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**CENTER FOR RURAL, LOCAL AND REGIONAL DEVELOPMENT
STUDIES**

**DETERMINANTS AND EFFECTS OF HOUSEHOLD GRADUATION
FROM PRODUCTIVE SAFETYNET PROGRAM (PSNP): THE CASE OF
SHEBEDINO WOREDA, SIDAMA REGION, ETHIOPA**

By: Lijalem Aytnew

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Determinants and Effects of Households Graduation from Productive Safety
Net Program (PSNP): The Case of Shebedino Woreda, Sidama Region,
Ethiopia

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fulfilment of requirements for the Master of Art (MA) Degree in Rural
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BY: Lijalem Aytnew

Advisor: Matebu Tadesse (PhD)

November 2025
Addis Ababa, Ethiopia

Declaration

I hereby declare this study of Determinants and Effects of Households Graduation from Productive Safety Net Program (PSNP): The Case of Shebedino Woreda, Sidama Region, Ethiopia has been summited in order to satisfy the requirements for a master degree in the Department Center for Rural, Local and Regional Development Studies, Rural Livelihoods and Development at Addis Ababa University. I confirm this research is my original work and it has not been submitted to any other academic institution and all reference materials used have been acknowledged.

Lijalem Aytenuw

Signature: -----

Date: -----

Approved by

Advisor; Matebu Tadesse [PhD]

Signature:-----



Date: 26/11/2025

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Addis Ababa, Ethiopia

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Lists of Abbreviations

ADLI	Agricultural Development Led Industrialization
BRAC	Bangladesh Rehabilitation Assistance Committee
CCIP	Complementary Community Investment Program
CBPWD	Community Based Participatory Watershed Guideline
CFSTF	Community Food Security Task Force
CSA	Central Statistical Agency
CRGE	Climate Resilient Green Economy
CSG	Child Support Grant
DFID	Department for International Development
DPPA	Disaster Prevention and Preparedness Agency
FAO	Food and Agriculture Organization
FFT	Full Families Targeting
FSCO	Food Security Coordination Office
FSP	Food Security Program
FSS	Food Security Strategy
GRAD	Graduation with Resilience to Achieve Sustainable Development
HABP	Household Asset Building Program
HSNP	Hunger Safety Net Program
ILO	International Labour Organization
IGA	Income Generating Activities
KFSTF	Kebele Food security Task force
LH	Livelihoods
LEAP	Livelihoods Empowerment Against Poverty
MOA	Ministry of Agriculture
MOARD	Ministry of Agriculture and Rural Development
MOLSA	Ministry of Labour and Social Affairs
NIDIS	National Integrated Drought Information System
NNP	National Nutrition Policy
NGOs	Non-Governmental Organizations
OFSP	Other Food Security Program
PDS	Permanent Direct Support
PIM	Program Implementation Manual
PWs	Public Works

PSNP	Productive Safety Net Program
SNNPR	Southern Nations, Nationalities, and Peoples' Region
SWAO	Shebedino Woreda Agricultural Office
SPP	Social Protection Policy
SPSS	Statistical Package for the Social Sciences
TLU	Tropical Livelihoods Unit
TUP	Target the Ultra-Poor
UN	United Nations
UK	United Kingdom
WFP	World Food Programme
WHO	World Health Organization
WSF	World Food Summit
WFSTF	Woreda Food Security Task Force

Abstract

The Productive Safety Net Program (PSNP), was introduced in Ethiopia in 2005 to support food-insecure people by providing cash, food or both. The main objectives the program was to protect beneficiaries' asset depletion and produce community asset, enabling them graduate(exit) from the program. In the study area, however, performance of graduation from the PSNP still remains low. This study aimed to analyse determinants and effects of graduation from PSNP in Shebedino Woreda, Sidama Reginal State of Ethiopia. A multistage sampling technique was used involving both purposive and random samplings methods. The study participants were 207 respondents, including 99 graduated and 108 non-graduated beneficiaries. Quantitative data were collected through structured questionnaire, the qualitative data were collected through focus groups discussions and key inform interviews. Both quantitative and qualitative data were collected at the same time. Primary and secondary data sources were used to try generate holistic information from sampled clients. The data were analysed by using both descriptive (frequency and percentage) and inferential (binary logistic regression model) statistics. The Binary logit model results showed that 7 of the 12 variables, considered were statically significant. Those are: age, education, family, farm land size, irrigation access, livestock ownership, non-farm participation, extension service and credit access. Family size had significant negative association with PSNP graduation. Delay of regular transfer & in sufficient transfer, low community participation on graduation process and full family targeting problem were the other influence factors that hinder the speed of graduation in the study area. For this study finding, it is recommended that to enhance the goals of PSNP graduation, there is need to capitalise on vitalise adult education, agricultural extension service, supply- demand driven improved crop as well as animal inputs, promote credit service for non-farm activities and encourage more appropriate irrigation agriculture to enhance the likelihood to graduate from the program. Timely and adequate transfer, community participation on graduation and applying full family targeting are key to improved graduation rate. Graduation from PSNP is critical to addressing rural poverty and enhance sustainable livelihoods status in the community.

Key words: Livelihoods, Food security, PSNP, Graduation, Binary logit, Shebedino woreda,

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

At the World Summit for Social Development in Copenhagen in March 1995, 117 countries reach in an argument to organize national programs to fight poverty, and maintain both absolute and overall. That was the first news of a time a global commitment to poverty reduction was announced (UN, 1995). At the heart of the Copenhagen declaration are ten commitments, some of which include facilitate an enabling community, alleviate poverty, support full employment, promote social integration, and promote equivalency between men and women. Before this time, development aids have been conducted for half-century and more with the aim of promoting development and lowering poverty (World Bank, 2001). But poverty is still a serious issue and food problem affecting about one billion people worldwide (DFID, 2015; FAO, 2014; USDS, 2009).

Different Sources indicate that the highest numbers of the world's malnourished populations (98%) live in developing nations. Globally, now a days, one from nine people don't get enough food for maintaining an active and healthy life. In the developing world about 791 million people were attacked by hunger and one out of eight people still did not get balanced food, but the number of affected people declined by 203 million compared to before 20 years (world bank, 2014).

In Africa one from three Africans live under poverty level (FAO, 2014). To reduce the food shortage problem, a number of social safety net programs were started in many African countries to protect and enhance the lives of the poor and affected peoples. Today, there are 475 safety net programs in the world (World Bank, 2014). In Africa 46 countries implement safety net programs (*Beegle et al.,2018*). In Africa and South Asia, over 90% of the population is not covered by any social protection program, the overall social protection in both nations currently does not exceed 20% of the total population (van Ginneken, W.,2003).

Ethiopia has encountered recurrent droughts throughout the course of its history, caused by a combination of environmental, economic, political, and social factors. Literature shows that the country has faced more than a dozen drought between 1950 and 2003. The greatest drought recorded and occurred during 1984–85 and 1.2 million people was died (Gill ,2010; De Waal, 1991). In a year 2002-3 there was also highly distractive drought occurred,13.2 million people and animals affected, children were the first affected. There were responses by Ethiopian government and international assistance (Kassahun & Hoddinott, 2009). Due to a number of complex issues, including logistics, food aid frequently arrived after households had exhausted

their resources. In addition to this, a response to unexpected shocks, more than half of the yearly emergency food aid was being given to the same people in the same geographic locations (2005-2009). The Governments of Ethiopia renewed different food security strategies in 1996.

After different consultations by Ethiopian government and multiple donor agencies introduce safety net program, the first time 2005 (World Bank, 2010). PSNP the biggest program in Africa, and supports not only protection also it promotes development agendas. PSNP has two components, public work and permanent direct support. Main PSNP objectives protect client assets lose the affected people and create a community asset (MOA, 2014). When the program was started in 2005, it covered and 192 woredas, 5 million food insecure people (MOA ,2016). Now a days, PSNP covers 11 regions, 492 woredas, and supporting (7.9) million people (MOA, 2024). Similarly, currently in Sidama region there are 153,159 PSNP beneficiaries and 7693 clients are found in Shebedino woredas (SWA,2024).

Graduation is central goals of the program, according to the Government of Ethiopia is perceives whether the food security program effective or succeeding, is measured by the capacity reducing food insecurity levels of chronic households (*Devereux et al.,2014*). A year 2008 up to 2015 around (3.6) PSNP beneficiary were graduated from the program (MoANR (2010 E.C/2018). Government argues that HH after graduating from PSNP, can cover its food needs for a year without PSNP resources and can handle minor shocks (MoARD's ,2007). Livelihood output is major component of this program to facilitating graduation process from both PSNP and the Food Security Program. Despite sustainable achievements, efforts were done, different documents & researches indicated that PSNP contributes different for these clients, and graduation is not succeeded when compare to its objective.

1.2 Statement of the Problem

Food insecurity has a long history and has adversely affected millions of Ethiopians for more than two hundred years (Beyene, 2008). Recently, in 2015- 2016, large numbers of citizens and livestock were affected by droughts that followed the absence of rains for two consecutive years (*Hill &Porter et al., 2015*); but, the risks of famine and death of people were significantly reduced by early responses (*Hill &Porter et al.,2015*). Due to El Niño caused the climate change 2015, more than 27 million Ethiopians suffered food by shortage, of which 18.1 million people needed food aid (Hill &Porter,2015; Anderson & Elisabetaet, 2015). More recently, WFP indicated that over 15 million people need immediate assistance (WFP, 2024).

To alleviate this food insecurity challenge, Governments of Ethiopia developed PSNP in 2005 (World Bank, 2010). PSNP became famous and well-known, the second largest program in

Africa. This program throughout the countries covered the biggest number chronically food-insecure districts and rural families (Cochran & Tamiru (2016). It focusses on graduation (move food insecure HHs to self- sufficiency) because graduation central argument whether the Food Security Program is meeting its goal and alleviating long lasting chronic food insecurity target or not (*Devereux et al., 2014*).

Climate change, such as droughts and floods, affected their livelihood options as they heavily relied on natural resources (IPCC, 2021). Cochrane and Tamiru (2016) show that graduation from PSNP was compromised by limited credit access, transparency problem, poor client targeting & low monitoring, low integration with other similar program, which leads to food gap and less poverty alleviation to PSNP graduated families. According to *Messay et al., (2022)*, low awareness on clients, dependency syndrome among beneficiaries, poor quality of infrastructure, debatable graduation processes, and budget deficiency remained to be main challenges for graduation from the PSNP.

Arega (2012) indicated that 61% of the clients were not clear about the selection criteria for graduation. This problem created in correct decisions on follow up and continuous supports for graduated households. PSNP alone cannot fully elevate graduated clients and reduce holistic food challenge for all beneficiaries. Well integration the program with credit access and can pay back a loan 77% timely and more likely to graduate (Mulugeta, 2021). PSNP PIM, indicated financial funded by a number of development partners plus Ethiopian government; due to this, it faced implementation challenges, mainly creating delays, and budget deficits but through time improved.

