studies conducted in 9 countries of Africa during the period from 2002 to 2019 and brought forth some insights with regards to smallholders' commercialization welfare outcome for men and women, the impact of smallholders' commercialization on gender equality, and array of factors affecting the participation of women in smallholder's commercialization and benefit from their participation.

The insight gained through this systematic review is much influenced by the notion of power and agency, the gender gap in agriculture, and the women empowerment in Agriculture OPDI 2013 and Oxfam women empowerment measurement framework 2017. Briefly put, the notion of power and agency is the state whereby poor men and women are subject to market forces, and the capacity of poor men and women to engage in markets beneficially needs enough power to influence terms (Chris, 2012). Equally the systematic review was guided by contemporary conceptualization of smallholders' commercialization, and gender and commercialization.

1.3.Scope, Significance and Limitation of the study

Conducting a systematic review and increasing the evidence base of outcomes of smallholders commercialization from the perspective gender equality and women empowerment is believed to strengthen the knowledge base and prompt right set of policy options and program towards fostering fair and equitable gender roles , the right to and control over key productive assets , and that thereby harness the potential of women in participating in smallholders commercialization, and contribute for agricultural transformation. With this in view this research has undertaken a thorough review of 24relevant studies conducted across 9 African Countries over the period of 2002 to 2019 covering most of agricultural commodities including Apiculture, horticulture, staple foods, and cash crops.

It is the opinion of the Author that the results and discussions presented under chapter three and four shade a more visible light across the spectrums of the themes covered to the benefit of the literature and practical interventions on smallholder's commercialization. The

researcher also believes that systematic review has done an optimum coverage of the width in terms of the components to be covered, but admittedly the a more in-depth look at both the theoretical literatures in the area as well as an additional coverage of similar studies would have added value to enrich the depth of the findings and the studies. The difficulty of adding more of the relevant studies which fit the criteria was inaccessibility of the works.

The researcher is cognizant of the limitations on some of unpublished and not peer reviewed materials of the possible inadequacy in their scientific and academic rigor. But on the plus side, the provision of the information on the reviewed materials is much to the benefit of the systematic review since they gave nuance to the answer sought by the research. It has also been attempted to include more of studies which covered multiple countries, combining studies from different agricultural commodities, and studies which involved a review of many other studies, and selecting a case that would provide substantive evidence to other similar studies.

1.4.RESEARCH OBJECTIVES AND QUESTIONS

The review has three Objectives:

- Assess and synthesize gender differentiated welfare outcomes of smallholders' commercialization
- Discuss the relationship smallholders' commercialization to and on gender equality
- Provide a synopsis of interplaying factors affecting women participation in, and benefit from smallholders' commercialization

The review has attempted to answer three major questions, namely:

- What are the similarities and differences on commercial and welfare outcomes of smallholder commercialization for men and women participants across sectors?
- To what extent does participation in and positive outcome from smallholder's commercialization, contribute to gender equality at different levels?
- What are the factors interplaying in affecting and/or enhancing the empowerment of women in market participation for better outcomes/benefits?

1.5.METHODOLOGY

A collection of relevant studies on smallholders' commercialization, gender equality and gap in the agriculture sector were collected from the open knowledge sources using key words, geographic bound, and timeframe criteria. The review has covered 24 major, most relevant works from academic centers, international research centers, and studies commissioned by multilateral and UN agencies. All reviewed studies were conducted in Africa within the time frame of 2002 to 2019. Both published and unpublished, peer reviewed and not reviewed by peers are covered in this systematic review. Some of the studies are multi- country while others are country specific.

Some of the works and literatures which are beyond the timeframe and the content were purposely included, with an aim to see the evolving thoughts and progressive thinking in the thematic areas of smallholders' commercialization, and gender inequality in commercialization. **Table 2 in chapter three** presents the list of works that are used in this systematic review and key findings generated.

The results are categorized according the subtitle corresponding to each of the research questions, preceded by contemporary notions on the two areas: smallholder commercialization; and smallholders' commercialization and gender inequality. Admittedly, in some section's findings (especially factors of inequality) may reappear more than ones. Where that happens, the researchers' intension is to emphasize the interwoven nature of inequality factors, and the outcomes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction to Literatures Review

The literature review for the present work focuses on three major areas. The systematic review largely draws on the prevailing context of poverty and subsistence agriculture in Sub-Saharan Africa, the widely entertained presumption that the transition from subsistence agriculture to smallholders' commercialization is vital to curb the situation. Based on this premise, the first part of the literature review will dwell upon the extent of poverty, the implication of subsistence agriculture to the prevailing socioeconomic situation. Apparently, the role of women in African agriculture will have an optimum space in this part of the discussion.

Central to the review of literature is the various views and works on smallholder's commercialization. An attempt is made, under this part, to cover the conceptual and analytical foundation of smallholders' commercialization, the process and outcomes, and the different views on ways of measuring smallholders' commercialization. The corresponding review of related literature on this part provides a summary of the difference in the perspectives by various schools of thought together with a conceptual framework on the process and outcome (as adapted from the material reviewed for the purpose). Important to note at this juncture will be the method applied in this systematic review is regardless of the difference in the methodological approaches of the studies covered by the systematic review.

The third thematic focus for the related literature review is made to be about gender equality, economic empowerment, and their connection with smallholders' commercialization. Like the second part of the literature, this part provides the conceptual background and notion of gender and women economic empowerment to the insights that appear later.

2.2 Theories and Concepts of Gender and smallholders Commercialization

2.2.1 Development and Poverty

The leading contemporary thinker on development Amartya Sen had brought forth the capability approach to explore the human side of development goal, and the nature and dimension of poverty -against the conventional old thinking of the material nature of poverty in the traditional development economics (Todaro and Smith, 2012). According to the capability approach of Sen (1999), the capability to function is what really matters for the status a poor or non-poor person, and thus as in as much as economic growth not addressing this, cannot be sensibly treated as an end. Poverty can't be measured by property, or utility as conventionally understood. What matters a person is not has or the feelings they provide, what matters for wellbeing is but what a person is or can be an does and can do. Freedom of choice or control of ones one's own life is a central aspect of wellbeing.

The capability approach by AmartaySen to development has shade a different light on this. According to the capability approach of Sen (1999) the capability to function is what really matters for a status a poor or non-poor person, and as such economic growth cannot be sensibly treated as an end. Poverty can't be measured properly, or utility as conventionally understood what matters a person is not has or the feelings they provide, what matters for wellbeing is but what a person is or can be, does, and can do. Freedom of choice or control of ones one's own life is itself a central aspect of wellbeing.

Counting much on this notion of development of having human wellbeing at its center, Todaro and Smith (2012) have broadly put the concept of development as sustained elevation of an entire society and social systems toward a better and more humane life. According to these authors the spectrum of development should encompass three core values, namely Sustenance, Self Esteem, Freedom by all individuals and societies/Society groups. Sustenance is the ability to meet basic needs. Self-esteem is to be a person of having a sense of self-worth and self-respect of not being used as a tool by others for their own ends. Freedom from servitude -to be able to choose, a sense of emancipation from alienating material conditions, and from social servitude to nature, other people, misery oppressive institutions and dogmatic believes specially (including) that poverty is predestination. Freedom involves an expanded range of choices for societies and their members together with a minimization of external constraints in the pursuit of some social goal called development.

The body of literature on poverty and development, thus grow to treat differently the nature and economic characteristics of poverty, the relationship between inequality and absolute poverty, the poor and their economic characteristics, and the notion of development as right (Sen 1999) and poverty from the perspective of the incapacity approach (Sen 1999). Social inclusion has also come to be part of and parcel of the problem of poverty and inequality.

Contrary to the foregone notion of development *visa-vis* poverty; in traditional development economics the concept of absolute poverty is understood to specific minimum level of income needed to satisfy the basic physical needs of food, clothing, and shelter to ensure continued survival (Todaro and Smith, 2012: 62). Informed by this assumption, for long poverty has been remained to measure for proportion of people living under 1USD per day adjusted to purchasing power.

2.2.2. Definitions and Concepts Of smallholders' Commercialization

The literature on smallholder's commercialization entertains diverse views on conceptualization, measurement, process and outcomes. One of the major issues of argument is whether smallholder's commercialization is a long, gradual process of agricultural transformation or a static linear transition from subsistence to modern market-oriented agriculture production (van Braun 1994, Wiggins et.al 2011, Moti et. al, 2011). Another element of difference is whether smallholder commercialization is about resource allocation preference or more being connected to market signals during household production decision. Similarly, measuring the degree of commercialization features quite a lot of differences.

Smallholder commercialization is the process of agricultural transformation through which household's agricultural production shifts from a highly subsistence-oriented production towards more specialized production targeting markets both for their input procurement and output supply (Birhanu et al 2011). The term is also used interchangeably with smallholder, family, subsistence, resource -poor, low input or low technology farming (Heidhues and Bruntrup ,2003; cited in Hagos and Geta (2017). According to some authors like Immink and Alarcon (1993), Strasberg et al. (1999), a farm household production is commercialized when producing a significant amount of cash commodities, allocating a proportion of its resources to marketable commodities, or selling a considerable proportion of its agricultural outputs.

The broader meaning of smallholder commercialization, however, goes far beyond supplying surplus produce to markets, and involves the integration of household decision making on

production and marketing, both for inputs and outputs. Smallholder commercialization could be the strength of the linkage between farm households and markets at a given point in time. This household-to-market linkage could relate to output or input markets either in selling, buying or both. The dynamism in the process is another key aspect of the concept. The dynamic process in terms of the speed of the proportion outputs sold and inputs purchased changing over a space of time at household could define smallholders' commercialization.

The distinction between cash crop and food crop is another area of the limited notion in understanding smallholders' commercialization. While some consider cash crop as commercialization, Van Braun (1994), Gebremedin et.al (2010), Wiggins et al. (2011) and other scholars expound that commercialization is not restricted to cash crops as traditional food crops are also marketed to a considerable degree. Categorizing crops broadly into food and cash crops to analyze the extent of household commercialization lacks a strong footing and requires looking at the purpose for which a crop is grown rather than looking at the nature/type of crop itself. In subsistence production, the farmer's objective is food self-sufficiency by using mainly non-traded and household generated inputs. The objective and the input sources change in semi-commercial farms into generating surplus agricultural outputs and using both traded and non-traded farm inputs. In a fully commercialized agriculture, however, inputs are predominantly obtained from markets and profit maximization becomes the farm household's driving objective

The concept of agricultural commercialization is also further complex than the forgone statements, and the complexity contributes to the varying definitions and emphasis given to the different aspects. According to Pingali (1997), agricultural commercialization is more than marketing agricultural outputs. Agricultural commercialization is attained when household product choice and input use decisions are made based on the principles of profit maximization. Moreover, according to von Braun et al. (1995), commercialization implies increased market transactions to capture the benefits from specialization. Increased market transactions are more easily attained when there are favorable policies and institutional arrangements that promote open domestic and international trade environment, and the development of market infrastructure and support services that facilitate access to existing markets and the opening of new market opportunities under a secured legal system.

The most commonly adapted concept of commercialization is, therefore, that commercialized eholds are targeting markets in their production decisions, rather than being related simply to

the amount of product, they would likely sell due to surplus production (Pingali and Rosegrant 1995). In comparison to subsistence, production decisions of commercialized farmers are based on market signals and comparative advantages, whereas those of subsistence farmers are based on production feasibility and subsistence requirements and selling only whatever surplus product is left after household consumption requirements are met.

2.2.3 Perspectives on Smallholders Commercialization

There are different schools of thoughts which vary on their notions regarding the possible process of smallholders' commercialization, and the outcomes thereof. Wiggins et al. (2011) summarizes six schools of thoughts expounding different views. One is the Marxian view which sees markets as places where unequal relations lead to differentiation thereby offering capitalists with the advantage of ending up with land and capital, and small farmers as landless. The non-Marxian, differentiation thinking, on the other hand, upholds increased productions and productivity from large scale farming as result of commercialization will create jobs for those leaving farming.

The third view is the notion that expects the ability of family farmers may not cope up and survive harvest losses and economic shocks. A closer but slightly different view to the later is the thinking that smallholders may survive but become unproductive because loss of assets and shocks. The thinking dominating this view is that small farmers resilience can form the basis of a smallholder economy that is productive and resilient without commercialization. Contrary to all of these is the liberalist market theory which assumes that markets are solution providers in terms of providing to sell produce, acquiring inputs and technologies which thus make smallholders commercialization thrive, make linkages and enhancing the multiplier effect of spreading incentives and benefits.

The researcher is largely supporter of the later view but equally cognizant of the concerns entertained by the six strands of thought which maintains that markets, especially rural markets are prone to failure and inefficiency. The gist of the notion of the six strands of thought is that rural markets are prone to failure, including insecure tenure, high transactions costs and monopoly power that hit SF particularly hard blocking access to credit, inputs, increasing risks, and reducing returns. The perspective of the author of this researcher is that in order to smallholders' commercialization to benefit from the advantage of markets for

technical efficiency and economies of scale main factors that affect rural markets should be addressed through smallholder's commercialization supporting programs. Scholars like v. Braun (1995), Timmer (1998), Gebre-ab (2002), Gebremedin (2010) seem to support this view.

The welfare gains from market-oriented production arising from specialization that builds on and creates comparative advantages, potential for large-scale production, and from dynamic technological, organizational and institutional change effects that arise through the flow of ideas due to exchange-based interactions (Gebermedin et al. 2010, Gebere-ab 2002). Higher agricultural productivity, through commercialization, promotes growth in other sectors, including services, and higher farm productivity can be expected to reduce overall inequality and poverty (IFPRI 2020 Book: 20) It has a linking power between input and output sides of a market, increasing specialization at farm level and creating diversified agricultural outputs at national level (Gebermedin et al. 2010: 13, Wiggins et al. 2011:49).

A progressive, broader diversification would provide for successful agricultural transformation (Timmer 1998, IFPRI 2009). Growth in agricultural productivity not only increases farm incomes but it also stimulates linkages to the non-farm rural economy, causing economic growth and rapid poverty reduction (Gebre-ab 2002, IFPRI 2009, Timmer 1998). **Annex C** is intended to provide the causal view of smallholders' commercialization. The source of the diagram is von Braun et al. (1994, 13). Cited in Moti et al. (2009)

The opposite view from other schools of thoughts largely expounds the inability of smallholders' commercialization due to market failures, unfair competitive forces by large scale farming and farmers, and the very subsistence nature of peasantry economy. The resilient nature of subsistence agriculture is central. Arguably, there is a large tendency that at least at initial stage commercialization may not result in diversification. Gains from specialization and economies of scale are unattainable, and because of this agricultural growth, and welfare outcomes would be unlikely achievable. The incongruence in this view is that commercialization remains an important livelihood strategy for smallholders to earn income, for aggregate expansion of export commodities; and more importantly subsistence production is becoming increasingly non-viable option (Von Braun 1997)

The weighty argument to the researcher is that farmers' commercial activities enables them with economies of scale in skills, knowledge, equipment, land acquired, and the welfare

return in terms of household food, incomes, production will be high; albeit it passes through a daunting process. Table 1 is summary of the different perspectives adapted from Wiggins et, al. (2011)

Table 1 : Perspectives on Smallholders Commercialization, (adapted from Wiggins et.al. 2011 Table 2.2 PP 31)

<i>Perspective</i>	Expected processes in markets	Expected outcomes
<i>Differentiation, Marxian and anti-globalization</i>	Small Farmers (SF) face falling prices for output, rise for inputs and are exploited by monopolist in the market	SF are exploited, made poorer, likely to sell up land or be expropriated by Large Farmers (LF). SF will have pushed out of the system and the rural society increasingly divided between landlords and landless
<i>Differentiation, non-Marxian</i>	SF lack economies of scale, access to finance and know-how that LF have and hence are less productive and earn less	SF sell land to LF and become agricultural laborers. They may become better off since highly productive LF generate higher returns and compete for labor
<i>Distinctive peasant economy: Chayanovian</i>	SF have advantages in use of households: they can withstand shocks of poor harvests or low prices through self-exploitation. Differentiation is primarily through the age cycle	SF resilience can form the basis of a smallholder economy that is productive and resilient
<i>SF resilience can form the basis of a smallholder economy that is productive and resilient</i>	Within the ‘economy of affection’ capital is dissipated in transfers to family and friends. The need to establish rights in formal and informal jurisdictions can also dissipate capital	SF can survive, but unproductively. Loss of capital slows investment, innovation and growth in agriculture and economy
<i>Liberal economy, Washington Consensus</i>	Markets offer opportunities to sell produce, acquire better inputs and technology. Linkages and multipliers across markets spread incentives and benefits	Markets encourage investment and innovation, hence growth and prosperity.
<i>Liberal economy, but market failure,</i>	Rural markets prone to failure, including insecure tenure, high transactions costs and monopoly power that hit SF particularly hard blocking access to credit, inputs, increasing risks, and reducing returns	SF invest and innovate less than expected and growth is slowed Can be so severe that SF are trapped in poverty.

2.2.4 Process of smallholders' Commercialization

Among others, Gebremedin et.al(2010), Gebre-ab (2006) ,Pingali and Rosegrant (1995) Wiggins et al (2011) , van Braun (1994) have worked much on the process of smallholders and outcomes of commercialization. The common assertion by these researchers, with regards to process of commercialization is the nonlinear, gradual transformation process it goes through. The smallholder's commercialization goes through a long transformation process from subsistence to semi commercialization, and then to fully commercialized agriculture (Gebremedin et al 2010 , Wiggigs et al. 2011, Pingali and Rosegrant, 1995). It is a none linear, many layers step-up, and dynamic process. The dynamism and small step process in the course of commercialization of smallholders agriculture is well expounded in the review of issues of smallholders commercialization in Africa (Wiggigs et al 2011). According to this work, smallholders' commercialization takes place within existing farming systems, within existing land tenure forms, by using household own labor, and governed by longstanding norms about who does what, and with what reward.

Changes come in small, incremental, adding up a series of small steps into an eventually substantial change in the farming system. As such, specialization may not be necessary observed in the early stages of smallholders' commercialization. In contrast, commercialization may be associated with diversification, that could be ascribed to two main reasons. One, the aversion to higher risks that could arise from relying on a single crop for income; and because most small farmers want to produce a large part of staples for home consumption, owing to fears about availability and second because of cost in markets.

The review of the process of smallholders by Moti et.al (2009) summarizes Smallholder commercialization as part of an agricultural transformation process in which individual farms shift from a highly subsistence-oriented production towards more specialized production targeting markets both for their input procurement and output supply. In a broader sense, one could also see smallholder commercialization as a pathway to the overall economy's structural transformation in which larger proportions of economic output and employment are generated by the non-agricultural sectors. To attain this essential goal of structural transformation through a smooth process of smallholder agricultural commercialization, policy and strategy interventions to improve the functioning of input and output marketing, improvements in service provision, and the development of infrastructure stand out prominent.

Table 2: Processes in agricultural commercialization: Characteristics of food production systems with increasing commercialization

Level of market orientation	Farmers objective	Source of inputs	Product mix	Household income source	Human nutrition	Soil fertility
Subsistence	Food self sufficiency	Household generated (non-traded)	Wide range	Pre-dominantly agriculture	Predominantly home produced	Farm yard manure (FYM)
Semi-commercial	Surplus generation	Mix of traded and nontraded inputs	Moderately specialized	Agricultural and non-agricultural	Home produced and purchased	FYM and chemical fertilizers
Commercial	Profit maximization	Predominantly traded inputs	Highly specialized	Pre-dominantly non-agricultural	Predominantly purchased	Chemical fertilizers

Source: Pingali (2001) cited in, Moti et al. (2009), PP 33, Annex 1

Other aspects of smallholders' commercialization process are the drive, targeted commodities and markets, and the risk involved in the process. It can be presumed that the driving factors would favor men and women differently. Women are likely to impacted more by the risks involved unless appropriately addressed. Likewise, the commodity and targeted markets will have different implications for both.

Despite these assumptions, few of the existing body literature explicitly mention how driving factors are favoring men and women differently, and the magnitude of the difference on smallholder's outcome for men and women. Exceptions to these are the world Bank study on

leveling the field for gender equality in Agriculture in Africa (2009), and the review conducted by IFPRI (2009) covering over 21 countries, and 23 studies. Indication from these studies will appear in the findings part. In addition to gap observed in differentiating the driving factors and determinants, another limitation in the literature is the inadequacy of the effort to see the interplay between different factors affecting smallholder's commercialization

A. DRIVERS AND DETERMINANTS OF Smallholders Commercialization

Higher prices, a better access to market, and diffusion of technology are among the main drivers of smallholders' commercialization (Wiggins et al.2011, Moti et.al 2009). Higher prices at farm gate can happen as a direct result of policy intervention like state agencies and traders offer granted prices, offer or reduce transaction costs. The drive due to technology to commercialization plays well when improved productivity is achieved or problems associated to the production of marketable commodity is removed or reduced and risks due to commercialization are reduced.

The adoption of new technologies follows a natural step by step process, while operating within an existing farming system. Technologies are adopted by making small, incremental changes to existing systems. The clearest exception to this is when irrigation is introduced, which often entails a change of crop, more intensive use of fertilization and crop protection, more intensive weeding, and new forms of social organization to manage water and maintain the irrigation infrastructure. Irrigation may also entail mechanization using pumps, which also generates new jobs for mechanics to maintain them. Technology, by and large, does not of itself lead to enhanced production and commercialization, unless there is a market opportunity that makes it worth adopting.

B. RISKS

The role of risk in a smallholder commercialization process can be seen from two perspectives: before and after shifting from subsistence to semi-commercial production system. First, perceived risks in labor and food markets compel subsistence farmers to stick to the self-sufficiency objectives both in their production and consumption decisions. Second, unreliable and costly food markets and fluctuations in market prices put the relatively market-oriented resource allocation decisions of semi-subsistence households at stake due to less

reliability of food markets to guarantee household food security (von Braun et al. 1994; Govereh et al. 1999).

As it goes on commercialization leads to a more specialized pattern of production, which by its nature is highly susceptible to fluctuating market prices of inputs and outputs, and output yields, which in turn affects household income (Timmer 1997). Thus, the continuation of smallholders' commercialization under such unpredictable shocks needs accessible and affordable markets and saving of income in a form quasi-liquid asset for smoothening consumption in a bad year. Effective policy instruments are crucial to mitigate risks associated smallholders' commercialization and help households to step-up to full commercialization. Governments must design and implement measures that could help smallholders in designing their own risk management and risk sharing strategies (Timmer 1998)

Apart from the unpredictable income shocks, the extent of commercialization at household level is also affected by the level of risks the households foresee in their production and marketing environment. The extent at which agricultural production is commercialized at a household level is subject to risk and household's attitude towards risk. The riskier the marketing environment a household is engaged in (high variation in market prices and strong correlation between marketed commodity prices and household income) the less a household will be involved in agricultural practices that support market orientation (Braun et al. 1994). By the same token, a household's decision to commercialize also depends on the sum of consumption and income effects of market shocks.