Efforts were made in each phase to enhance the poor performance of graduation; however, studies and different papers indicated the performance as very low. The food security reports (2019) revealed that from 7.9 million PSNP clients, only (4%) completed and exit from the program. Hobson (2014) also found that in 2010 and 2013, around 850,000 PSNP clients or 11% of all beneficiaries graduated from the Program each year.

Thus, this research was mainly interested to study the determinants of PSNP graduation, to assess the income difference between graduated and non-graduated PSNP clients. In addition to this, studies did not analyze the benefits of PWs activity and linkage with livelihood for graduation, and critical variables, transfer delays, insufficient cash transfers deserve to be studied. This research also aspired, to seek answers to conflicting conclusions about graduating from PSNPs, relating to factors like family size, sex, education, and age, were suggested by different scholars (*Muhammed et al,2023*). Also environmental, socioeconomic and food related factors, which are

dynamic, need to be studied. In Shbedino Woreda, there is no research done on contributions and challenges of PSNP graduation. Thus, study was identifying the determinants influencing household graduation from PSNP and to fill the knowledge gap in Shbedino Woreda, Sidama regions of the study area.

1.3 Research Questions

- what are the determinants of households' graduation from the PSNP study area?
- What are the clients' perceptions on PSNP graduation?
- How to explain community participation on the process of PSNP graduation?
- What would be the effects of graduating from the PSNP on household income?

1.4 Objectives of the Study

1.4.1 General objectives of the study

The general objective of the study is to examine Determinants of Graduation from the Productive Safety Net Program (PSNP) and Effects of Household income perception and community participation that leads to graduation in the study area.

1.4.2. Specific objective

More specifically, this study aimed to:

- Identify determinants of household graduation from PSNP in Shebedino wereda.
- Examine PSNP beneficiaries' perceptions on household graduation.
- Assess community participation on PSNP graduation process.
- Examine the effects of PSNP graduation household on income.

1.5 Significance of the Study

The study generates important evidence about the Determinants and Effects of Households Graduation from Productive Safety Net Program. Additionally, it also sheds light into household perceptions and participation in the processes leading to graduation. In can inform future PSNP graduation and other social safety net measures. The findings will also indicate into the outcomes of graduation, for rural livelihood resilience and asset building, and sustainable development

1.6 Scope and Delimitation of the Study

The study mainly focused on to identified determinants of and effects of PSNP graduation in the Sidama region, Shebedino woreda particularly in PSNP kebeles. This study was focused on selected 3 kebeles only, incorporated both currently PSNP beneficiaries and previously graduated from the program. In shebedino from 23 kebeles 17 of them are PSNP users. But this

study covers only 3 of the 17 kebeles because of time and finance problems. This study was provided by a sample of 207 beneficiary from these three PSNP kebeles.

1.7 Limitation of the Study

During the study, it was observed that respondents had limited awareness about the challenges and opportunities related to PSNP graduation; some respondents were also less willing to share accurate socioeconomic data, and it took more time to obtain reliable information. This problem was solved by repetitive awareness creation at the field on respondents. The study also faced financial constraints during data collection with focus group discussions and key informant interviews. But the investigator had to allocate funds from his own resources to ensure the survey was conducted efficiently.

1.8 Organization of the Thesis

This research organized in to five chapters. First Chapter, introduction, presented the background information, problem of statement objectives of the study, a set of research questions, specifying the boundaries and limitations. Second Chapter, Literature review includes definitions and concepts on related to PSNP, theoretical, empirical, and conceptual frameworks. In Third Chapters tried to incorporated a description of the study area, research design, data sources and types, sample size and sampling technique, data collection tools, and data analysis techniques. Under Chapter Four research result and discussion covered. Finally, Chapter Five conclusion and recommendation highlighted here based on research findings presented.

1.9 Definition of Terms

Food security; -when all people, at all times, have physical, [social] and economic access to sufficient, safe and nutritious food that achieved throughout balanced food and preference by human for their healthily life (FAO, 1996).

Social protection- is government and private projects which deliver income or consumption transfers to the poor, protect those in need from risks to their means of subsistence, enhance social standing, with the primary goal of reducing the economic and social vulnerability of the hungry, insecure, and excluded communities (Devereux & Sabates-Wheeler, (2004).

Social Safety Net; is a part of larger systems of social safety, it consists of not only contributing cash, coupon, or in-kind payments that can be unconditional or conditional transfer, it adds school feeding, food for work and cash for work (*Adato et al., 2004 &World Bank ,2018*).

Graduation: - household moves from food insecure to food-sufficient and they can meet its yearly food needs independently, without relying on PSNP or other support, and is resilient to

minor disruptions (MoARD ,2007).

Food insecurity: - when people permanently unable to get adequate food to full basic requirements of our body to maintain good physical structure, health and active life system in all time (FAO, 1996).

Kebele; -it is small administration unit under districts in hierarchy of Ethiopia

CHAPTER TWO: LITERATURE REVIEW

1.1. Theoretical Review Literatures

2.1.1 Definition and concepts of social protection

Social protection is a broad concept it includes insurance and alternative social services like, SafetyNet, which is just one component of social protection (Gentilini, U., & Omamo, S. W. (2009). All countries in the world adopt new forms of social protection, but the structure is not uniform, because the countries' ability and aims follow different social protection structure each country (Gentilini, U., & Omamo, S. W. (2009).

Social protection refers to government and private projects which deliver income or consumption transfers to the poor, protect those in need from risks to their means of subsistence, enhance social standing, with the primary goal of reducing the economic and social vulnerability of the hungry, insecure, and excluded communities (Devereux & Sabates-Wheeler, (2004).

There are two realities for applying social protection, first it is a fundamental human right, this as stated by the International Labor Organization (ILO), it is a collection of measures and initiatives aimed at reducing and preventing poverty and vulnerability throughout an individual's life (ILO ,2019a) and other plays development objectives, for example promoting holistic development (United Nations ,2019 &World Bank ,2020). Social protection in recent years can be linked to a number idea including globalization, economic reforms, social justice and equity, response to crises (Norton, A., Conway, T., & Foster, M. (2001).

2.1.2 Theories of development

i. Sustainable livelihood approach- was created as a conceptual framework to explain and address poverty and development in the late 1980s and early 1990s. In order to enhance the effectiveness of development cooperation, Robert Chambers and Gordon Conway initiated the ideas of sustainability and livelihoods in 1992. The British Department for International Development (DFID) develop the sustainable livelihood method and initially incorporating it into its development cooperation program in 199 (Kolliar & Gamper, 2002). The basic principle is that livelihoods are made up of people's abilities, assets (such as resources, stores, claims, and access), and activities required to support their way of life. They can endure and recover from shocks and stresses, keep or enhance their assets and competencies, and offer sustainable livelihood opportunities for future generations while providing net benefits locally as well as worldwide (Chambers and Conway 1992, 5). DFID (2001) framework identifies five key types of capital essential for development. Human capital includes good health, skills, knowledge, and the capacity to work whereas, natural capital consists of land, agricultural products, water

resources, and environmental services. Social capital involves relationships and networks that build trust and foster cooperation and physical capital covers infrastructure like roads, transportation systems, and buildings. Lastly, financial capital encompasses resources such as savings and access to credit, whether formal or informal. The Sustainable Livelihood (SL) framework takes a comprehensive and flexible view, focusing on the different factors and processes that either limit or support poor people's ability to sustain their livelihoods in ways that are economically, ecologically, and socially responsible (Krantz, 2001: 6). Krantz (2001) notes that many organizations have adopted this approach in their ongoing efforts to reduce poverty. These include the Sustainable Development Goals (SDGs), the Smart Community Development Framework, the United Nations Development Programme, CARE (Cooperative for Assistance and Relief Everywhere), and the Department for International Development.

ii. Capability approach – Amartya Sen introduced the capability approach in the 1980s, shifting the focus of evaluating human well-being from just resources or happiness to what people are actually able to do and become. The core of this approach is measuring development by the real freedoms or "capabilities" individuals have to live lives they value. Instead of concentrating only on material goods or satisfaction, it looks at people's "functioning" the various things they manage to do or be and their genuine opportunities to make these choices (Sen, 1999). Sen highlights that the lack of enough food remains one of the gravest problems facing the world today. He also recognizes that people differ in how effectively they can transform resources into meaningful opportunities, influenced by their social environment, personal circumstances, and natural surroundings. This approach has become a key framework for understanding welfare economics, assessing poverty, and shaping social policies aimed at expanding individuals' real freedoms to live more fulfilling lives (Sen, A. (1999).

iii. Human capital theory-; this theory focuses on the belief that a person's skills, knowledge, experience, and personal qualities are important resources that boost productivity and add economic value. It highlights the importance of investing in education, training, and health together known as human capital as essential for both economic progress and an individual's success. This concept was first developed and gained recognition mainly during the 1960s (Schultz, T. W., 1961). The key message is that by investing in human capital, people become more productive, which in turn drives economic growth and leads to higher personal income (Becker, G. S. (1964)

iv. The theory of poverty traps -. This concept was largely developed and brought to wider attention by economists like Jeffrey Sachs in the late 1990s, though its origins go back to the "Big Push" theory from development economics in the 1940s and 1950s (Easterly, 2006). The idea is

that individuals, families, or even entire countries with low incomes can become caught in a poverty trap a cycle that reinforces itself and is very difficult to break without outside help. The main factors behind this include limited savings, lack of investment, and what are called threshold effects, where economic progress only begins once a minimum level of capital or investment is achieved (Azariadis & Stachurski, 2005).

2.1.3 The concepts of food security and its evolution

Food security defined different in ways, the most widely accepted definition by World Food Summit (WFS) in 1996. It is “when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 1996). Even though, the concept of food security started before it began to attract global attention around 1930s. In 1935, there was a meeting held in Yugoslavia addressed global food issues in the world, which developed the first-time report on key findings by Health Division, this report suggested that knowledge about hunger and malnutrition issues should be disseminated around the world. (D. John Shaw,2007).

During 1974 UN World Food Conference held in Rome to discuss and commit to protect everyone from food insecurity. This event was pivotal in recognizing food security as a shared international responsibility. World Food Summit in Rome in 1996, Significant progress was made and FAO was organized; this is an important turning point in the evolution of food security and continues as of today (D. John Shaw, 2007) & (Cook & Anderson (1999). Food security has four dimensions, including availability, access, utilization and Stability (WFP, 2009). These dimensions together determine whether individuals and communities can consistently obtain adequate and nutritious food to maintain a healthy and productive life.

2.1.4. Social safety Net program

A formal social safety net first emerged in the 1980s in Latin America, initiated by the World Bank and the International Monetary Fund (IMF). These included unconditional cash transfers, school feeding initiatives, food support, and other approaches designed to improve access to food and basic necessities, such as price subsidies (*Adato et al., 2004*; World Bank, 2018).

According to the World Bank, one in nine people globally does not have adequate access to food approximately 870 million people remain food insecure and are not covered by any form of social protection. To address this challenge, about 457 safety net programs have been established across 146 countries, benefiting more than one billion people worldwide (World Bank, 2014).

Africa remains one of the regions most affected by extreme poverty, following Latin America. By 2022, the poverty rate in Africa reached 38%, representing the highest regional poverty level

globally, with many people living on less than \$2.15 per day. In the same year, global poverty was reported at 60% (World Bank, 2024). Although African countries have made efforts to reduce poverty, it remains widespread and persistent.

Currently, an estimated 422 million people food insecure and about one in three Africans live in poverty, while around 70% of the continent's population remains vulnerable to economic shocks. Between 1990 and 1992 alone, 176 million people in Sub-Saharan Africa faced food shortages (Tong, B., Hofer, M., & Hamel, K., 2019). This indicated that while poverty rates have declined slightly over time, the absolute number of poor people continues to rise. Consequently, social safety nets have become increasingly essential in the region, as they play a critical role in reaching and supporting the most vulnerable populations (World Bank, 2024).

Over the past few decades, many African and Sub-Saharan countries have introduced and expanded social safety net programs as part of broader strategies to protect and improve the well-being of poor and vulnerable households. 46 African countries implement at least one major social protection program, such as cash transfers, public works initiatives, school feeding schemes, health and education support, and emergency relief interventions (Beegle, K., 2018). For example, Rwanda's Vision 2020 Umurenge Program (VUP), launched in 2007, is a key component of the country's National Economic Development and Poverty Reduction Strategy. It seeks to enhance the living conditions of disadvantaged populations through public works and direct support via unconditional cash transfers (Cirillo & Tebaldi, 2016; European University Institute, 2010; Garcia & Moore, 2012).

Ethiopia has passed a long history catastrophic drought occurred in 1972-1974 (Webb & von Braun, (1994); Marcus ,2002). Again between 1984-1985 drought was happened 1 million people deaths were recorded (USAID ,1985). In 2002–2003, Ethiopia faced a major food crisis, with approximately 13 million people affected the largest number of people ever before (*Hill, Porter, & Anderson et al., 2015*).

To alleviate this recruit challenges, Ethiopia's Productive Safety Net Program (PSNP) initiated in 2005 as food security strategy and it targets to addressed extremely poor rural households. The program includes unconditional cash and food transfers which is recognized as Africa's largest public works program; it has been jointly financing by the Ethiopian government and international development partners (Cirillo & Tebaldi, 2016; European University Institute, 2010; Garcia & Moore, 2012). When PSNP started it was covered five million food-insecure people and currently it addresses 7.9 million beneficiaries (MoA, 2016& 2024).

2.1.5 Food insecurity overview in Ethiopia

Ethiopia has passed a long history catastrophic drought occurred in 1972-1974. The drought crated high destructive on animal death, throughout the country (Webb & von Braun, (1994); Marcus ,2002). Again between 1984-1985 drought was happened and affected more than 7.9 livestock and nearly 1 million people deaths were recorded (USAID ,1985). In 2002–2003, Ethiopia again faced a major food crisis, with approximately 13 million people affected the largest number of food-insecure people ever recorded in the country at that time (*Hill, Porter, & Anderson et al., 2015*). The situation worsened in 2015–2016, when more than 27 million Ethiopians faced food insecurity and about 18.1 million required emergency food assistance (*Hill, Porter, & Anderson et al., 2015*).

Currently, the country continues to experience recurrent food insecurity due to multiple interrelated factors, including soil erosion, rapid population growth, climate change, limited access to modern farming technologies, inadequate agricultural extension services, and internal displacement. As a result, more than 15 million people are estimated to be in need of immediate humanitarian assistance (WFP, 2024).

2.1.6 Food security program and its strategy in Ethiopia

Between 1999-2000, in Ethiopia had occurred a major disaster, nearly up to 10 million people required immediate food support due to the adverse effects and prolonged drought. To tackle the challenges and protected sustainably, in 2003 Governments of Ethiopia with doner coordinating agency established New Coalition for Food Security program (FSP) in the country. The aims coalition collaboration efforts collectively among various stakeholders, provide immediate help and to provided sustainable solutions for food related problem. In 2002/3 governments of Ethiopia introduce new food security program (World Bank,2010), including Household Asset Building Program, resettlement in land excess area and PSNP (MOA,2010).

Before some year, the country also develops and introduce food security strategy in 1996.The Strategy has two pillars, productive safety net programs (PSNP), protect rural venerable people throughout the country and significantly attention was given for agricultural sectors and increase agricultural production & productivity.

Before the strategy to enhance agricultural production in 1991, agricultural development led industrialization (ADLI) was established. This strategy was providing for capacity development like agricultural service delivery and capacity development, on education and family planning activity and disease prevention activities. Additionally, it highly recognizes women participation on agricultural. Food security strategy also give attention against environmental degradation,

particularly in drought-affected and pastoral areas by performing soil and water conservation, emphasis on environmental sustainability and ensuring food security Ethiopia (FSS,1996)

2.1.7 Productive safety Net program

The PSNP the biggest social safety net program in Africa, it combines two social protection strategies: livelihood development (resilience buildings) and social protection or better risk manages methods to protect peoples who has under extremely poor that leads by world bank (SafetyNet), Mainly introduced to support households facing chronic food insecurity by providing cash, food and both transfers for those chronical food insecure HH (Cochran & Tamiru, (2016). Its objectives keep household resources and foster community development through asset creation (MoARD of Ethiopia ,2014). Productive Safety Net Program (PSNP) is an evolving program, it undergone a lot of changes through time. The program also two major components, public work & livelihood. Livelihoods program main concern in income generating activity and contributes to build household assets through improved technical assistance, business planning, and credit provision from appropriate financial institutions (MoARD,2009). According Kassaw, K. (2024) key elements were targeting ultra-poor households in PSNP through community selection, providing regular cash or food support to meet basic needs and giving subsidized assets or cash to start income-generating activities.

2.1.7.1 PSNP components and principles

According to Cochran & Tamiru (2016), PSNP has three key components, direct support program, public works program; and temporary program. PDS support clients are un able to work without any consideration cash transfer for 12month transfer linked with social protection services. But PW are able bodies who works (on integrated community-based watershed development, covering activities such as soil and water conservation) for 5 days for six months, but transfer and public work time flexible by considering food security gap and environmental situation of the area (MOA, 2014). After benefiting 3-5 year and properly measuring clients are expected to exit from the program. Clients who are identified as temporary program beneficiaries including pregnant and lactating women, after completing it shift and become to PWs participant (Cochran & Tamiru (2016)

PSNP has its own principles, each process fair and transparent, timely transfer and predictability transfers (both cash & food transfer for clients within 30 days of each month) and Primacy of transfers, cash first and integrated planning align with local government plan (MOA, 2014).

2.1.7.2 PSNP PWs, livelihoods and their linkages

PWs major component of the program in PSNP. More than 80% program budget plan under this

component. Public work sub projects take huge amounts of labours, capital and time. Its main responsibilities performing integrated environmental developments (soil & and water conservation, frost development, irrigation canal construction, constructing community road, school & health post maintenances. the main goal creates community assets at each community (Beegle et al., 2018) & MoA,2014).

According Department for International Development (DFID), a livelihood incorporates knowledge, abilities, assets, to maintain life, it is able to survive and recover through losses, keep advantages and assets through time, without destroying the natural world (DFID, 2000). Livelihood other core elements of the program, it enhances and targeted PSNP households, and resilient rural community and then timely exit from the program (MOA, 2020).

PSNP graduation is sustainable livelihoods conceptual tool that established and supports a housed for timely graduated from the program, mostly focused on major elements, including livelihoods assets (human capital, natural financial, physical social) policies, institutions and vulnerability (DFID, 2000). To facilitate graduation livelihoods and public work activities linked each other or PWs support livelihoods components. Program clients should involve on identification of development projects, planning, implementation (MOA, 2014).

2.1.8 The concepts of graduation in the World

Graduation concept was first introduced in Bangladesh Rehabilitation Assistance Committee (BRAC) developed to Targeting the Ultra-Poor (TUP) in 1972 and modified 2002. Graduation time-bound, multisectoral intervention established to support poorest and affected vulnerable families to enhance sustainable livelihoods and transition from extreme poverty or sustainable livelihoods (Rashid, L., (2017). Nowadays, over 50 nation and 100 institutions have adopted the graduation concept, and about 14 million individuals have graduated worldwide.

Graduation is a combination with these interventions participant can activate latent economic potential and place households on a sustainable pathway out of poverty (Dharmadasa et al. 2016). Similarly, Oxford Dictionaries (2017) also explained Graduation it is individual has overcome extreme poverty, characterized by the specific economic standard, and ready to move without support transition to occur.

2.1.8.1 Productive safety Net program and graduation in Ethiopia

Graduation have become fundamental agenda whether the Food Security Program is succeeding in its aims of reducing chronic food insecurity in the country or not (Devereux et al., 2014).it has consisted of two distinct stages. The initial stage of graduation is food security, and the other is graduation from PSNP. My focus is graduation from PSNP. Graduation beneficiaries contributes

to a reduction in the numbers of household that require outside food assistance. Once assets of a household are built and linked properly to other income generating programs the household must graduate from the PSNP. PSNP as a program filled food gaps, consumption smoothing, rural infrastructure development, and environmental conservation & prevent asset depletions (*Messay et al., 2022*).

There for, graduation is a HH deemed food-sufficient and they can meet yearly food needs independently, without relying on PSNP or emergency support, and resilient to minor shock (MoARD ,2007). Based on graduation guidance Note (MoARD (2007) are two ways of graduation, bench mark and self-graduation. Starting from 2008 up to 2015, 3.6 PSNP beneficiary were graduated or transition from food insecurity to self-sufficiency (MoANR, (2010 E.C/2018). According (FSCO, 2019), graduation plan indicated that from 7.9 million PSNP clients to graduated 3.9 million (44%) but only 156,348(4%) clients were graduated. Hobson (2014) notes that between 2010 and 2013, nearly 850,000 beneficiaries or nearly 11% of all beneficiaries graduated from the PSNP yearly.