C. MARKETS AND COMMODITIES

Among the points of arguments in the process of commercialization are also which commodities to be supported, and which market to be targeted -domestic or export markets. The socio-economic circumstances under which smallholders operate, agroecology, technical know-how of smallholders, and their risk bearing capacity and attitude towards risk are considered to be the major underlining factors for targeted priority agricultural commodities for smallholder commercialization (Moti et al. 2009).

Staple food crops have been produced for a longer period under the subsistence system, it is believed that smallholders have the technical know-how and experience in the production of

these commodities. Yield-enhancing technologies for these crops could help in generating more surpluses to the market, increasing household income at a lower risk and improving national-level food security. On the other hand, different modes of production targeting high-value non-traditional commodities could help farm households generate more income per unit of resources used on the farm but at a higher production and market risk. Contract farming are usually considered major risk-sharing strategies and means to link smallholders to the export markets (Dolan and Humphrey 2000).

However, smallholders' commercialization is not only about the production of high value crops, and specialization of those crops. For many of smallholders, the transition the transition from subsistence to commercial staple crop production is far more pertinent than a complete shift to specialized high-value commodities, the production of marketable surplus of staple food over what is needed for own consumption is the initial form of commercialization (Pingali 2005, Gebre-ab 2006). Through time, as the level of smallholder commercial orientation increases, however, one observes mixed staple and cash crop production systems giving way to specialized production units to produce high-value crop and livestock products (Pingali et al. 2005; Gebre-ab 2006).

The potential gains from high-value agricultural commodities tend on average to be higher than those for staples even though production of high-value commodities can be accompanied by greater uncertainty and risk. The major issue for smallholders specializing in high-value outputs is whether their size, be it land or other resources, can profitably support such activities in the long term (Lerman 2004; Pingali et al. 2005). Considerably, crop choice is determined a priority by the land potential available to small farmers. So, while high-value crop production may promise higher rewards, that option is not open to all small farmers. For some small farmers, at best, commercialization can offer the possibility of some diversification into non-staples, but not a total specialization (Pingali et al. 2005).

Hence smallholders can commercialize in staple food commodities, in non-traditional high-value cash commodities, or combine the two types of commodities depending on the agroecological circumstances, levels of production and price risks, and market conditions. Still it is more likely that smallholders will move towards more specialization in the process of commercial transformation in the long run.

The choice of targeting either domestic or export markets in the process of smallholder commercialization is also linked to the type and nature of targeted commodities. Domestic markets could work well for large population size; while high-value, non-traditional commodities are usually produced for export markets (Birahanu et al 2010). In targeting the export market for the process of smallholder commercialization, the issue of product quality, sanitary and phytosanitary standards, timely and regular supply, and volume need to be given emphasis in enabling the small-scale farmers to be part of the game (Henson et al. 1999).

Dolan and Humphrey (2000) works show that an array of issues pose difficulties and risks associated with smallholders' commercialization targeting export market. Regulatory, quality procedures and other issues put smallholders at a higher income risk which might have an adverse consequence on the overall commercialization process. Nonetheless such and other similar constraints could be minimized vertically coordinated supply value chains that use smallholders as out-growers. Domestic and inter regional markets also provide alternative market options for staple foods. Other works like by Dia and Hazell (2004), indicates that there is huge domestic demand for staple foods in Africa, with a steady increase over years.

2.2.5 Measuring Smallholders Commercialization

Understanding smallholders' commercialization requires at least a bird's eye view of the way it could be measured. Measuring the level of smallholders' commercialization helps to gauge to what extent a given farm household is commercialized in its overall production, marketing and consumption decisions, and to analyse the determinants of commercialization (Randolph 1992, Moti et, al. 2009). Different methods are followed because of the difference the conceptualization of the subject.

Reference was made for this review from the works of Moti et, al.(2009) in their work entitled Process, determinants and outcomes of smallholders commercialization. According the mentioned work, despite the widely agreed net welfare gains at household level; a common standard of measuring smallholder' commercialization does not exist. The dichotomy of classifying crops as food and cash crops, and the proportional resource allocation by farming households is considered by some as proxy to measure the level of commercialization.

Ratios like marketed outputs or inputs to the total value of agricultural production or total household income are also used (von Braun et al. 1994). In the dichotomy between food and cash crops, food crops are assumed to be used only for home consumption whereas households are considered as net sellers in the cash crop output markets and net buyers in the input markets for cash crops. Studies however indicate that this dichotomy is refutable since food crops are also marketed and households could also take any position in their food crop output market participation (Gebre-ab et al. 2007; Pender and Alemu 2007). Instead, the level of surplus production available for marketing and the household, location, and commodity specific transaction costs are often more important than the crop type in determining the position of a household in the output markets.

Another way of measuring smallholders' commercialization is the method used by von Braun et al. (1994). Their method specifies three types of commercialization indices at household level: output and input side commercialization, commercialization of the rural economy, and degree of a household's integration into the cash economy. The first index measures proportion of agricultural output sold to the market and input acquired from market to the total value of agricultural production. In the second type, commercialization of the rural economy is defined as the ratio of the value of goods and services acquired through market transactions to total household income. Here, there is an assumption that some transactions may take place in-kind such as payments with food commodities for land use. Thirdly, the degree of household integration to the cash economy is measured as the ratio of the value of goods and services acquired by cash transaction to the total household income (von Braun et al. 1994).

Household commercialization index (HCI) was used by Gebere-ab et al. (1999) and Strasberg et al. (1999) to measure household-specific level of commercialization. The index is the measure of the ratio of the gross value of all crop sales per household per year to the gross value of all crop production. This ratio does not include livestock. Gebre-Madhin et al. (2007) have also used four approaches to measure the level of household commercialization: sales-to-output and sales-to-income ratios, net and absolute market positions (either as a net buyer, net seller or autarkic/self-sufficient household), and income diversification or level of specialization in agricultural production. According to Gebre-Madhin et al. (2007), the sales-to-output ratio measures the gross value of all agricultural sales by a household as a percentage of the total gross value of its agricultural production.

This ratio is like what has been developed earlier by different authors (Abercrombie 1961; Cleave 1974; Ruthenburg 1980 as cited in Randolph 1992; von Braun et al. 1994) as the percentage of agricultural output sold to total agricultural production. The total sales-to-income ratio is the ratio of the gross value of total sales to total income from crop production. In this index, income from crop production is assumed as a proxy to total household income, ignoring income from livestock, and off- and non-farm sources. The market position of a household is evaluated using the ratio of volume of sales and volume of purchases to the total volume of stock: the sum of storage from the previous production year and production in the current year.

The specialization index tries to capture to what extent farm households are specialized in their production to capture the benefits from comparative advantages: producing what they can efficiently produce and buying what they cannot. This index measures the proportion of the value of purchased agricultural products not produced by households to the gross value of agricultural production.

2.2.6. Smallholders' Commercialization and Gender Equality

Two contrasting views are held regarding the impact of smallholders' commercialization on gender equality. On one hand, there is much concern that commercialization can increase gender differences since commercial opportunities are often more accessible to men who may use their advantages to pre-empt the resources of the household to earn income they can control (Wiggins et.al.2011:7). Paseilo (2009) ,Afshar (1991) , Momsen (2010) cited in Afalio (2012) expound a much profound concern on the negative impact .

Modernization of agriculture, through commercialization, will have a negative impact on women reliable source of revenue from subsistence production, role of men and women in labor division, increase in women's dependent status, displacement of women from their farm land and overall increase of masculinity. Women struggle with different issues that affect their full participation in cash crop production and agricultural commercialization, such as land issues, credit facilities, direct access to chemicals and other inputs for their crops and direct market access; which in turn affect both on their income as well as their well-being.

The contrast view is that women economic empowerment, such through increasing their participation in market and benefit thereof, can be one way to address gender inequality, and

bridge the striking wider gender gap in the sector. Other studies also relate the impact of smallholders' agriculture on gender to commodity gender specific demand of, and who controls income generated through commercialization (Moti et, al.,2009:15). According to the review of Issue of smallholders commercialization in Africa (2011), the effect depends on unresolved tensions over gender roles, and the recognition of these issues by those promoting and encouraging commercialization (Wiggins et,al 2011:49).

The review at hand shall explore in-depth and shade some light on smallholders' commercialization impact on gender equality. The elements entertained by both perspectives are given due emphasis. Few individual project evaluations are added as examples for changing or disrupting the power balance that come through or at least through a contribution by smallholders' commercialization for gender equality and women empowerment.

2.2.7. Smallholders Commercialization, Gender and Women Empowerment

An understanding of the outcome of smallholders' commercialization from the perspective of gender equality and women empowerment would provide a useful insight on income flows and expenditures, and gender relationships, the right to access and the ability to access key productive resources (WB 2005 :117). Women's role in agriculture has a vital role in examining the participation and outcome from smallholders' commercialization. The role of women in agriculture is daunted by an array of factors, foremost among others including: unequal access to and control over agricultural resources, unequal returns to inputs and investments, and unfair division of role (World Bank, FAO 2008, Kamal 2014).

As such, smallholders' commercialization through market intervention should consider the unique barriers women facing such as low ownership of assets, unequal access to productive resources, and disproportionate responsibility for unpaid, household work (USAID ,2014). Likewise, poor men and women are subject to market forces, and the capacity of poor men and women to engage in markets beneficially needs enough power to influence terms (Chris, 2012).

The systematic review on gender differentiated outcomes utilizes the evidence, together with others, the work by the World Bank leveling the field which is about the gender gap in the agriculture in the content (2009) , and the works of FAO (2014) on impacts of Agricultural extension on women in Africa. Key insights for the present work is gained from Women's

Empowerment in Agriculture Index (WEAI) by Oxford Poverty and Human Development Initiative (2013) and Framework for measuring women empowerment and characteristics of empowerment developed from impact evaluations by Oxfam (2017).

The Women's Empowerment in Agriculture Index (WEAI) is a survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector. Like this review, the development of the index is based on the increased recognition of the role of the agricultural sector as an engine of growth and development and greater recognition of the importance of women in agriculture. According to the WEIA framework measurement of agency and empowerment should be domain specific and measuring empowerment in Agriculture should encompass five main domains (Alkire et.al 2013). Box 1 Contains the five domains of empowerment in Agriculture as taken from WEIA (OPHDI, 2013). While this domain specific indicator is evidently consisting the key areas of focus for access and control, and decision making; it lacks the element of agency that can look personal level empowerment. Owing to this observation, this research augments the view on the empowerment with Oxfam's framework for measuring women empowerment, and indicators that characterize women empowerment (**Box 2 and Annex B**).

Box 1: The Five Domains of Empowerment in Agriculture

- 1. Production:** This dimension concerns decisions about agricultural production and refers to sole or joint decision-making about food and cash crop farming, livestock and fisheries, and autonomy in agricultural production, with no judgment on whether sole or joint decision-making was better or reflected greater empowerment.
- 2. Resources:** This dimension concerns ownership of, access to, and decision-making power about productive resources such as land, livestock, agricultural equipment, consumer durables, and credit.
- 3. Income:** This dimension concerns sole or joint control over the use of income and expenditures.
- 4. Leadership:** This dimension concerns leadership in the community, here measured by membership in economic or social groups and comfort speaking in public.
- 5. Time:** This dimension concerns the allocation of time to productive and domestic tasks and satisfaction with the time available for leisure activities

Source: **OPHDI(2013), PP 7**

Oxfam GB has a framework for women empowerment called a how to guide to measuring women empowerment: sharing experience from Oxfam Impacts Evaluations (Oxfam 2017) One of the merits of referring this framework, the guide on how to measure women empowerment, was found to be the nuance given to empowerment aspects through the evidence from Oxfam Impact Evaluations, and the characterization of empowerment aspects blended into power lens. Another merit is that it has benefited from the experience Women's Empowerment in Agriculture Index (WEAI) developed by the Oxford Poverty and Human Development Initiative (OPHI).