Natural factors recurrent drought was affecting their livelihood resilience, it creates stress on HHs, it leads high food price, and remove their effort to graduate from (Hayalu ,2014). PSNP participants are not confident that food security be guaranteed by the graduation process. According to Wedajo and Lerong (2017), found out due to inadequate management, political preference, and unclear targeting procedures, clients did not perceived graduation reduce poverty and not improving capabilities of low-income families. This study finding showed the objectives graduation not clearly awarded by beneficiaries in practice and theoretically. This concept leads the results of graduation performance in national as well as my study area were below expected.

2.1.8.2 Self-and bench mark graduation

Self-graduation occurs when a beneficiary households show with them interest to exit from the program. (Cochrane & Tamiru, 2016) can provided individual self-independent by create own asses participation diversify livelihoods income generating activities at household level and easily protect any shocks. This may occur if households choose that their time and labour are better used participate in his own income generation activities than in public works activities (MOA, 2014). Whereas, bench mark graduation takes place collecting the socioeconomic data of each PSNP clients like cattle, crops, income from horse driven cart services, retailing business, selling vegetables from small irrigation and value of these assets on the market price is calculated annually. According to (Tadesse, 2022) local government pressure, shocks and inconsistencies in measuring graduation criteria, cause failed graduates' principle and family's poverty and food

insecurity backs again. The beginning 2005-2009 governments of Ethiopia has high ambiguous plan on PSNP graduation, due to this there were quota and political interfere to exit clients.

To maintain this problem government and doner group tried to set fix benchmark graduation on different regions (Graduation Guidance Note ,2007). Bench mark was established for each region, but ceiling was differed region to region and changed time to time by considering market conditions. This model generally shows that to perform PSNP graduation starting from extreme poor apply each activity properly. lower left- hand quadrant of the diagram indicates ultra-poor and chronically food insecure households with PSNP transfers, beneficiaries need providing tailored support and financial literacy programs, aims to stabilize assets and help these households gradually graduated from PSNP finally move out of poverty.

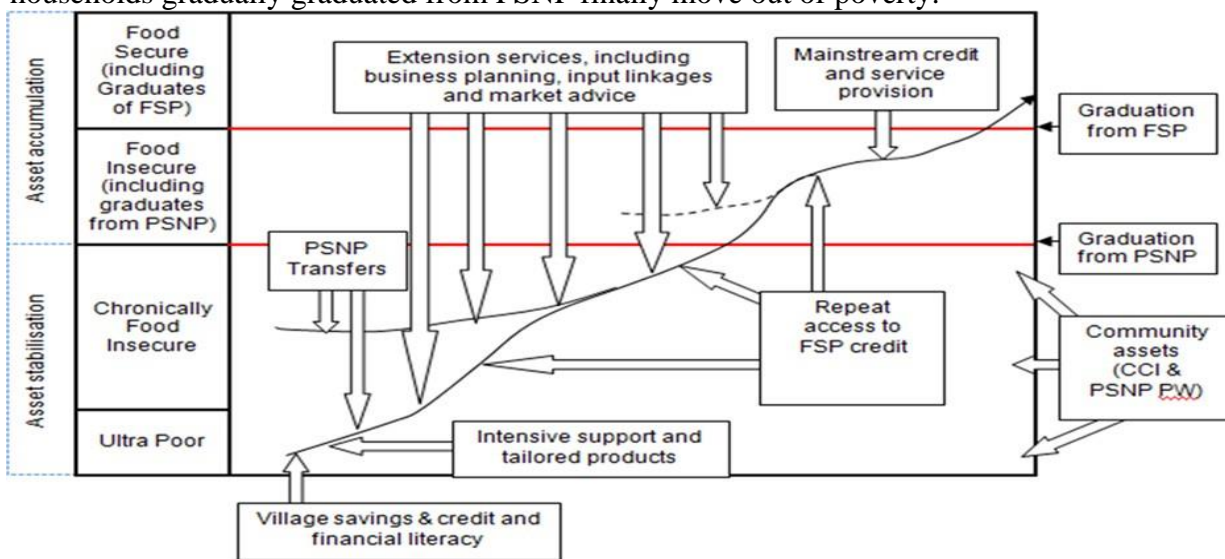


Figure 1 Graduation Model

Source -Graduation model PSNP and FSP, John Hoddinott, (2014)

2.1.8.3 Principles and steps of graduation

PSNP graduation has its own unique principles, some are selection mechanisms for graduate house hold evidence based, the process of graduation opens for stakeholders and participants, accountable, communities are well informed before the process of graduation and finally graduation properly applied to community up to woreda level stakeholder highly transparently engaged in each process (MOA, 2014).

The graduation process begins with the identification of graduated clients, focusing on their wealth status, through community discussions. Wealth categories are established and marked on a master list based on socio economic wealth rankings. Properly selected beneficiaries for graduated posted kebele administration center for one week. In cases where there are

disagreements regarding the list, individual households can present their grievances to the Kebele Appeals Committee (KAC). After all appeals have been heard and resolved, the KFSTF submits the final list of graduates to the WFSTF (MOA, 2014).

2.1.8.4 Challenges observed in PSNP graduation

Studies have shown that the graduation of households from the Productive Safety Net Program (PSNP) is influenced by multiple interrelated factors. Climate variability such as recurring droughts and floods significantly affects beneficiaries' livelihoods, as many depend heavily on natural resources for survival (IPCC, 2021). Increasing dependence on PSNP support, limited access to credit, inconsistencies in graduation procedures, and a lack of transparency have also been identified as key factors hindering household resilience and sustainable poverty reduction among graduated beneficiaries (*Messay et al., 2022; Cochrane & Tamiru, 2016*). Low participation in credit access, targeting problem, weak institutional linkage with other program, poor monitoring and follow up system of the PSNP strongly affected rate of HHs graduation (Birhanu ,2018).

According to the PSNP Program Implementation Manual (MoA,2014), graduation principles require that the process be evidence-based, transparent, participatory, and accountable, with all stakeholders and community members adequately informed. But practically the process of graduation bias by local leaders, decision was often linked to political affiliation, gap on transparency, this leads participant's dissatisfaction and loss of trust on graduation process (Cochrane& Tamaru, (2016). Targeting the right households remains one of the most critical activity of PSNP graduation, *Sabates-Wheeler et al., (2012)*.

2.2 Empirical Review Literature

2.2.1 Socioeconomic factors

Irrigable land; - irrigation land facilitates the growth of cash crops like vegetables and livestock feeds. This engagement on irrigation activity enables clients move from food insecure to self-sufficient with planed time (*Devereux et al., (2014); Muhammed, (2022)*). According to (*Mulugeta, (2021)*), Irrigable land is significant and is positively associated enhancing graduating. This because that beneficiary who have irrigated land produce two times a year varies of crop.

Farm land size; -land is very important to meet the basic needs for rural community. Graduates from PSNP have greater access of land in comparison with non-graduated participants (*Devereux et al., 2014*). Both on Muhammed (2022) and Mulugeta (2021), found that land size significant difference between graduated and non-graduate families. Beneficiaries who owned large land can produce variety crops than less farm size.

Livestock (TLU); -it is measure and counting different varieties of animals. TLU allows the conversion of different types of animals into a similar unit. TLU an important to develop and plays a crucial role in food security and household resilience for small, farmers. Muhammed (2022), found that livestock positively significance on graduation from PSNP and also food security. Participants who have animals immediately graduated than participants who have not livestock.

Non-farm activities; it is one of a positively significant factors of graduation. it crucial particularly for land less youth and women. Muhammed (2022) found out a household who properly engaged in non-farm activity the probability of exit from this program increased by 20.5% than non-participants.

Household perception; it is acritical challenges of the achievements of PSNP objective. This factor shows PSNP clients the needs of dependency syndrome that did not interested to exit the program in a long time with their attitude did not lose regular transfer (Muhammed, 2022, as cited in Lentz, 2005).

Awareness on graduation; -it is basic for PSNP clients to enhance household graduation. Devereux, (2014), indicated the ability beneficiaries achieved graduation benchmarks that a household free from a social protection support. Similarly, PSNP, IPM (MoA, 2016), stated that program beneficiaries have a clear information about each activity of the program

2.2.2 Institutional factors

Agricultural extension service; -Strong contacts farmers with experts that facilitate graduation. Muhammed (2022) found that farmers frequently contact with experts have easily graduated from this program and vices versa. Clients who had frequently contact with experts graduated faster than less contacted.

Awareness on graduation; - it is basic for PSNP clients to enhance household graduation. Devereux, (2014), indicated the ability beneficiaries achieved graduation benchmarks that a household free from a social protection support. Similarly, PSNP, IPM (MoA, 2016), stated that program beneficiaries have a clear information about each activity of the program.

2.2.3 Demographic characteristics

Age of a household head; -when a household age increase understand environment and acquire knowledge new thing increase. Muhammed (2022), found that as household age increases the abilities PSNP beneficiaries being to be exit improved, this because the households have got more information on the program and well experience new agricultural technology and increase agricultural production in his plots of lands higher than younger households.

Education level of a household; – According to Muhammad (2022) and Mulugeta (2022), in order to help PSNP graduates from the productive Safety Net and food security conditions, education is extremely important. A less level of education indicates a delay in the client's program graduation.

Family Size; - Family size has negative significant on PSNP graduation. Wedajo & Lerong (2017) and Wasie (2017), found out that PSNP beneficiaries who have large family size graduated less than small household size. So, family size determinate factor on rate of graduation.

Sex of a household; – sex is a major significance factor of PSNP Graduation (*Devereux et al., 2014*) and *Mulugeta et., (2021)*, found that gender differences have an impact on the success of graduation rates, less women graduated than men.

2.2.4 Environmental factor

Drought; - According GRAD assessment droughts has negatively result on graduation process from but graduation can help households build ability with stand venerability. Mulugeta (2021), found a year agricultural activity free from drought clients graduated increased by 69.8%. But on when there was drought only 30.6 % clients were graduated.

2.3 Conceptual Framework

Graduation from PSNP influenced by various factors. To understand the relation between and dependent and independent a household characteristic, socio economic, institutional and natural factors need to prepare this conceptual frame work. This is providing valuable insights that enhance the overall quality of the study.