The framework uses the women economic empowerment definition by VeneKlasen and Mille (2002) as a process whereby the lives of women and girls are transformed from a situation where they have limited power to one where their power is enhanced (Oxfam 2017: 1). The framework provides three areas of changes that broadly signify women empowerment. Box 1 gives summaries of these changes in women economic empowerment, while on **Annex B is**

characteristics of women empowerment using the same framework but looking through a power lens.

BOX 2 :WOMEN EMPOWERMENT

- Changes at the **personal** level take place within the person. This refers to changes in how a woman sees herself, how she considers her role in society and that of other women, how she sees her economic role, and her confidence in deciding and taking actions that concern herself and other women.
- Changes at the **relational** level take place in the relationships and power relations within the woman's surrounding network. This includes changes both within the household and within the community, and encompasses markets, local authorities and decision makers.
- Changes at the **environmental** level take place in the broader context. These can be informal changes, such as in social norms and attitudes and the beliefs of wider society, or they can be formal changes in the political and legislative framework.

Source: Oxfam(2017),PP6

2.3. Empirical Literatures

2.3.1 Subsistence Agriculture And Women In Sub-Sahara Africa

Absolute poverty is highly concentrated among rural poor women and children, and two-thirds of the very poor scratch their livelihoods from subsistence agriculture either as small farmers or low-paid farm workers (Todaro and Smith 2012, UNDP 2014). Globally women tend to be poorer than men. Women are more deprived in health and education, and in freedoms in all its forms. Women have more responsibilities. Women have primary responsibilities for child rearing, and all the resources they are bringing to this role will determine whether cycle of transmission of poverty from generation and generation will be broken. Children need better health and education, and studies around the world confirm that mothers tend to spend

a significant higher portion of income under their control for the benefit of their children than their fathers (Todaro and Smith 2012)

The Global Gender Gap Report (WEF, 2018) revealed that within the broader economic power across the globe, gaps in control of financial assets and in time spent on unpaid tasks continue to preserve economic disparities between men and women. Globally, women do three times more unpaid care work than men, and the unpaid care work is valued at \$10 trillion per year, but even that huge number still doesn't capture the full extent of women lost economic potential (Bills and Melinda Foundation, 2019). As a crucial and critical stage towards addressing the gender gaps in paid and unpaid work, the international definition of "work" was refined to recognize unpaid care work since 2013

It is also noted women in female headed households have less education and income. In addition, rural women have less access to resources necessary to generate stable income and are frequently subject to laws that further compromise earning potential. A higher proportion of female headed households are situated in poorest areas which have little or no access to government sponsored services (Todaro and Smith 2012: 240-241). Women's control over income and resources is limited because of several reasons. Of primary importance is the fact that a relatively large proportion of the work performed by women is unremunerated. Development policies that increase the productivity differentials between men and women are likely to worsen earnings disparities as well as further erode women's economic status within the household. Agricultural extension programs promote female dominated crops frequently at the expense of men. Studies reportedly show that development efforts can actually increase women's work load while at the same time reduce the share of households' resources over which they exercise control, thus resulting women and their dependents remain the most economically vulnerable groups.

The fact that welfare of women and children is strongly influenced by the design of development policy underscores the importance of integrating women into development programs. To improve the living conditions for the poorest individuals' women must be drawn into the economic mainstream. This would entail increasing female participation rates in educational and training programs, formal sector employment, and agricultural sector extension programs. *A process of growth that fails to improve the welfare of people experience greatest hardships broadly recognized to be women and children, has failed to accomplish one of the principal goals of development (Todaro 2012: 243).* In the long run,

the low status women are likely to translate into slower rates of economic growth. This is true because the educational attainment and future financial status of children are much more likely to reflect the present status of the mothers than those of the fathers

In the Sub Sahara Africa 65% population lead subsistence agriculture; with 33% living under absolute poverty; and with the highest gender inequality women and children experience the harshest deprivation (Todaro and Smith 2012, UNDP 2014, WB 2008, WEF 2014). Increasing female headed households, the lower earning of women, and their limited control over their spouses combine to contribute to high disparity. More than elsewhere, the poorest segments live in the households headed by women, where there are no male wage earners

According to the recently published Goalkeepers report by Bills and Melinda Gates Foundation (2009) , small-scale producers vastly outnumber large-scale producers but they earn just a fraction of the income, because they lack access to financial services, improved inputs like seeds and fertilizer, agricultural knowledge, and efficient markets. In addition, both small- and large-scale producers tend to earn less in sub-Saharan Africa than in other regions. According to the same report progress in reducing poverty in the Sub-Saharan Africa is projected to be relatively slow between now and 2030

However, the scenario is not entirely gloomy and hope of transformation is visible. As elsewhere in the world, Agriculture transformation in Africa is an important component of broader economic transformation process that would address the prevailing poverty (Jayne and Amaya 2016, Timmer 1998). Indeed, agriculture in Sub-Saharan Africa is 2-4 times more effective than growth in other sectors in reducing poverty; and enabling women farmers to control their resources is important not only to achieving gender equality and women empowerment but also in eliminating hunger and ending poverty (Meinzen-Dick 2019).

The transformation of the subsistence agriculture to an agri-food system, commercialized and more productive can greatly advance to economic transformation that could be instrumental in addressing the prevailing poverty (Timmer 1998). The multiplier effect is particularly high in rural Africa because of the additional income is spent in the local rural economy (Wiggins et.al., 2011). The commercialization process could generally startwith growth in agricultural productivity where farming is the primary source of employment for most of the population, with a maximum likelihood of rising the income of farming households. The rising income

from increasing surplus production will have a great potential to enhance higher and effective demand for goods and services, agricultural and non-agricultural, and jobs including in other sectors.

A gradual shift from agrarian labor force, to non-farm activities, rural–urban migration, and a slowing of population growth in rural areas would be made possible; and a decline in the relative share of agriculture to the total domestic production (GDP) will succeed (Jayne and Ameyaw 2016). The transformation would be driven by technical innovation, scale economies, shifts to higher-return crops and animal products associated with urbanization and improving market access conditions, and the exit of less productive laborers from farming. In times the process would lead economic transformation that require diversification, sophistication, and specialization of a country’s agri-food system. Labor productivity rises as labor migrates from less productive agriculture to more productive manufacturing and service sectors (inter-sectoral gains) and through productivity growth within agriculture through intra-sectoral gains (Jayne and Ameyaw, 2016)

According to the African Agricultural Status Report 2016 the agricultural sector in Sub-Saharan Africa is showing some aspects of this transformational process; albeit a long stagnation for decades. The reports record a decline in poverty rates in countries such as Ghana, Rwanda, Ethiopia, and Burkina Faso. According to the same source Africa’s workforce is shifting, in some cases quite rapidly, from farming to off-farm sectors; with some resemblance of the like of Green Revolution in Asia. This report depicts the enormous potentials in the emerging trends of the transformation process. It gives an account of the rapidly increasing number medium- and large-scale farms with a sizeable and rising portion of total farmland in many African countries. The ability to respond and absorb the growing population by the steady growing agribusiness and downstream food systems appears to be profound. This assertion is substantiated by the annual agricultural growth rates and total factor percentage presented in **Annex A**.

2.3.2. Smallholders Commercialization welfare outcomes

Many scholars and researchers, international research centers and multi-lateral agencies, UN agencies and INGOs have undertaken numerous studies on outcomes of smallholders’ commercialization. Von Braun had done an extensive research on the impacts of smallholder commercialization on household income and nutrition, and on Agricultural transformation

(1994, 1999). Peter C. Timmer covers a lengthy discussion on smallholder commercialization through his work on Markets and farmers, the political economy of markets and farmers (1997), and commercialization for agricultural transformation and development (1997).

Hagos and Geta (2017), Birhanu and Moti (2010), Gebre-ab (2007) and others have done similar researches and contributed for the discourse from the perspective of Sub-Saharan Africa. The works of Wiggins and others (2011), through future agriculturist research center, on issues smallholders' commercialization in Africa provides a comprehensive analysis. Likewise, several case studies and reviews had been conducted by the World Bank (2015), FAO (2014) and IFPRI (2009). Some of these works, and others will be used as main informants for the findings section. Below is a general summary of the outcome areas as evidenced by the major works and scholars' views on the subject.

The impacts of smallholders' commercialization are reported to be highly specific to the geographic location and policy environment; but overall the positive impacts are likely to outweigh the adverse consequences from the process (Von Braun et al 1999, Burhan and Moti 2010). Put together, it is presumed that smallholders' commercialization is leading to more specialized production systems because of comparative advantages in resources use, which in turn leads to higher productivity, scale of economics, exposure to new ideas and connections to trades, and gaining higher income (Gebre-ab 2001, Von Braun et al 1999, Moti et al. 2010, Wiggins 2011)

The review conducted by Moti et al (2009), on process and outcomes of smallholders commercialization categorizes impacts of smallholders commercialization into three orders. The first-order are mainly income and employment effects that are directly reflected in household welfare. The second-order effects include health and nutrition aspects usually contingent on the level of income attained through the existing level of commercialization. The third-order (or usually known as higher order) effects are the macro-economic and environmental effects that go beyond household level.

Others classify the outcomes differently as commercial outcome, welfare outcome, environmental and macro level outcome (Sharp 2007, FAO 2014). This systematic review uses the combined classification as put by Sharp (2007), FAO (2014) and Moti et al. (2010). The discussion in this literature review part also considers others way of putting the outcomes as it deemed appropriate.

Overall contrasting views are held among different schools of thought on the net effect of smallholders' commercialization and the process. This contrasting view is presented on table 2 and summary section of the different perspectives. More emphasis is given by the researcher on the widely entertained positive impacts, and the effort made here shall be more to dive deep into what it means for the women and men, and whether the implications have to do with gender power balance.

According to the reviews made by the researcher, there seems to be a wideconsensus that commercialization has differential impacts on different socioeconomic groups (wealthy and poor, land owners and landless farm households, women, and children) under different socio-economic, institutional and policy environments, although the net impacts are not necessarily or universally positive. It appears to be less argument on the need for the commercialization to promote social and economic development. But the different impacts on the better off farmers, and resource poor, on women and men have gained due emphasis (Wiggigiset.al 2011) . This review builds more the later part with a bid to get more nuance on men and women, and the implication of same for gender equality and the vise-versa. With this in view, here follows the commonly categorized outcomes of smallholders' commercialization

Household Welfare Outcome

Taken together the welfare outcome could comprise the impact on household income,employment,household expenditure on education health and nutrition, household investment on productive assets and durable goods.The income side is relatively straight forward as mentioned in the beginning of this section. The ability to generate increased household income is more likely over subsistence agriculture. An increased income through commercialization of agriculture could be attained through resource and technical efficiency (Gebre-ab ,2001) , and through well integrated rural markets that would result in less transactional costs (FAO 2014 , Van Braun 1994). Employment on other hand may face either negative or positive effect depending on wider socio-economic circumstances of smallholders in the areas where commercialization is advanced.