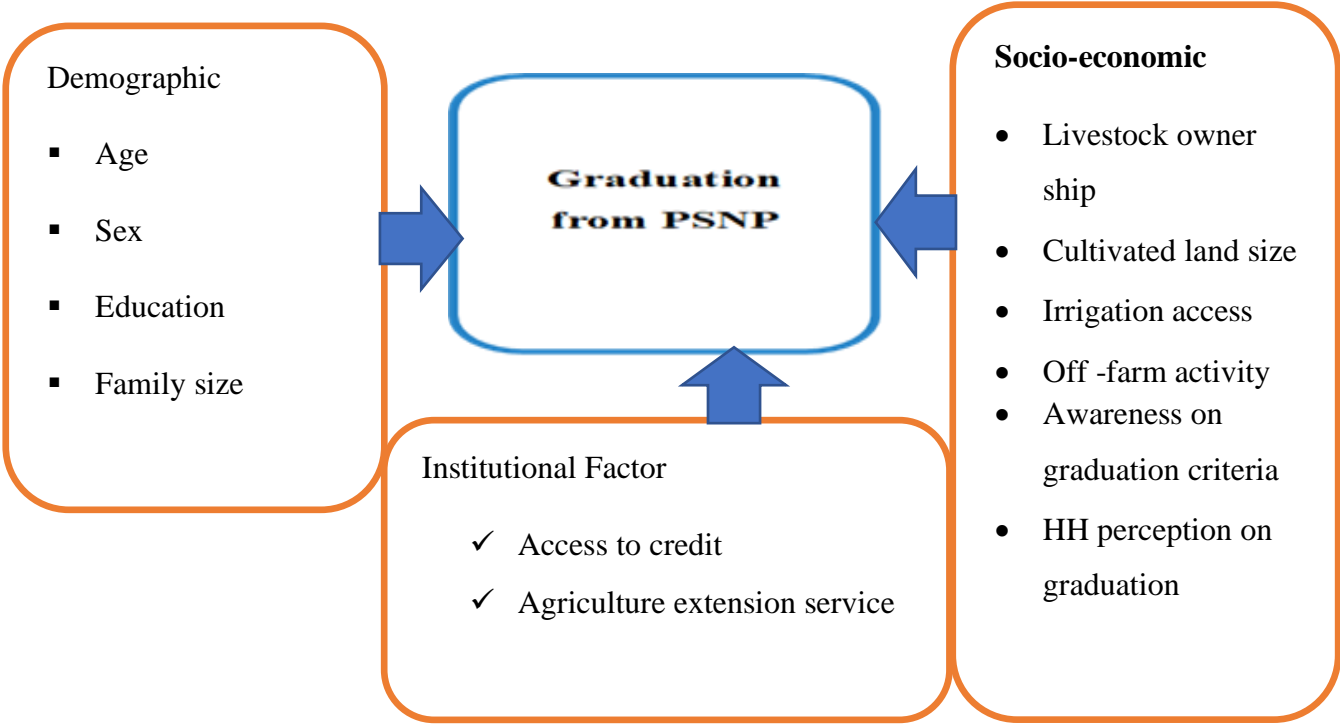


Figure 2 conceptual frame work

Source: Constructed by the researcher, drawing on the literature

CHAPTER THREE: RESEARCH MATERIALS AND METHODOLOGY

In this chapter, research design approaches, type(s) of data collected, methods of data collection and sampling techniques employed and data analyses methods are presented.

3.1 Description of the Study Area

3.1.1 Location

The Sidama Regional State is located Southern parts of Ethiopia. It consists totally 37 districts, outs of which 31 rural woreda, Shebedino is found on the Northern side of Sidama regional state ,27 km away from Hawassa and 302 km distance from Addis Ababa. It is bordered the South by Hawela Woreda, on the north by Dale, on the south west of Goriche, in the East of Boricha woredas.it has totally 23 kebeles, of which 17 Kebeles are targeted for with a total of 7,693 beneficiaries (SWA,2024).

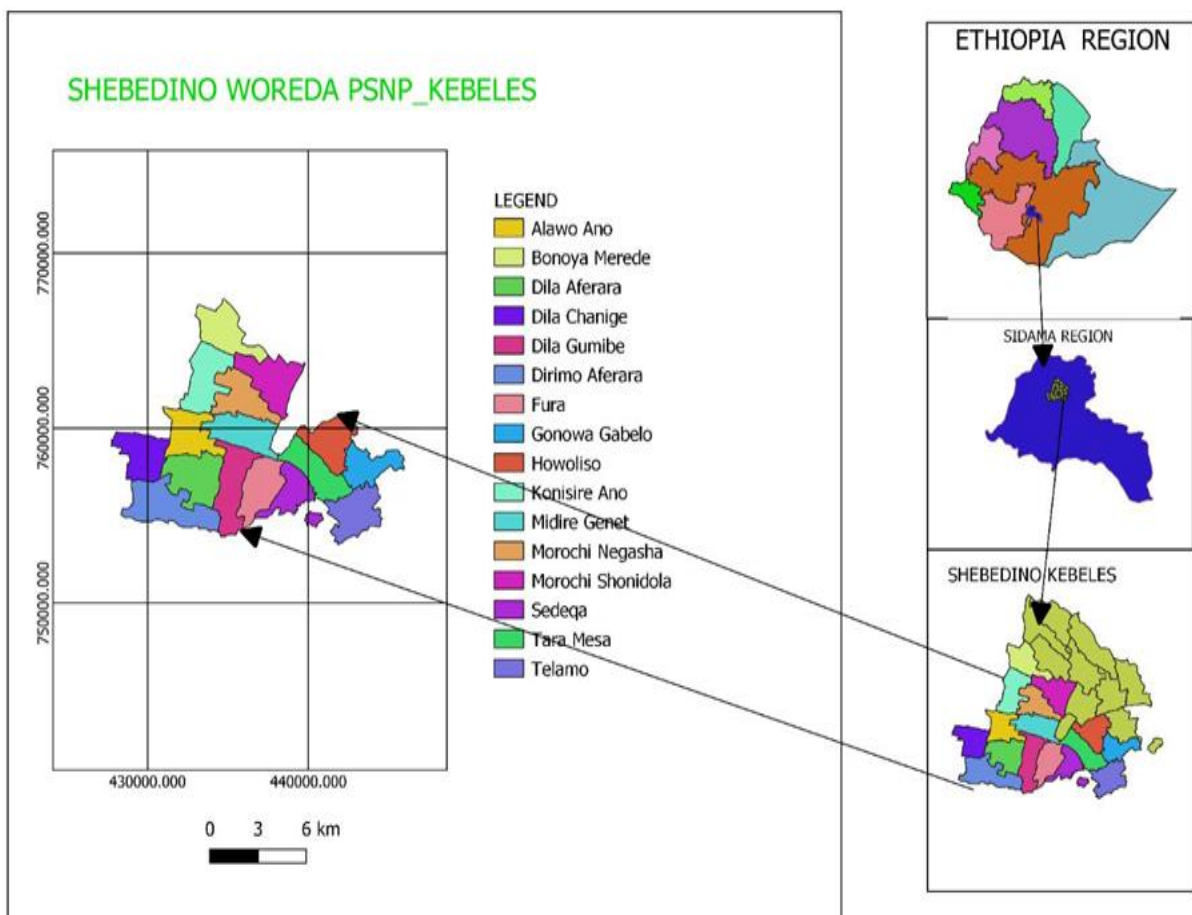


Figure 3-Maps of the study area

Source: Constructed by researcher, take from maps of Ethiopia

3.1.2 Socio-economic information

Sidama Regional State, is organized into four zones and 20 woreda are covered by Productive Safety Net Program (PSNP). Currently region has 134,716 Public Works participants and 18,443 Direct Support clients and totally 153,159 beneficiaries. Shebedino is one of 31 rural districts, Sidama region has a total population of 201,174, of which 97,368 (48.4%) are male and 103,806 (51.6%) were females (SWA ,2024). In a study conducted in 2006 to assess the program's impact across various regions in Ethiopia including Shebedino, it was found that many residents faced significant challenges related to food shortages. Shebedino has a total of 6,855 PWs participants and 838 PDs clients, a total of 7,693 beneficiaries receiving support through these programs (SWA ,2024).

3.1.3 Argo-ecology

Study area has two agro -ecology zone, including high and mid altitude, and the high-altitude zone accounts for 15.6%. The average annual temperature is 20.5 °C, with variations ranging from 16 °C -25 °C mostly observed. The annual rainfall in Shebedino is varies 800 mm to 1600 mm, there is enough moisture contents for many crops. The altitude of the region falls between 1750 m and 1800 m above sea level. This woreda administration suitable for most agricultural activities (SWA,2024).

3.1.4 Farming system

The district is identified as a mixed farming zone where both crop and livestock production are interacting in the farming system. It experiences two cropping seasons, "Beleg" and the summer season, consistent with the wider Sidama region. Shebedino Woreda covers a total area of 19,350 hectares with loam clay soil. Out of this, 13,819 ha are used for crop production, including 904 ha under permanent crops. Grazing land accounts for 1,211 ha, forest land covers 2,571 ha, and water bodies span approximately 19 hrs. Residential areas and other institutions occupy 572 ha, while ha hectares are classified as other land uses. Among the crop production land, 3,706 hectares are suitable for irrigation. The district has eight small rivers and more than 350 hand-dug wells. The major crops cultivated include maize, teff, wheat, barley, oats, sweet potato, chickpea, enset, and coffee.

Livestock plays a significant role in the farming system. It is the major source of draft power and it also serves as a source of food and source of income. Due to high population pressure, the grazing land has considerably reduced in support of cropping land. Crop residues and silage are important sources of animal feed. Oxen are the major sources of draft power in ploughing cultivated lands of the farmers in the study area. Besides these, animal husbandry is largely

constrained by feeding quality and availability due to an imbalance between animal's population and pasture size. Livestock such as cattle, oxen, sheep, and goats are also commonly reared in the district (SWA, 2024).

3.2 Research Design

This study was employed mixed (quantitative and qualitative) approaches and both graduated and non-graduated clients were considered. Three PSNP kebele was selected purposively by considering numbers of PSNP participants. Structured questionnaire prepared and used for both primary and secondary data collection, the data collects cross sectionally. Additionally, this data was conducted triangulation way because it helps to increase the reliability of the results by comparing the data obtained from one source with the other. Qualitative from FGD and KIK key informant was collected kebele development agents, local community leaders and community representatives were selected purposively.

3.3 Source of Data, Type and Data Collection Tools

To identify the determinates of influencing factors for timely graduation and effects of Household graduation data collected from both primary and secondary source were used.

3.3.1 Data source

1. Primary data was collected from both graduated and currently PSNP beneficiaries from those selected three PSNP kebeles, used random sampling methods by considering proportionality-based clients' number. Totally for research 207HHs were surveyed, Key informant interview and focus group discussion were used to collect qualitative data.

2. Secondary data -Secondary information was properly collected from different sources. Mainly MoA, FSCO reports, Sidama regional state FSCO report, research, PSNP PIM, WB documents, shebdino woreda agricultural office reports and different related papers reviewing on desk level.

3.3.2 Data collection tools

1. Questionnaire: Structured survey questionnaire was prepared, the purpose of this questionnaire was to collect the necessary information from both previous clients who have graduated from PSNP, and current participants. The questionnaire was tested, and modified. Three experienced data collectors were recruited, who well understand the local language, these kebeles and communities. Additional, one supervisor was also assigned to supervise, follow up and monitoring. Two-day training was conducted at woreda for those data enumerators.

2. Focus group discussion; -Kebele TC members, youth and female household are main

participants in discussion. This focused group discussion conducted each kebeles and numbers selection participants were 8 each FGD, as a guiding prepared semi structure structured question prepared for discussion. After group discussion collecting qualitative identified, summarized, organized.

3. Key informant interview - Twelve experienced experts from different position identified purposively including kebele development agents, woreda agricultural offices, and food security experts. A semi-structured question was prepared as guidance that was focused on determinants of graduation opportunities and program challenges. Additional information was collected from regional food security M&E experts and also incorporated. This KII provides relevant information from knowledgeable sources about PSNP graduation variables.

4. Document review -For this study documents that were more relevant to PSNP program, including program designed concept note, performance reports, researches, consultant documents were used widely. Additional unpublished documents of MoA office report were used.

3.4 Target population, Sample size and Sampling Procedures

3.4.1 Target population

For this study, three PSNP kebeles namely: Dila Aferara, Alawo Ano, and Konsore Ano were selected purposively based on beneficiary numbers. Clients who are currently participants and graduated from the program was considered as a targeted.

3.4.2 Sampling procedure

Multistage sampling techniques were employed. Shebedino districts was selected purposefully, because it was one of 20 food security from Sidama Region, clients benefited nearly 20 years; but low graduation performance. From the 17 kebeles, 3 kebeles were selected purposefully considering PSNP beneficiary number, these has lager PSNP clients when compare to the other, these were Dila Aferara, Alawo Ano and Konsore Ano. Finally, for surveyed respondents were selected by simple random sampling method, because targeted populations were homogenous (their income, food security status, live similar agro- ecology) and consider PSNP selection criteria.

3.4.3 Sample size determination

For this study, Yamane (1967) formula was applied, at 95% confidence level, degree of variability = 0.5 and level of precision 5% (0.05). The reason why using the Yamane formula is that this kind of formula is valid for survey on populations which size is finite, and already known. Yamane formula as follows;

$$n = \frac{N}{1 + N(e)^2}$$

N -is the population size,

n-is the simple size

e- is the level of precision, There for $n = 431 / 1 + 431(0.05)^2 = 431 / 2.0775 = 207$

To determine each kebele respondent with equal proportional sample size each kebele was use (Kothari ,2004) formula,

Table 1 proportional sample size

Kebele Name	Total PWs HH	Non graduated HH	Graduated HH	Total Sample respondent
Alawo Ano	139	33	30	63
Dila Aferara	160	40	37	77
Konsore Ano	132	35	32	67
Total	431	108	99	207

Validity and Reliability

To ensure the accuracy and consistency of the data collection process, first checked by used validity and reliability of the tools. A pre-test was conducted with 15 respondents, five from each kebele was taken to understand the appropriacies of the questioners, that selected for validity were all are PSNP clients. This sample test supports to review the questions quality and to improve the quality, this provides final data collected out comes clear and to deliver a dependable and appropriate.

3.5 Method of Data Analysis

After completing data collection, the information that was collected carefully summarized and organized according related themes in a clear and orderly. Both quantitative and qualitative data were analyzed at each stage, and the result were combined with final report to ensure a comprehensive knowledge on the study. This integration approach quantitative with quality result

deliver accepted and balanced out comes.

Descriptive statistical – analyzed by using mean, standard deviation, frequency, percentage, minimum, and maximum etc. the qualitative outcome was presented by using charts, tables, bar graph and so on.

Inferential statistics: - T-tests and chi-square tests, were used to evaluate the hypotheses based on sample data. Categorical variables provided by chi-square test like sex, educational, off-farm participation, irrigation, credit access, Household perception of graduation and awareness of PSNP graduation criteria. On the other hand, independent sample t-tests analyzed and compared the means of continuous variables such as age, family size, cultivated land size and frequency of extension contact by DAs. Qualitative data were analyzed through in-depth interviews and focus group discussions. Finally, econometric analysis using a binary logit regression model was performed with SPSS/STAT software.

3.6 Model Specification

3.6.1 Binary logistic regression model

PSNP graduation is dichotomous nature whether a household graduates or not, respondent express as yes or no answer. Econometric modelling is often the most useful way in the case of a research questions and hypothesis. The assumption of binary logistic regression model is binary out comes, no multicollinearity and linearity were utilized to determine the odds of households' graduation from the productive safety net program which is closely related to the dependent variable that is binary in nature and is defined as “graduation from PSNP”. For graduated =1 and non-graduated =0. So, Y is dependent variable graduation from PSNP and Xs are independent variables used. According to Wooldridge (2002), in order to explain binary logistic model cited by Mulugeta (2021), Wedajo & Lerong (2017), and Hayalu (2014) utilized binary logistic models in similar study was used and the following mathematical formula applied.

$$P_i = E(Y = 1/X_i) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} \quad \text{-----} \quad 1$$

The model predicts the probability of $P_i = E(Y = 1/X_i)$ an event occurring using the logistic function:

P_i (response variable) is 1 or 0 for individual i , and x_i is the data of exogenous variable, when $\beta_0 + \beta_1 X_i$ in equation 2 is obtained.

$$p_i = \frac{1}{1 + e^{-z_i}} \quad \text{-----} \quad (2)$$

Harrel (2001) cited by Hayalu (2014) if “ P_i ” is the possibilities of graduating from PSNP, and the not graduated $1 - P_i$. between $-\infty$ and $+\infty$ Z_i . The model be as follows:

$$1-p_i = \frac{1}{1+e^{z_i}} \text{-----(3)}$$

When divided 2 & 3 or graduated by non-graduated will get,

$$\frac{1}{1-p_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i} \text{-----(4)}$$

To get equation 5, it can change logarithmic function we get

$$L_i = \ln\left(\frac{1}{1-p_i}\right) = z_i = B_0 + B_1 X_i \text{-----(5)}$$

If there is more than one exogenous variable, (X1, X2..... XK), binary and logistic models used.

“L” is called “logit” and the models we called it “logit model”, (Gujarati, 1995, 2004) cited by Hayalu (2014). From equation 1 is used for transformations:

$$p_i = \frac{1}{1+e^{-(B_0+B_1X_1+B_2X_2\dots B_KX_K)}} \text{-----(6)}$$

As cited by Hayalu (2014) on Agresti (1996) and Tuzunturk (2007) in binary logistic regression model’s categorical dependent variable has the following assumptions:

Conditional mean of logistic regression has a value between 0 and 1

If the data is X, the possibility of Y’s being 1 is Pi, that is, E (Y =1| X i....Xk) =Pi

N number of observations about dependent variables are statistically independent

Defining variables are independent of each other

$$P_i = \beta_0 + \beta_1 X_i + U_i \text{-----(7)}$$

Where Pi = the dependent variable (Graduation)

Xi = a vector of explanatory variables

βi =a vector of estimated coefficient of the explanatory variables (parameters)

ui = disturbance term

$$Z_i (\text{graduation}) = \beta_0 + \beta_1 \text{Sex} + \beta_2 \text{Age} + \beta_3 \text{Edu} + \beta_4 \text{FASI} + \beta_5 \text{ACCI} + \beta_6 \text{EX} + \beta_7 \text{TAM} + \beta_8 \text{LS} +$$

$$\beta_9 \text{CRE} + \beta_{10} \text{IRR} + \beta_{11} \text{Off} + \beta_{12} \text{CROP} + \beta_{13} \text{LS}$$

Where, Sex=sex, AGE =Age, EDU =Education, CRE= Credit, OFF= off farm activity LS=livestock, LS= land size, EX=extension services, ACCI=FASI= Family size, IRR= irrigation

3.6.2 Inversely propensity weight (IPW) model

To examine the effects of graduation on HH income, IPW model used to compare mean average incomes and to under income effects treated and un treated HH.

Inversely propensity weight model- it is a tool used assess the effects of treated or exposure out comes .it can evaluate the difference b/n group, who take a treatment with those who did not. The benefits of IPW helps avoid bias and provided accurate treatment effect in case of missing data or selection problem (encyclopedia).

Steps to apply IPW

1. Estimate Propensity Score

By using logistic regression model, estimate probability (propensity receiving treatment.

$e(X_i) = P(T_i) = 1/X_i$; Where, T_i =is treatment, and x_i =covariates

2. Calculate Invers Probability Weight

For treated individual, IP $W_i = 1/e(X_i)$ and f or untreated individual, IP $W_i = 1/1 - e(X_i)$

Then apply or calculate the average weight /average treatment effects ATE.

To find ATE used IPW

Based on binary treatment variables T (1=treated,0=un treated) and X covariates

Then, IP $W_i = T_i/e(X_i) + 1 - T_i/1 - e(X_i)$, Where, $e(X_i) = P(T_i) = 1/X_i$ estimated propensity score

Then ATE IPW = $N \sum_{i=1}^N [T_i Y_i /e(X_i) - (1 - T_i) Y_i] / 1 - e(X_i)$, (Horvitz & Thompson (1952)

Y_i - is the outcomes of each individual, based on the above formula can calculate incomes of treated graduated HH by comparing non graduated with STATA.

3.7. Dependent, Independent Variables and Expected Hypothesis

Independent variable demographic, socio-economic, natural and intuitional will use to perform the study. Each independent also classified base on its nature variables categorical, continuous, ordinary to easily identify the challenges graduation from PSNP at house hold level

3.7.1. Dependent variable

According to PSNP implementation manual participants after proper benefiting & participating from this program expected exit and replaced by another new participant. This indicates clients had self-sufficient and move out of any external aid, immediately fulfilled the bench mark (3 up 5 years supported) clients exit from the program. In this research the dependent variable (Graduation) is represented by 1= graduated and 0 =otherwise (not)graduated.

3.7.2. Independent variable

Based on theoretical explanations, literature review, and practical personal observations independent variables are list below. Influential explanatory variables are proposed as follows how to affect graduation from productive safety net program in Shebedino districts.

Sex of household head: -it is categoric variable and affects HH levels of PSNP graduation. clients who is male =1 and female stand for =0. *Mulugeta et., (2021)*, all found that gender differences have an impact on the success of graduation rates, women less graduated than men. Because women have additional tasks at home like childcare.

Age of household head (AGE):- for this study it is classified as continuous variable, it is clear that age measuring in years. Muhammed (2022), age statical significance on graduation. when household age increases the probably of understand and knowledge about the program also increase.

Education of a household; - It is a categorical variable, 1=read and write,0=cannot read and write. Mulugeta (2021), found that education has positive significant that families shifting from chronic food insecurity situation to food self-sufficiency. Educated farmers easily adopted new technology and can understand agricultural advisory service.

Participate off-farm activities: -It is under categorical variable. (1 = yes ,0= no, it expresses as job that creates incomes that people have got additional benefits outside of their own farms activities.