INCOME

The review made by Geberemedinet,al.(2010) using the different case studies done by Braun(1994) ; by Dorsey (1999) ; Kennedy and Cogill(1987)in Africa ; and Bouis and

Haddad in Phillipines (1990) and other similar studies collectively showed that household income increases as farm resources are reallocated from subsistence to commercial crops. According to this review, households who pursued commercial specialization scheme of growing coffee in Kenya, and sugar cane in Philippines earned significantly higher annual net income than others.

The same review by reciting by von Braun (1994) states that compared to the smaller but more continuous flow of income in the form of cash and food under semi subsistence production system, higher income from cash crops in lump-sum payments is usually spent within a short time and more on non-food commodities (von Braun 1994). This problem is exacerbated in the absence of well-integrated financial systems that promote savings from cash-crop income.

The gap observed in these and similar studies don't show explicitly how the gains income differ for women and men, and/ or how women affected or benefited from pursuing the commercial scheme. Similarly, the effect of the inability to be well integrated in the market system was explained in terms of the difference market access for women. The present review is attempting to generate some evidence from other studies how poverty in general and income is influenced by commercialization both for women and men.

Employment

The impact of smallholders' commercialization on employment depends on the type of agricultural commodities, technologies used in the production process, the value-added processing involved after the production, and other factors (von Braun et al. 1994). High value cash crops may help to absorb family as well as additional labor. Crops like soybean, tobacco, cassava and other similar crops which involve process prior to marketing help to create local employment. This may in turn help to the disbursement of income from the commodities among the poorest sections of the households in the areas. On the contrary, smallholder commercialization that favors labor-saving technologies like mechanization may have an adverse effect on employment of the agricultural labor force in the family

Household Health and Nutrition

The impact of smallholder commercialization on household health and nutrition features a mixed evidence. Immink and Alarcon expound (1993) expound resource diversion from food

crops to cash crop production which results in lower food availability from own production and more dependence on local food markets. The review by Birhanu and others (2010) brings forth some studies supporting this view and providing evidence on the adverse effects of smallholder commercialization on nutritional status of households, particularly preschool children. The works of Dewey(1981) , Randolph (1992) and Bouis and Haddad (1990) were recited in the review mentioned . It is stated that dietary diversity, dietary quality, and nutritional status of preschool children can be negatively associated with lower crop diversity and increased dependence on purchased foods.

The works of Randolph (1992) cited in Gebremidinet,al.(2010) also found that agricultural commercialization in Malawi was also reportedly mentioned that smallholder's commercialization impacts negatively on child nutrition, more particularly during pick hangry seasons especially during the nutritional stress seasons. Income increase attained through sugar cane commercialization in Philippines was also reportedly mentioned to be necessary but not enough for improving preschooler nutrition. The bottom line from these and other studies is that higher income households preferred to spend more of their cash crop income on non-food items.

The researcher assumes these evidences to be patchy for they don't associate the result who controls more household income and the difference between women and men household income expenditure.

Indeed, the extended coverage of the literature on household nutrition and health associate income from commercialization in relation to the link household consumption, and the equitable access for women and men. Other also provide a strong argument. The debate is that income from commercial (cash) crops is under the control of men. The same authors work had shown that income control by women correlates with improved child nutritional status, suggesting that women are more likely to spend on food and health care. According to these authors, a 1% increase in sugarcane income in South Nyanza District in Kenya results in an increase in energy intake of 24 kilocalories per household per day.

A study recited in Gebremidinet.al. (2010) also indicatedthat, sugarcane production increased household income by 15% which increased household energy intake by360 kilocalories per day, or approximately 33 kilocalories per day per person in the household. In the same and

other materials evidence that the purchase power of households through increased income from helps to purchase a diversified mix of goods and services, and durable household assets.

2.3.3. Women and Market Systems

The Source Book of Gender and Agriculture by the World Bank (2005) provides using insight on the role of women on agriculture, and how the participation of women in markets is daunting. The book shades light on contrasting feature of smallholders marketing activities by women including in the Sub-Sahara Africa, and the researcher finds this the insights in the book have much to do with smallholders' commercialization and gender equality.

According to this source, many parts of the world women play a major role as farmers and producers; however, their access to resources and opportunities to enable them to move from subsistence agriculture to higher value chains is much lower than men's (2005: 175). In sub-Saharan Africa, women are largely responsible for selling and marketing traditional crops such as maize, sorghum, cassava, and leafy vegetables in local markets. In countries where urban markets for these traditional crops are expanding rapidly, such as Cameroon and Kenya, the challenge is to ensure that women retain control over their production, processing, and marketing.

Women are the traditional producers and marketers of horticultural crops throughout sub-Saharan Africa, but the production and supply to the market of horticulture has steadily declined over the years against the global increase (World Bank 2005:176) The entry and participation in the export market faces many deterrents. Inadequate transportation, infrastructure, restrictive international standards, and poor market linkages to mention few. For women, not only export markets but accesses to local and regional market are severely constrained.

Increasing the participation and level of women integration into markets requires targeted analysis and program interventions. Women often hold distinct rights and obligations within the household, and they often perform distinct functions about market activities. These circumstances affect differently women as compared with men their ability to take up opportunities, to invest, and to take risks. Most women farmers are smallholders who cultivate traditional food crops for subsistence and sale, whereas men are more likely to own medium to large commercial farms and are better able to capitalize on the expansion of

agricultural tradable goods (World Bank 2005:176). Farms managed by women are generally characterized by low levels of mechanization and technological inputs, which often translate into low productivity (FAO 2006). Globally integrated markets mean that international prices affect even smallholders producing only for the domestic market. The free entry of traditional agricultural products into domestic markets can hit small-scale farmers hard if they are not prepared (World Bank 2005)

The less presence of women in the formal market, and urbanized and development market is another feature. Without equitable access to land ownership, to formal financial services and technical services, and training integration of women into the market remains highly limited (FAO 2006, IFAD 2002).

Nonetheless, markets for smallholders' commercialization are not without opportunities for women. The relatively higher participation of women in production systems often implies smoother procedures for certification such as for organic production (WB 2005) High-value crops require labor-intensive production techniques, whereby mechanization tend to be not smooth, and thus provide opportunity for women's specialization or increased role. Many studies also indicate that with the increasing urbanization, the demand for high-value products such as vegetables and local crops is steady growing, and this provides an opportunity for women's participation.

The global value chain for agricultural and livestock markets is undergoing a rapid development fostering the link between local, national, and international markets. The growing demand of health concerns of consumers in the developed world is rendering higher demand for fresh produce; given post-harvest quality to meet standards, and with and improvement international cold chain logistics for the transport of fresh fish, meat, and horticultural products. Markets for certified organic and fair-trade products are increasing

The outstanding challenge appear to be ensuring and enhancing that women retain control over their production, processing, and marketing; product quality and reliability must be enhanced. Deployment of cold chain, transportation, and communications infrastructure will be critical to link producers and women with the growing markets.

CHAPTER THREE

FINDINGS AND DISCUSSIONS

3.1 Gender Differentiated Welfare Outcome

Many of the researches, with exception of few, were found to be patchy with respect to generating evidence on gender differentiated outcome of smallholders' commercialization. Two problems could be ascribed to the existing gap. One, despite the recognition that smallholders' commercialization can impact variously different societal groups, studies appear to be less in terms of pursuing gender lensed approach. Many of support programs for smallholders' commercialization appear to be gender blind (Wiggins et. al 2011: 7). Nonetheless, this review attempts to shade a faint light on different results of smallholders' commercialization on men and women participants.

By and large, women as compared to men, participate less and are less positively impact by smallholders' commercialization. By virtue have higher potential of crop production efficiency advantages; access to market information and credit and incomes than the female-headed households, and thus higher participation in commercialization; male headed households are positively impacted against poverty as compared to female headed households (Mitiku and Belay , 2014).Average female productivity in agriculture in Africa varies by 25%, where sometimes goes up to 66%; but even with same access to land and credit women's return to commercialization is very less (World Bank 2015). Compared to men, women's endeavor is local oriented, highly risk aversive, run a smaller volume of business, and less integrated into the market.

Across agricultural commodities, women have less chance of being involved and getting outcomes form commercialization of cash and exports crops (like coffee, tobacco, cacao sugar cane etc because of the multiple factors, including land and labor technology to access, connectivity to markets (World Bank 2015, Mitiku and Belay2014, Afalio 2012, FAO 2014). Smallholder commercialization supported by a gender analysis show a positive result, both in terms of involving more women,and enhancing the gains as well as contributing to gender equality.A glimpse of emerging cases provides the possibility that commercialization supported by intervention filling the gap women have enables to harness a positive multiple outcome from smallholders' commercialization. One case is added to this review as an example from Oxfam project impact Evaluation done recently in Ethiopia.

Table 3 :Works covered by the systematic review and highlights of key findings

Author /year	Country /commodity	Sample	Themes Analysis &	Published	Gender and/or empowerment Indicators	Key Findings and Comments
Richardson et.al 2002	Ethiopia, Tanzania, Zambia,	Review	Women's Business	Y	Women standalone	<p><u>Growing small business women Entrepreneurs in Africa:</u> a study which reviewed the success and changes of women business in three countries of Africa</p> <p>Key findings:</p> <p>Women businesses are distinctively constrained by social norms lack of, market integration small size business, inadequate capital</p>
Geoffrey et.,al. 2007	Kenya	457	welfare outcome	N	None	<p><u>Smallholders Agricultural Commercialization and Poverty:</u> exploring the impact on poverty from panel data</p> <p>Key findings: Increased participation of smallholders in commercialization, through crop output sale increases household expenditure on basic needs and decreases poverty gap. The study does not cover as to how this is different or same among female farmers, and female household heads</p>

Wiggins et, al.2011	Africa	Review	Determinants, outcomes, and policy Issues	Y	Gender relationship, access and control over resources within a household	<p>Small farm commercialization in Africa: Reviewing the issues: - A review conducted on the main issues affecting smallholder's agriculture commercialization.</p> <p>Key findings</p> <ul style="list-style-type: none"> - Welfare outcomes of smallholders' commercialization are realized upon having access to physical access to markets, markets are competitive, farmers have access to credit, technical advice, and market information - Smallholder commercialization doesn't directly contribute for gender inequality unless supporting interventions fail to address existing issues of gender inequality - Policies to promote commercial small farming address two main areas: they promote increased productivity and production for sale, and they link farmers to markets in effective, efficient and fair supply chains.
Afalio, 2012	Nigeria, cash crops	Review	Gender power dynamics: gender role and commercialization impact on gender equality	N	Female farmers & female headed HHs	<p><u>Agricultural Commercialization and Its Impacts on Gender Relations</u> This study explored the impact the impact of women's involvement in the commercialization of agriculture on gender relations, using processes of agricultural commercialization, and the shift in gender power dynamics.</p> <ul style="list-style-type: none"> - The study indicates that women can thrive on commercialization when social norms are addressed, and access to land and other factors are addressed . The result positively impacts gender equality

Seleti and Tlhompho , 2012	South Africa	Review	Extension service, finance, community participation and other services by men and women	Y	Female farmers and female headed HHs	<p>Rural Women Subsistence Farmers, Indigenous Knowledge and Agricultural Research in South Africa: <u>a</u> study that conducted to examine the role of gender in the use of indigenous knowledge, and how gender access to agricultural research and technology for the sustainable community livelihood.</p> <p><u>Findings</u></p> <p>-women have less access to technologies, participate less in community level activities, and credit services are not tailored to their needs</p>
Mutabazi et.al 2013	Tanzania, Onion	140	Level of commercialization, factors & outcomes	N	None	<p>Commercialization of African Smallholder Farming. The Case of Smallholder Farmers in Central Tanzania.</p> <ul style="list-style-type: none"> - The level of commercialization is affected by farmers access to labor, land , credit , and other physical assets - Does not discuss the differentiated effect on women and men
Eleet,al. 2013	Nigeria	120	Determinates, and level of commercialization	Y	None	<p>Assessing the Extent of Commercialization Of Smallholding Farming Households In Cross River (Nigeria) :- a study that assessed level of commercialization among households in the three agricultural zones, & micro level factors. <i>Major factors identified include access to physical resource (land and inputs) , capital/credit , water , extension , market are the main ones</i></p>

FAO, 2014	Kenya, Maize	500	Farmers attitude to commercial models	y	None	<p><u>Smallholder farmers attitude to commercialization: The case of maize in Kenya.</u> a study conducted to explore smallholder maize producers and rural youth with respect to their attitudes, strategies and opportunities related to maize commercialization in two regions of Kenya</p> <ul style="list-style-type: none"> - Farmers assume high risk to involve in market and have developed less skill of commercial models. Policy options and extension services need to address these.
Mitiku and Belya, 2014	Ethiopia, Coffee	280	<p><u>Determinates and outcomes:</u>crop output market participation, HH income and consumption</p>	Y	FHHs	<p><u>Impact of smallholders' commercialization on Poverty among major coffee producers in Ethiopia.</u> A study conducted in West south of Ethiopia on impacts of smallholders' commercialization on poverty</p> <p><u>Finding</u></p> <ul style="list-style-type: none"> - Commercialization increases household welfare outcome, not significant in reducing poverty because the poor and women headed households participate less. Female headed HHs participate even less because of lack of access to credit

World Bank, 2015	Ethiopia, Malawi, Niger, Nigeria, Tanzania, Uganda	Integrated Surveys on Agriculture from the six countries	<u>Gender gap in Agriculture:</u> Access to resources and return to resources	Y	FHHs, and women	Leveling the field: Improving opportunities for women farmers in Africa provides a detail analysis of the drivers accounting for gender gap in agriculture in six countries. <ul style="list-style-type: none"> - Female productivity gap ranges (lower than men) from 13%-25% - The gender gap in agriculture is caused by more than unequal access to inputs. Women also get unequal return to same amount of inputs - When conditions are addressed women show success on smallholders' commercialization, and these shows promising contribution to gender equality
Gebersilasie and Bekele 2015	Ethiopia, Wheat	160	Technology adoption: asset holding, access to credit	Y	None	A study conducted to analyze the main determinants of adapting improved wheat and allocation of land <ul style="list-style-type: none"> - Educational level of household head, family size, distance to main road, tropical livestock units, access to credit facility, frequency of contact with extension agents, perception of household towards cost of the technology and distance from the nearest market affect adoption of improved wheat - The study doesn't relate these factors to women headed households or women farmers in general

Kibiti et.al.2016	Zimbabwe	102	Determinants	Y	None	<p>A study on determinants of agricultural commercialization among smallholders' commercialization in Munyati Chikomba District, Zimbabwe. Results include:</p> <ul style="list-style-type: none"> - Farming experience of household head, method of cultivation (input , technology) , household income , access to market information , and distance to the market place are among the key factors affecting household commercialization
Hagos andGeta, 2016	Ethiopia	Review	Drivers& determinates	y	None	<p><u>Review on smallholder's agriculture commercialization in Ethiopia:</u> a study which synthesizes major determinants of commercialization including Institutions, markets, access to services, and others</p> <ul style="list-style-type: none"> - Eight major determinants affect smallholders' commercialization. Population, Land, access to technology, market and transaction costs, institutional and policy Issues,

Mazengia ,2016	Ethiopia, Maize	160	Output market and determinants market	Y	FHHs	<p>A study on Smallholders commercialization of maize production in Guanga district exploring the extent of maize output marketing and determinants</p> <ul style="list-style-type: none"> - sex of the household head, distance to the nearest village market, size of the household and the land holding size are main determinants. - Sex of the household head, household size and land holding size have positive and significant role in the volume of maize sold. Male headed households sell about 6.58 quintals of more maize as compared to female headed households - Land holding affects both households' decisions to participate and intensity of participation in maize sales.
Mbegallo, 2016	Tanzania, Maize and Paddy	NA	Fertilizer application and outcomes of smallholders' commercialization	N	None	<p>A study done in Tanzania on the status, determinants, and effects of agriculture commercialization among the smallholders</p> <ul style="list-style-type: none"> - Access to physical assets, credit, and market determine level of participation

Kibirigi , 2017	South Africa, Maize	108,	Welfare Outcome: crop sales, HH income, social value	N	FHHs	<p>Smallholders Commercialization of Maize and Social Capital in East Cape Province of South Africa</p> <ul style="list-style-type: none"> - Farmers with more household members, earning more incomes from crop and use river and dam water to produce higher market surplus. HH size provides labor, income from crop increases capital to involve in commercialization. - Farmers' bonding social capital had a positive and significant impact on household commercialization of maize. - The research does not explain as to how family size, labor, and sale from crops vary for women and men
Girma,2017	Ethiopia, wheat	146	Determinants	N	None	<p>The study on determinates of smallholders' wheat commercialization that assessed the extent of commercialization progress of wheat farmers in one district over the period of three years.</p> <p>-farmers participation progress over years. Extension service, and land holding are key factors</p>
Mekonnenand Alamirew, 2017	Ethiopia ,2017	2177	Access to road, Transport, level of commercialization	Y	None	<p><u>The Effect of Rural Road Transport on Crop Commercialization:</u> studied the effect of having access to road and transportation on market participation, and level of commercialization in rural Ethiopia</p> <p>-Accessible communities participate higher than non accessible or community those not having access to all whether roads</p>

Gutu , 2017	Ethiopia	453	Market participation, degree of commercialization	Y		<p>A study titled Climate change and challenges of smallholders' commercialization; examined smallholders market participation, degree of commercialization and link to poverty.</p> <ul style="list-style-type: none"> - Commercialization increases with better access to extension services, size of land holding, number of farm plots, area under irrigation, access to credit, access to improved seed, diversity of enterprises, saving, livestock holding, total value of farm earning and engagement in non-farm activities. - Farmers with long experience of farming commercialize less to minimize risk
Paul et.al 2017	Ethiopia, Chickpea	614	Adoption, commercialization and production	N	None	<p>Impacts of chickpea adoption on smallholder's commercialization: a study explored the cultivation of improved chickpea variety on HH commercialization</p> <p>-Participation and adoption of improved chickpea increases household crop output sale. the study doesn't differentiate the result between men and women</p>
Tesfaye, 2018	Ethiopia	1421	Land renting, market participation, output marketing	N	None	<p>Impact of land rental on smallholders' commercialization Evidence from northern Ethiopia: this study relates the growth of famers participation when they get more land through renting</p> <ul style="list-style-type: none"> - Availability of land through rending increases HH participation in commercialization by 8%. Does not discuss how women are able to get land through renting

Elizabeth & Waholi, 2019	Uganda, Dairy	171,	<u>Determinates & extent of commercialization:</u> participation /decision and sale of market sale	Y	FFHs	<p><u>Analysis of Market Participation Behavior Among Smallholder Dairy Farmers:</u> -A study to analyze determinants of dairy farmers in market participation and percentage of milk sale among dairy farmers in three main regions of Uganda</p> <ul style="list-style-type: none"> - Men participate more than women by 91.25 against 8.75 % . having more improved dairy cows, and a greater number of children increases household participation in milk sale
Lombardino et.al,2019	Ethiopia, Honey	1101	<u>Women Empowerment</u> HH income, production, and women empowerment	N	HH decision making, income control, self-confidence and others	<p><u>Impact of smallholders' commercialization on Poverty among major coffee producers in Ethiopia.</u> Oxfam impact evaluation on a project supporting smallholder women honey producer's commercialization</p> <ul style="list-style-type: none"> - Women participating honey value chain demonstrate high decision making self-confidence, decision making against non participants

A honey value chain development project supported by Oxfam in Ethiopia was aimed at increasing the capacity, productivity and income of honey producers to advance women's economic empowerment within the honey value chain and to influence markets in favor of female smallholders. A total of 5930 women were mobilized and organized into 334 Self Help Groups (SHGs), through which women had the opportunity to obtain capacity building activities aiming to increase knowledge and skills related to honey production; access to financial services and participate in cooperatives, taking up leadership positions and enabling women to access better inputs and tools for honey production and marketing opportunities. Better honey production practices are expected to increase honey quality and production, which combined with better marketing channels are expected to increase women's income from honey, which should lead to overall higher household income and greater control over resources. The results of the impact evaluation show a substantial increase in household income technology use, production, and in women empowerment indicators, and market integration.

Project Impact evaluation conducted based on experimental design and using Oxfam GB women economic empowerment model that deploys a composite index designed to assess this complex and hard-to measure concept. The tool is based on a framework that remains unchanged from one evaluation to the other, while the characteristics and indicators that make up the index change from context to context, aiming to capture the characteristics of an empowered woman in the socio-economic context of analysis. The index provides a concise, but comprehensive, measure of women's empowerment, while also allowing analysis by level of change or the individual indicator. According to the definition used in the impact evaluation women's empowerment is defined as the process whereby women's and girls' lives are transformed from a situation where they have limited power to a situation where their power is enhanced. The measurement framework recognizes three levels where change can take place: personal, relational and environmental. Changes at a personal level refer to changes taking place within the person changes in how the person sees herself, how she considers her role and that of other women in their society: their economic role and their confidence in deciding and taking actions concerning themselves. Changes at the relational level refer to changes in the relationships and power relations within the women's surrounding network. This includes, for example, changes within the household, the community, markets and local authorities. Finally, changes at environmental level take place in the broader context. These can be informal changes, such as social norms, attitudes, and the beliefs of wider society, as well as formal changes in the political and legislative framework.

3.2 Relation between Smallholders' Commercialization and Gender Equality

A considerable attention appears to be existing in examining the impact of commercialization on gender equality; whilst there seem to be less on the vice versa. This section will attempt to give a very light touch on both.

The difference in access to and control over resource; and of the effect of unequal on the difference of welfare gains for men and women profound. Evidently, the right to access and the ability to control key productive resources (land, labor, information)—already fostering conflict between men and women farmers—will become ever-more important in relation to stallholders' commercialization (WB 2005). All aspects of women empowerment, either from empowering women in Agriculture and /or women empowerment measurement framework of OGB have to do with enabling or limiting the participation of women in the commercialization process, and the benefit therefrom.

However, the notion that stallholders' commercialization is negatively affecting gender equality is appears to be in deficient of empirical evidence, and in some cases seriously debatable. In the absence of targeted analysis, and where there is little effort to address existing gender gabs; yes smallholders commercialization would contribute negatively to exacerbate existing gender disparity, especially in the agricultural sector (Wiggins 2011, World Bank 2009) . On the contrary, supporting stallholders' commercialization, underpinned by empowering at all levels of change (personal, rational, and environmental), and covering the key dimensions of empowerment, stallholders' commercialization shows a promising evidence in closing gender gap as well as in enhancing the welfare gains of households.

Research report by the World Bank (2005) on the consequences of small-scale commercialization indicated that the introduction of cash crops weakened the traditional gender division of intrahousehold rights and obligations, that the gender-based division of labor broke down, and that farm women increasingly undertook tasks previously done by men. The vegetable commercialization in Gambia, reviewed by Wiggins et.al (2011) share most of these findings, but with a difference conclusion on the causes for such effects, maintaining that it's is the unresolved issue which could be ascribed to the negative impact rather than direct effect of commercialization itself. On commercialization impact on poverty; women are less positively impacted.