Agricultural extension contacts by DAs: - Continues variable, measured by frequency of DAs contact with farmers in a year. Mulugeta (2021), studies indicated extension service builds the knowledge and skill of farmers. Proper utilization of agricultural service has positively significant association with graduation as well as poverty alleviation.

Livestock owner ship: -Categorical variable, 1=have, 0= did not have. TLU a universal measure for counting different animals (measured in tropical livestock unite, TLU). Muhammed (2022), found that livestock positively significance on graduation from PSNP. Participants who have animals' unit immediately graduated than participants who has not. This because that rural community agriculture is back bone of farmers.

Size of farm land: -It is a continuous variable, measured terms of hectare. Muhammed (2022) & Mulugeta (2021) found that farm land size is a significant difference between graduated and non-graduate beneficiates. Clients who owned large cultivated land produce more crops production (*Devereux et al., (2014)*).

Access to irrigation -; it is variables factors, clients who have irrigation access stands for =1, and who did not have=0.

Family size; - it is continuous variable; it is the total number of children each family (Encyclopaedia). Mulugeta (2021), Wasie (2018) (Wedajo & Lerong, 2017) they found that family size has a negative and significant relationship with graduation of households from PSNP. This means small size household graduated faster than large household size.

Access to Credit- it category variable, access explained as is available of credit or not. 1= used, 2= not used. O'Sullivan, A., & Sheffrin, S. M. (2003) access to credit is essential for improving agricultural production among rural people.

Awareness on Graduation criteria- it a categorical variable, weather PSNP clients' aware of the of PSNP graduation criteria or not. if clients are aware= (1), if not aware=0

Perception on Graduation – Categorical variables, it is farmers' opinions on graduating .1=good 0=not good.

Table 2 Variable type, measurement and signs

<i>Variable</i>	Variable type	Measurement	Expected sign
Sex	Categorical	Mand F	+ve
Age	Continuous	Year	+ve
Family size	Continuous	No, of people	-+ve
Education	Categorical	Year's schooling	+ve
Off farm activity	Categorical	Participation	+ve
Land size	Continuous	Hector	+ve
Livestock TLU owner ship	Continuous	Number	+ve
Extension service contact	continuous	Frq. extn. contact	+ve
Access of credit	Categorical	Access credit	+ve
Irrigation	Categorical	Participation	+ve
HH on graduation Perception	Categorical	Attitude on gra,	-+ve
HH awareness the criteria of graduation	categorical	perception	-+ve
Graduation	Dummy	Gra=1, no =0	Dependent Variable

3.8 Ethical Consideration

To conduct this study, official permission letter was obtained from Addis Ababa University. Based on this letter, the Shebedino Woreda Food Security Office issued a permission letter, which was then submitted to the administrations of the three selected kebeles. Data collection was carried out carefully to ensure the reliability of the information gathered. All participants were fully informed about the purpose and objectives of the study, and their willingness was obtained before to the data collection. Respondents were also assured that their privacy would be respected and all information provided would remain confidential. Finally, I confirm for participants that data collected from various sources were used only for the purpose of this research.

CHAPTER FOUR: RESULT AND DISSCUSTION

In this chapter, mainly covered determinants of PSNP graduation and the effects of graduation on client's income in Shebedino woreda. The data collected from 207 respondents. Both descriptive (frequency, percentage and model results were analyzed and the results are presented. For analysis both SPSS and STATA are used for analysis.

4.1 Numbers of Respondent by Sex and Graduation Status

Table 3 shown graduated and non-graduated respondents with by sex categories. A total of 207 respondents participated in study, including 112 females headed and 95 males headed HHs. This is because in PSNP, numbers of female headed HHs is higher than male-headed HHs. Additionally, 108 non- graduated or a PWs clients currently participating in the program and 99 graduated houses hold head were included.

Table 3 -Numbers of Respondent by Sex and Graduation Status

		Male	Female	Total
1	Graduation Respondent	49	50	99
2	Non-Graduated	46	62	108
	Total	95	112	207

Source: Own surveyed data (2025)

4.2 Determinates PSNP Graduations

On this section tried to analyzed the determinate variables by using means, frequencies, standard division and percentage by using descriptive, Inferential statics (chi-square and T test) and binary Logistic Regression binary models.

4.2.1 Demographic characteristics of the respondents

i. Sex of the sample household head

According to (Table 4), out of 207 respondents ,112(54.11%) female and remaining 95 45.89% were male. From 99 (47.82%) graduated, 50.51 % female house hold and remaining 49.49% male graduated house head. Conversely, from non-graduated household head 57.41 % female and 42.59 % household non -graduated. The chi-square test indicates sex difference of a household head and PSNP graduation statically insignificance association at (x 2 df (1) =0.9910, P=0.319) at $P > .05$). Habib, (2022) found similar report; however, Mulugeta (2021) and Wedajo & Lerong, (2017) both found gender is a significant determinate factor for graduation.

Table 4. The relationship between sex and graduation

Variable	Label	Graduation status						Ch-square	p-value
		Non - graduated		Graduated		Total			
		No (108)	%	No (99)	%	No (207)	%		
Gender	Female	62	57.41	50	50.51	112	54.11	0.991	0.319
	Male	46	42.59	49	49.49	95	45.89		
	Total	108	100	99	100	207	100		

Source: survey result (2025) no= frequency, %=percentage

ii. Age of respondents

The sample survey showed an average (mean) age of 42.29, with a minimum of 28, a maximum of 58, and a standard deviation of 6.653, as shown in (Table 5). The mean age for graduated households was 43.83, while for non-graduated households it was 40.88. The difference in mean ages was 2.95. The independent t-test results indicated that age is statistically significant at the 1% probability level ($T(df(205)) = -3.2587, P = .001$). *Desalegn et al., (2017)* found that age was a critically significant determinant factor for PSNP graduation in their study area. As clients' age increases, they become more experienced with the program's objectives and diversify their agricultural activities, since adults have better access to land compared to younger individuals. During the group discussion, participants indicated that younger PSNP beneficiaries do not fully participate in community development activities because most of them lack access to land and depend solely on regular cash transfers for their livelihood.

iii. Family size of the respondents

The sample survey data (Table 5) showed that both graduated and non-graduated households have an average family size of about 5.6. The mean family size for graduated households is 5.24, while for non-graduated households it is 6.07. The standard deviation is 1.28, and the mean difference is 0.83. The results show that non-graduated households have larger family sizes than graduated households. Independent t test statics analysis showed the family size is negatively significant association b/n PSNP graduation at 1% probability level ($T(df(205)) = 4.9278, P = .000$). *Desalegn et al., (2017)* in Babil and Mulugeta (2021) Wechale both highlighted that larger family size slower graduation rate. Thus, the study illustrated that lager family size had graduated lately than small in number and averse in our study area.

Table 5. The relation between Age, Family size and Graduation

Variable	Observation	Graduation status	Mean	S. D	T-value	P-value
Age	108	No gradate	40.88	5.8863	-3.2587	0.0013
	99	Graduate	43.83	7.1157		
	207	combine	42.29	6.653		
Minimum= 28, maximum = 58, range = 30, MA=42.29						
Family Size in number	108	No gradate	6.07		4.9278	.0000
	99	Graduate	5.24			
	207	combined	5.68	1.28		
Minimum= 3, maximum =8, range = 3-8, MA=5.68						

Source -; Own Survey Data (2025) S.D = Mean

iv. Educational status of respondents

Education is a major factor that facilitates or delays PSNP graduation performance. According to (Table 6), out of 207 households, 96 (46.38%) can read and write, while the remaining 111 (53.62%) cannot. Among the 108 non-graduated households, 70 (64.8%) respondents cannot read and write, and only 38 (35.1%) can read and write. On the other hand, among the 99 graduated households, 58 (58.5%) can read and write, while the remaining 41 (41.5%) cannot. The chi-square test result indicates that there is a statistically significant association between household head graduation and education level ($X^2(df (1), 11.3734 p = 0.001)$) at 1% probability level. *Desalegn et al., (2017)*, Similarly *Mulugeta (2021) & Habib (2022)*, found education was significantly determinate variables for graduation.

Table 6. The relation between Education status and graduation

Variable	Lebel	Graduation status						Ch-square	p-value
		Non - graduated		Graduated		Total			
		No (108)	%	No (99)	%	No (207)	%		
Education	cannot read & write	70	64.8	41	41.4	111	53.62	11.3734	0.001
	Can read & write	38	35.1	58	58.6	96	46.38		
	Total	108	100	99	100	207	100		

4.2.2 Socioeconomic determinate of graduation

i. Farm size

In the study area, the respondents' maximum land size was 0.75 ha, the minimum was 0 ha, and the standard deviation was 0.134. The average land size of a household was 0.254 ha. For graduated and non-graduated households, the mean land sizes were 0.284 ha and 0.228 ha, respectively. The difference in landholding between graduated and non-graduated households was 0.056 ha. The independent t-test results shown in (Table 7) indicated that there was a positive and significant difference between farm size and PSNP graduation at the 1% probability level (T (df (205) = -3.0622, p=.002). *Desalegn et al., (2017)* found in their study that land size is significant determinant factor for graduation. This study indicates that better land owner graduated faster than less land owner.

Table 7. The relation between household cultivated land and Graduation

Variable	observation	Graduation status	Mean	S.D	T-value	P-value
Farm Size in Hectare	108	No gradate	0.228	0.081653	-3.0622	0.0025
	99	Graduate	0.2841	0.170176		
	207	combined	0.2548	0.1342		
Minimum= 0, Maximum = .75, 0-.75=.75, Average mean =.25						

Source -; Own Survey Data (2025) S.D = standard deviation, Mean

ii. Access to irrigation

In (Table 8) among 207 respondents 137(66.18%) did not have irrigation, while 70 (33.82%) have irrigation access. In other side from irrigation land user 70, (44%) was graduated and 26(24%) respondents were non graduated. The result indicated graduated HH more access irrigation than non-graduated. The Chi square test showed irrigation access and the probability of graduation from productive SafetyNet program is statically significant at (X²(df (1) =9.5765, P=.002) at probability level <0.05. Mulugeta (2021), indicated that irrigation critical significant factor for PSNP graduation. He found that 66.18 % graduated respondents participate in irrigation.

iii. Livestock owner ship

The results of household survey (Table 8), Outs 207 participants 116(56.04%) has livestock, and the remaining 91(43.96%) did not have livestock. 68(68.69%) of graduated HH have their own livestock and only 31(31.31% did not own livestock. From non-graduated 108 (60) HH (55.56%) did not own livestock, while the remaining 48(44.44%) have own livestock. The chi-square test result indicated that there was a strongly significant association livestock ownership and graduation at (x²(df (1) =12.3220, P=.0001) at 1%. At the time of group discussion, most

participants confirmed that when there is a delay in transfers, they sell their livestock products and use the income to purchase food and agricultural inputs to enhance production. Similarly, Mulugeta (2021) found that a household who has owned better numbers of livestock graduated faster than who did not have.

iv. Off farm activities

According to (Table 8) out of 207 sample respondent 128(61.84) did not participate of farm activity, while the remaining 79(38.16) were participate in off farm activity. From these participants 79 individual 56(56.6) participants were graduated and only 23(21.3) were non graduated. A chi square test, indicates at 1% probability level shown that there was highly significant relation b/n graduation from PSNP and non-farm activity at ($\chi^2(df (1) =22,2262, P=0.000)$) at<. 001.Habib (2022) found that off farm participant HH graduated number higher than non-graduated. Thus, off farm activity has a positive association with PSNP graduation.