These might be possibly because women had less opportunity to involve because of the limited access to credit and other essentials (Mitiku and Belay 2014 :10). Emerging evidences also show the more positive impacts, even under the traditional role of women, and with the limited access to and control over resources. A more integrated role of women and men was witnessed in the study in Nigeria (Afalio 2012). In the modern apiculture production supported by Oxfam in Amhara, women increasingly became members of saving and credit groups, household decision making process, and earn income and control. In the same country, Oromia region, support to commercialized vegetable production enabled women to involve more,with an additional effort on household unpaid care work increasingly understood by men and the community (Oxfam in Ethiopia 2019).

The world Bank study, with an expanded coverage of six countries reveals a difference of productivity with a range 13-25%; and men and women don't get equal return with the same /equal access to in terms of agricultural productivity (WB 2015). Even with such striking difference, improving women's access to markets and enabling female farmers to shift into high-value commercial agriculture both show promise. The case of women farmers being less likely involved in export and cash crops contributes to gender gap, and there all the evidence in in Malawi, Uganda, and Nigeria that female farmers enjoy higher returns than male farmers from switching into high-value agriculture.

The apparent differences in participation and impact directly and indirectly limit productivity, welfare, and economic growth; and thus, augment to make agricultural change a gender and development issue.

Across the board, studies witness the struggle of women against cultural norms and values, access to and control over resources, broader market systems, and policy and institutional systems(FOA 2014, Afalio 2009). Research endeavors should thrive to integrate these factors, and the interaction between these factors could increase the body of knowledge on gender implication of smallholders' agriculture andcontribute for agricultural development. When examining the impact on women, a distinction should also be made between women headed households and the rest. A proper program support addressing issues, underpinned by policy instruments that leverage promising results would enhance both the impact of smallholders' commercialization, and its contribution towards gender equality.

3.3. Interplaying Factors affecting the participation of women in smallholders' commercialization

Studies show that a multiple array of factors are working together to deter women participation and lesson the outcome from the participation of commercialization. Access to land and quality and quantity of labor , low level of technology use (information, production and input, and production processing), access to credit, opportunity for business and personal networks (which has effect on their business know-how) , institutional factors and social norms , and less market integration and high transaction costs and other elements of the broader socioeconomic systems combine to constrain the participation of women in smallholders commercialization .

The lesser participation in and benefit from of women from smallholders' commercialization, in turn, stands as one of the key drivers in the existing wider gender gap in the agriculture sector in Africa. While the key drivers and overall gap the overall gap in agricultural productivity and productions is dually serving as a causal factor in limiting the extent of and outcome from the commercialization for women.

The agricultural gender gap, and drivers vary across countries in Africa but farm labor and productivity, and access to land are commonly upfront in the list (WB 2009). The list in table three shows the different drives accounting for the existing gender gap in Agriculture in six countries. Even though the list touches lightly on smallholders' commercialization, a clear link can be established with regards to how the drivers are working against the participation of women and benefit in as much as agricultural productivity and production, and technology are key factors for the participation and for the level of outcome from the participation.

Table 4: Gender gaps in agriculture and main drivers in some African Countries:
 Source World Bank 2015)

Country	Gaps and drivers	Magnitude
ETHIOPIA	Overall Agricultural Gap	Female farm managers produce 23% less per hectare than their male counterparts
	Household Farm labor	Female farm managers live in households with 1.7 fewer members on average than male farm managers. This difference widens the gender gap in agricultural productivity considerably, explaining nearly a quarter (23%) of the overall gap.
	Household Responsibility	Female farm managers spend 9 hours less per week on their agriculture, a factor accounting for 13% gender gap. An hour spent by a woman on her own farm activities does not yield as large a pay-off – in terms of increased
	Quality and Size of land	Women face challenges in obtaining the right agricultural land to boost their productivity. This would account for 20% of the overall gender gap.
	Return from farm inputs	Women get less yield improvements than men for same amount of fertilizer and oxen use, due to the differences in knowledge of appropriate farming techniques or proper timing of use.
	Knowledge of Improved farming Practices	Women receive less effective extension advice or guidance that is not tailored to their specific needs
MALAWI	Overall Agricultural Gap	women produce 25% less per hectare than plots managed by men.
	(Quantity of) Farm Inputs	Women use lower levels of agricultural inputs, including improved seeds, inorganic fertilizer and extension services, on their plots compared with men. The disparity accounts for more than 80% of the gender gap in agricultural productivity.
	Quality of Fertilizer Application	Men get larger improvements in yield, even when they apply the same amounts of inorganic fertilizer as women, suggesting that women may use inferior quality fertilizer, apply this input incorrectly or use it at the wrong time.
	Efficiency of Farm Labor	Adult male labor generates greater returns for male-managed plots compared with female-managed plots
	Burden of Child-Care	Child-care responsibilities fall primarily to women and are likely to restrict their ability to supervise farm labor and reduce the productivity of their plots. Having a larger share of children in the household significantly reduces the productivity of female-managed plots but does not affect male managed plots.
	Export Crop Cultivation	Men are largely cultivating export crops (mainly tobacco and cotton) because of the share of land under export crop, accounting for over 50% of the difference in agricultural productivity
NIGER	Overall Agricultural Gap	Women produce 19% less (in terms of gross value of output) per hectare than plots managed by men, on average.
	Farm Labor	Women face significant challenges in accessing, using and mobilizing male farm labor.
	Quantity and Quality of fertilizer use	Men use more organic and inorganic fertilizer per hectare than women, which widens the gender gap. Men also derive a larger boost in productivity from each unit of organic fertilizer per hectare
	Land Ownership Characteristics	Men are more likely to report owning land and to enjoy higher returns to ownership than women. They also benefit from higher relative returns to an increase in land elevation; differences widen the male/female yield gap and underline important gender disparities in tenure security and land attributes

Country	Gaps and drivers	Magnitude
	Child care responsibilities	An increase in the proportion of children in the household is correlated with higher returns for men relative to women. This finding may well be linked to women's larger role in child-care and household responsibilities, which is likely to restrict their ability to supervise farm labor which reduces the productivity of their plots
NIGERIA	Overall Agricultural gap	Women in northern Nigeria produce 27% less per hectare than plots managed by men,
	Quantity and Efficiency of labor	Men in the north tend to live in households that have more adult labor available and tend to hire more outside labor to meet their agricultural needs.
	Fertilizer use	Female farmers tend to apply less fertilizer per hectare than men, and this difference represents a substantial proportion of the overall gap.
	Commercialization	Women's cultivation of cash crops and use of purchased seed narrow the gender gap in terms of returns, meaning that female farmers enjoy higher productivity increases from these activities relative to men. Encouraging female farmers to cultivate higher-value crops could help them leverage this advantage to bridge the gender productivity gap
TANZANIA	Overall Agricultural Gap	Women produce less by 14% than men (in terms of gross value of output) per acre than plots managed solely by men or jointly by other family members.
	Quantity and efficiency of labor	Households with male- and jointly managed plots have twice many adult men as those of female managers, which drives a large portion of the country's gender productivity gap. The availability use and intensity of male farm labor widens the male female difference in yields. A day of labor of male family member or a hired labor generates higher increase in yield for male and/or jointly managed plots as compared with female managed plots
	Fertilizer & pesticides	Male and joint managers receive higher returns from the use of organic fertilizer and the use of pesticides than female managers. Gender differences in knowledge relating to timing and appropriate use of these productive inputs, or even in the quality of the products themselves result in differences.
	Regional Differences	Tanzania's more arid and food-insecure regions tend to have the largest gender gaps in yields. Individual female managers in the less fertile central and eastern zones of the country consistently produce less per acre than males or joint managers, with average gaps of 26% in the central zone and 51% in the eastern zone. In the southern "breadbasket" portion of the country, men and women farm at similar levels of productivity

3.3.1 Land and Labor, Size and Productivity

The women rights to land stands to be among the key determinant in Sub Sahara-Africa, which thus affecting the investment women can make on their plots of land (WB 2009, Meinzen-Dick 2019). Women rarely own land and mostly they access land through male relatives most commonly through husband and father, and this arrangement makes them vulnerable when divorce and under other circumstance (Meinzen-Dick, 2019). A study in Nigeria indicates that the availability of land not only through inheritance or on family farms but also on a rental basis; is one of the major incentives for women to participate in commercialization of cash crops. Women who have access to farm lands are powerful

sustainers of their homes against poverty, through their own visible farm labor and cash crop production, independent of their husbands (Afalio, 2012) . The possibility of having land by rental basis also increases the participation and output market by around 8% (Tesfaye ,2018)

Overall agricultural productivity of women farmers is less than by 23-27% from men from the same plot of land (WB 2009). Which could be explained by lack and inefficiency of farm labor, low application of technology (fertilizer, other inputs applications), inappropriate holding of asset (land, TLU and other), and the lesser time of women to spent on farm land due to their multiple competing household responsibilities including child care and other unpaid home care.

Women farmers across Ethiopia, Malawi, northern Nigeria, Tanzania and Uganda have fewer household members to provide labor on the farm or support in the home. Further, child-care responsibilities fall primarily to women and are likely to restrict their ability to supervise farm labor and reduce the productivity of their plots. In Malawi and Niger, having a larger share of children in the household has been increasingly noted to significantly reduce the productivity of female-managed plots but does not affect male managed plots.

3.3.2 Technological Advancement, Extension Services

Advancements in technological resources is another factor deterring women from participating in commercialization and the outcome from it. Women have by far limited access to technological resources (Peterman et.al 2010,) Access to technological resources include inorganic fertilizer, insecticides, improved seed varieties, mechanical power. In most of the country's extension services are not tailored to the specific needs of women which thus limits their knowledge in proper farm management, technology application, and product quality handling. Evidences from Ethiopia, Malawi and Nigeria and Uganda show that men get larger improvements in yield, even when they apply the same amounts of inorganic fertilizer as women, suggesting that women may use inferior quality fertilizer, apply this input incorrectly or use it at the wrong time (WB 2015). Women use lower overall low levels of fertilizer than men, which reduces their relative agricultural productivity. According to the research by the World Bank on gender gap in Agriculture in Africa (2015), in Ethiopia and Tanzania, gender differences in returns to fertilizer contribute to the gap, implying that female farmers in these countries use lower-quality fertilizer, apply the input incorrectly or use it at the wrong time.

Apparently, knowledge and training in farming methods and techniques are critical for both women and men, but women farmers tend to have less access to this information, and particularly information attuned to their needs. Women farmers tend to receive second-hand information from husbands and friends if they are not the head of their household. Extra household responsibilities, mobility constraints and inability to effectively communicate with male extension agents due to cultural norms put women in a disadvantaged position to benefit from available extension services and adaptation of appropriate technologies. For example, according to the World Bank Report on gender gap in agriculture presented in Table 3 women in Ethiopia and Uganda benefit less than men, in terms of increased agricultural productivity, from some sources of extension advice that their households receive, suggesting that current agricultural extension programs are better attuned to the needs of male farmers. Female access to extension services, and knowledge on agricultural practices is limited because of their limited connection of social networks

3.3.3 Institutional factors and Social Norms

Institutional factors and social norms work against women. The disparity between who farms and who receives inputs, credit, and other largely owes to institutional and social barriers. The perception that women produce crops for subsistence and not for the market, women's less secure land tenure and provision of credit through organizations geared towards men, affects the provision of credit to women farmers (Seleti and Tlhompho 2004). Women's contribution and participation in agriculture is less visible due to the patriarchal norms that makes African rural women contribution label to the household, only subsistence, and non-economic or non-market activity (Afalio 2012, FAO 2014 , Mufamadi 2006).

In some countries like in Malawi, northern Nigeria and Uganda, female farmers were able to demonstrate their ability of participating and getting higher returns than male farmers from switching into high-value agriculture, but despite the existing evidence participation of women in lucrative and high value cash crops is highly constrained by the patriarchal norm, together with other detaining factors

The traditional gender role which puts unfairly women in position to take extra burden of unpaid, unrecognized and undistributed works at home is critically deterring their participation in accessing extension services, and their social networks, and market integration. Existing cultural norms also extent as far as believing t that women may not be

able to afford to pay as much as men for effective farm workers; that cultural norms may mean that these laborer's work harder for a male supervisor; with additional constraint of time to effectively supervise farm laborers due to the increasingly heavy work load at home.

3.3.4 Markets and Transactions costs

Market failure and market volatility is not only among the critical factors affecting smallholders' commercialization. It is one the key drivers increasing poverty in Sub-Saharan Africa (Geoff et, al.2009). Poor men and women lack the physical and human capital assets to cope up with market shocks. The poor integration of markets over time and space due to inadequate institutional and infrastructural linkages reduces inadequate institutional and infrastructural linkages affects physical markets and reduces producers' and traders' access to information that signals price changes, which limits their ability to change their patterns of production and trade to avoid economic shocks. (Geoffet, al.2009). The high transaction cost associated to inadequate institutional and market infrastructures is thus deterrent to market participation and commercialization. Transaction costs consists far more factors other transportation, including institutional dimensions of transacting (Johann et, al.203).

A study on the effects of access to road on crop commercialization (Mekonnen and Alamirew 2017) has found that the level of commercialization and market participation in accessible communities is found to be higher than that of inaccessible communities. The same study indicates that, the provision of rural road can increase the level of stallholders' market participation and commercialization significantly as it facilitates market integration and reduce the transport cost burden. Key policy options that help to deal with high transportation can be public support to smallholder farmers for market participation and orientation; land tenure and property rights; and policy and program coordination. (Johannet, al.2013). These options however need to account the different situation of poor men and women. In rural Africa, facilitating the availability and access to all whether roads and adoption of agricultural transportation can improve smallholders market participation and level of commercialization

Evidently, women's integration in the market is further constrained by other factors other than those affect men. Women's ability to be connected to markets outside their areas is much limited due to their mobility factors, household cares (Richardson et al 2004). Women increasingly supply national and international markets with traditional and high-value

produce, but compared to men, women farmers face several disadvantages, including lower mobility, less access to training, less access to market information, and less access to productive resources (WB 2005). Both for men and women need accessible and cost-effective communication systems such as mobile telephones can help generate information and other market-related services.

CHAPTER FOUR

CONCLUSION AND RECOMMENDATIONS

The gist of results in this systematic review is women participate less in and benefit less from smallholders' commercialization than their male counterparts. Smallholders' commercialization by women farmers has shown up to be highly constrained by being highly risk averse, compared to men, women's endeavor is local oriented, highly risk averse, in deficient of economies of scale, and less integrated into the market system as compared to men farmers.

Though largely eschewed to men than women; evidences however don't imply negative impact on gender equality. On the contrary, emerging evidences -albeit less in number, exhibit that smallholders' commercialization have a huge potential for the involvement of women farmers within all the ranges of staple foods and cash crops, traditional and high value export crops alike. Despite foregone characterization impacts are also very promising both in terms of attaining the positive welfare gains as well as in bridging the gender gap, especially in the agricultural sector. Intrinsic to the later are targeted analysis of supporting interventions and addressing the inherent gender gaps with a concerted effort and with a blend of context specific, pertinent approaches in the sector. Such combined approaches can draw on the existing experience of gender analysis, empowering women farmers and the range of changes in women realities at personal, rational and environmental levels.

It's apparent that the range of factors affecting are numerous and inter play with each other. Increasing research evidences would benefit both the existing body of knowledge on smallholder's commercialization from the perspective of gender and women empowerment. Differentiated impact remains to be an empirical issue. A humble observation of this researcher is that quite several analytical and operational tools remain without feeding into each other while doing so is of paramount importance to the understanding of smallholders' commercialization from the gender perspective. To mention few, the household market index can benefit from a blend of gender analysis and women and market systems framework (Oxfam 2010). The framework on smallholders' commercialization process and outcome can borrow the lenses of measuring empowerment in agriculture (OPHDI 2013), and measuring women empowerment (Oxfam 2017)

Likewise, policy measures and program interventions need to address the broad spectrum of land and input access, finance and extension, existing norms and customs, and other spectrums of the wider market systems affecting smallholder women and men farmers. Foremost among others, equal access to land and agricultural inputs, financial access suitable to women, interventions directed at enhancing the agency and power dynamics equitably are most critical.

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Annexes

Annex A: Annual growth in agricultural value added and total factor productivity, 2005–2012, selected African countries

	Agricultural value added, annual % growth (2005–2012)	Agricultural total factor productivity, annual % growth (2005–2012)
Burkina Faso	6.0	-0.08
Cote d'Ivoire	-1.75	3.06
DR Congo	3.13	-1.17
Ethiopia	8.35	2.68
Ghana	3.56	1.44
Kenya	2.72	0.56
Malawi	3.30	2.93
Mali	6.34	2.17
Mozambique	6.31	2.18
Nigeria	6.15	-0.47
Rwanda	5.26	6.19
South Africa	1.95	3.15
Tanzania	3.97	1.46
Uganda	1.40	-2.68
Zambia	0.33	3.14

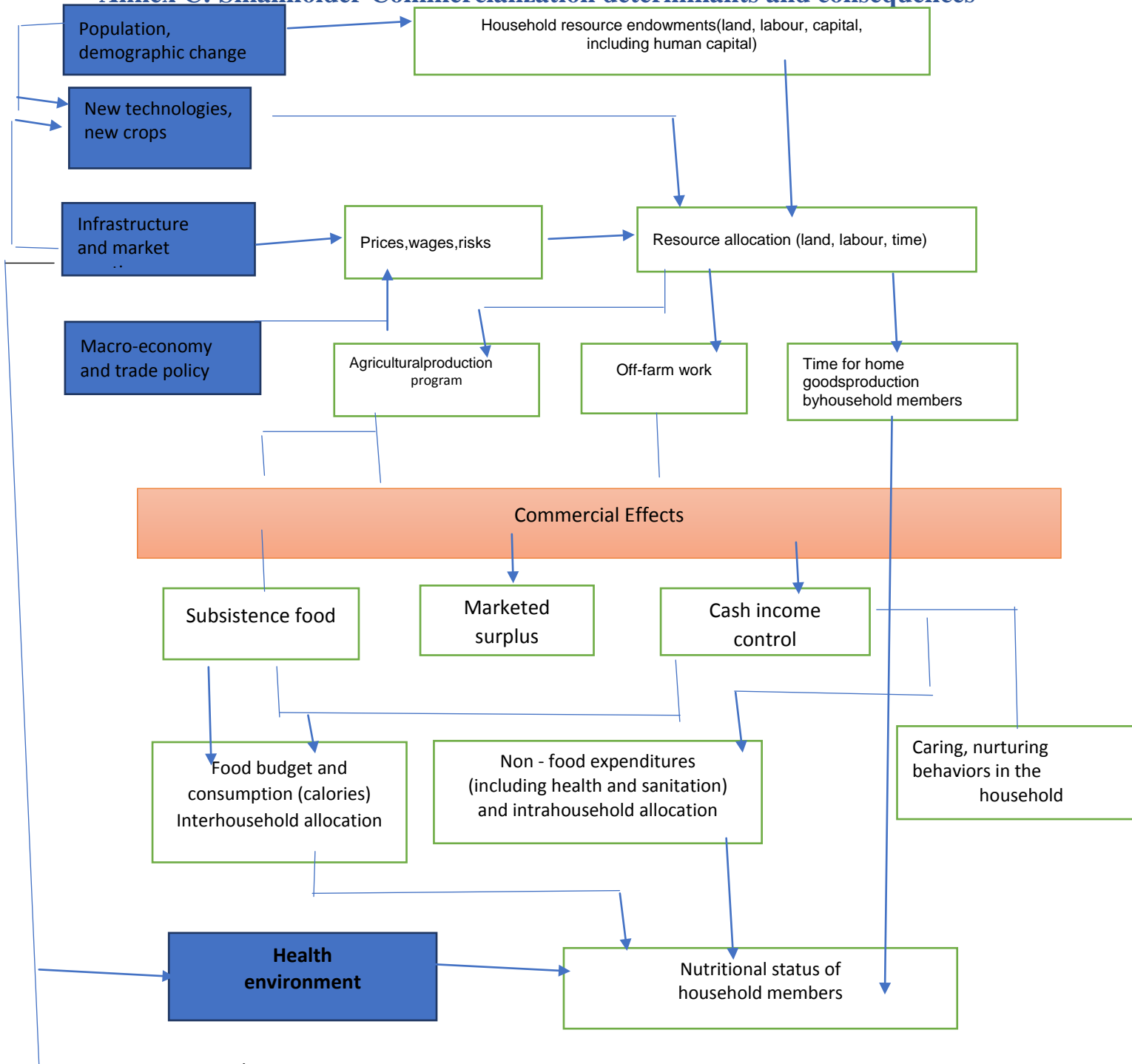
Source: Michigan State University and Alliance for a Green Revolution in Africa, 2016 , Africa Agriculture Status Report

Annex B: Women Empowerment Characteristics (adapted from Oxfam (2017),PP 21,Table A3.1)

Level	Dimensions	Characteristics
Personal	Power from within	<ul style="list-style-type: none"> - Self-esteem - Self-confidence - Self-efficacy - Individual knowledge (e.g. agricultural practices or milk production) - Individual knowledge (justice system) - Knowledge on where to go and what to do in case of violence - Opinions (attitude and beliefs) on women’s economic role - Opinions (attitude and beliefs) on gender rights - (Non-) acceptability of gender-based violence (GBV) - Opinions (attitude and beliefs) on power within the household - Opinions (attitude and beliefs) on property rights - Opinions (attitude and beliefs) on freedom of movement - Recognition of care
	Power to	<ul style="list-style-type: none"> - Individual capability (apply knowledge) - Personal autonomy - Personal autonomy around violence against women (VAW) - Access to savings - Access to credit
Relational	Power with	<ul style="list-style-type: none"> - Social capital - Participation in community groups - Level of support provided by groups to pursue own initiatives - Political participation - Attitudes and beliefs of people close to the woman (men’s support of women’s rights) - Attitudes and beliefs of people close to the woman (community leaders’ support to encourage women’s access to courts) - Degree of influence in governing of community groups - Participation in public events - Contribution to community social needs
	Power Over	<ul style="list-style-type: none"> - Involvement in household decision making - Involvement in household decision making (expenditure decisions) - Involvement in household decision making (investment decisions)

		<ul style="list-style-type: none"> - Involvement in household decision making (household management decisions) - Control over household assets - Contribution to household income - Power in markets - Control over sexuality - Experience of GBV - Control over time - Ability to reduce time devoted to care responsibilities - Ability to redistribute burden of care responsibilities - Ability to have more time for leisure and socializing
Level	Characteristics	
Environmental	<ul style="list-style-type: none"> - Accessibility of legal services - Safety of movement outside the home - Break stereotypes - Ability to influence at political level - Advocate change for other women - Quality of legal services 	

Annex C: Smallholder Commercialization determinants and consequences



Source: von Braun et al. (1994, 13). Cited in Moti et al. 2009