Table 8. The relation between access to irrigation, Livestock owner & Off farm with graduation

Variable	label	Graduation status						Ch-square	p-value
		Non -graduated		Graduated		Total			
		No (108)	%	No (99)	%	No (207)	%		
Access to irrigation	Yes	26	24	44	44	70	33.82	9.5765	0.002
	No	82	76	55	56	137	66.18		
	Total	108	100	99	100	207			
Availability of Livestock	Yes, I have	48	44	68	68.7	116	56.04	12.322	.000
	No	60	56	31	31.3	91	43.96		
	Total	108	100	99	100	207	100		
Off farm activity participation	yes	23	21.3	56	56.6	79	38.16	27.2262	.000
	No	85	78.7	43	43.4	128	61.84		
	Total	108	100	99	100	207			

Source -: Own Survey Data (2025)

4.2.3 Institutional determinate graduation

i. Extension service

Table 9- indicated that the average mean contacts respondents by DAs 2. 243.Graduate household monthly advice by DAs 2.39 and non-graduated was by 2.09-time,1.0553 standard deviation. The mean difference 0-.3013. The independent t test showed that there was a significant relationship between graduation level of the household and extension contact at 5 percent probability level (T (df (205) =-2.0686, P=.0398). Similar Mulugeta (2021) found that a household with high extension service contact graduated faster than these with less contact.

Table 9 . the relation between frequency of extension contacts and graduation

Variable	observation	Graduation status	Mean	S. D	T-value	P-value
Frequency of Extension contacts'	108	No gradate	2.0925	0.9524	2.0686	0.0398
	99	Graduate	2.3939	1.1412		
			combined	2.2367	1.0552	
Minimum= 0, maximum = 5,						

Source -; Own Survey Data (2025), S.D = standard deviation, Mean

ii. Credit access

Table 10, shown from total 107(51.69) participants were not access credit, but 100(48.31) were used. Similarly, 79, (79%) graduated HH used credit but when observed non graduated only (19 %) have access credit. This analysis outcome showed that graduated household participants more than two half than non-graduated clients. The chi-square test shown credit significantly associated with graduation from PSNP at $\chi^2(df (1) =75.34, P=.001)$ at $<.01$ probability level. Similarly, (Habib ,2022) found, Credit can maintain and stimulated PSNP beneficiaries to enhanced food self-sufficiency.

iii. Respondents' awareness on PSNP graduation

According sample survived result (Table 10), to assess the significance household awareness on PSNP Graduation, out of total 207 respondent (36.7%) HH awarded on PSNP graduation criteria, the rest (63.29%) did not inform the criteria of PSNP graduation. Additionally, 39 (39%) graduated and 71(65.7%) non graduated have lacks of awareness. The chi-square test analysis that showed that awareness creation on the criteria of graduation with PSNP graduation is not statistically significant association with PSNP graduation at $X^2(1) =.59. p=0.44(p>.05)$. This indicates household awareness PSNP graduation is only not enough to full fill graduation criteria.

iv. Respondents' perception on the importance of PSNP graduation

The result (Table 10) indicated that, out of 207 sample respondents ,119 (57.49%) believed that graduation from PSNP significantly important. Out of total 99 graduated house hold ,63(63.63%) perceived positively about graduation. The remain 36(36.36%) did not thinks the positive aspects of graduation. The chi-square test illustrated that HH perception on the importance of graduation with PSNP graduation not statistically significant association with PSNP graduation at $X^2(1) =.2.94. p=0.087(p>.05)$.

Table 10. The relation b/n Credit access, Awareness on PSNP and HH perception on the importance of graduation

Variable	Label	Graduation status						Chi-square	p-value
		Non - graduated		Graduated		Total			
		No (108)	%	No (99)	%	No (207)	%		
Credit access	Yes	21	19	79	80.8	100		75.3444	.000
	No	87	81	20	20.2	107			
	Total	108	100	99	100	207			
Awareness of HH on Graduation	Yes	37	34.26	60	60.61	97	36.71	0.5861	0.444
	no	71	65.74	39	39.39	110	63.29		
	Total	108	100	99	100	207			
HH perception on the graduation	yes	56	51.85	63	63.64	119	57.49	2.9351	0.087
	no	52	48.15	36	36.36	88	42.51		
	Total	108	100	99	100	207			

Source: Own survey data (2025)

4.3 Economics Model Analysis

This section investigates determinants factors that influence a household's graduation from productive SafetyNet program by using Binary regression. Because the dependent variables binary in nature. The binary logit models PSNP graduate household has given value 1=graduated household & non-graduated household assigned =0.

4.3.1 Multicollinearity Diagnostic Tests

In regression model may it happen two or more are correlated each other. before running analysis in economic model first look and variables whether multicollinearity or association b/n error or not. Thus, first check data quality and to provided more accurate, reliable and accepted output.

i. **Contingency coefficients (CC)**- can assess association or relation b/n two categorical factors independently (Statisticshowto.com,2019). Based on Pearson correlation coefficient pairing and measure across each variable, like gender with education =.096, education with credit =.070, irrigation with livestock=.057, HH perception with awareness on graduation =.242 and so on. accordingly, all 9 variables paired property calculated. From these 6 variables the values of CC were .04 up to .01 shows low association, and three also variables result 0.2 to .024, indicates moderate association which is accepted. All variables result shown that all less than 0.75. no multicollinearity issue among variables.

ii. **Variance inflation factor (VIF)**- After computing, $VIF = 1$, there is no correlation problem,

VIF =in between 1 up to 5 is moderate but acceptable. VIF <10 to be accepted. In this study all variable results the mean value of the factor (VIF) value of <1.18 indicates in all case multicollinearity is not an issue. In both cases, there was no multicollinearity issue because the results were less than ten. See on VIF Table 11.

iii. Tolerance in regression analysis, another tool that used to assess and detect multicollinearity $Tolerance=1-R_i^2$. The tolerance result ≤ 0.20 is sign of multicollinearity, between 0.1 and 1 there is no multicollinearity issues (Corporate Finance Institute ,2024). As shown in table 4.9 the result between 0.71 to .91 and the result are b/n .1 and 1. Therefor no -multicollinearity issue.

Table 11. Multicollinearity Diagnostics Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Ages of a respondent HH	0.918	1.089
Genders of a respondent HH	0.895	1.117
Education level of respondent	0.910	1.099
HH family size	0.880	1.136
Farm (cultivated) land size	0.879	1.138
Irrigation of a HH	0.742	1.348
Livestock owner ship	0.820	1.220
Participated on farm activity	0.714	1.400
Frequency Extension contact by DAs	0.843	1.186
House hold perception on PSNP graduation	0.881	1.135
Beneficiary awareness on PSNP Graduation	0.855	1.170
Irrigation access	0.830	1.205
	b/n .1 and 1	<1.19

Source: Own survey data (2025).

4.3.2 Goodness of fit test

Chi-square test value 147.906, the Omnibus test of model coefficients was highly significant at $p = 0.000$. this shown that the selected predictor variables had a combined effect on HH graduation. Nagelkerke's R^2 value indicates 0.681. A chi-square χ^2 (df (8) = 3.538, $p = 0.896$) for the Hosmer and Leme show. The p-value of the Hosmer and Leme show techniques greater than 0.05. so, the model's goodness of fit can be said very well. In SPSS, indicates adequate model fit. There for this model is found adequate and used for analyzing the data.

4.3.3 Binary logistic regression model results on PSNP graduation

Seven from Twelve explanatory variables were statistically significant in the model, including, family size, educational, and Extension service, credit access, farm land size, participation in off-farm activities and irrigation access. Whereas age, gender, livestock ownership (TLU), household

perception on PSNP graduation and awareness on graduation PSNP criteria were insignificantly determinant factor on graduation from PSNP in the studied area.

Table 12. Binary Logistic Regression Model Results

variables	Coef.	St. Err.	t-value	p-value
Age of household of HH	1.069	0.04	1.81	0.07Ns
Gender of a household Head	1.27	0.628	0.48	0.63Ns
Education level of HH	3.414	1.563	2.68	0.007***
Number of family size of respondent	0.614	0.11	-2.74	0.006***
Farm size (cultivated land)	95.556	183.522	2.37	0.018**
Access of irrigation of respondent	4.407	2.552	2.56	0.01**
Livestock owner ship	2.391	1.12	1.86	0.063NS
off farm participation of HH	3.409	1.764	2.37	0.018**
Frequency Extension contact	1.77	0.438	2.31	0.021**
HH perception on Graduation	0.976	0.459	-0.05	0.959Ns
HH awareness on Graduation	1.64	0.788	1.03	0.304Ns
Credit access of HH	23.944	12.089	6.29	0.000***
Constant	0.002	0.004	-2.7	0.007***
Mean dependent var	0.478	SD dependent var		0.501
Pseudo r-squared	0.516	Number of obs,	207	
Chi-square	147.906	Prob > chi2	0	
Akaike crit. (AIC)	164.665	Bayesian crit. (BIC)	207.99	

*** $p < .01$, ** $p < .05$, * $p < .1$, Ns=nonsignificant

Source; Own survey data (2025)

i. Education

Education in study area positively significant factor that influencing graduation from PSNP at ($P=0.007 < 0.01$). The odd ratio result indicated that when PSNP beneficiaries' education level increase by one stage the probability of HH graduation raised by 3.414 %, while other determinate variables remain the same. Similarly, *Asfaw al et., (2019)* found that more educated household had positive significant change on adopting new agricultural technology, easily adopted advanced agriculture activities for maximising agriculture production.

ii. Family size of a respondent

The model results that family size a negatively influence factors on PSNP graduation in studied area. Negatively significant implied PSNP beneficiaries who have lager family size graduated slowly than low family size. Odd ratio 0.614 indicates one individual increase in household chance to graduation decrease by 39 % at a significant level at $P=0.006$. This condition true all things remain unchanged. Thus, a HH have large has lower PSNP graduation status in the studied area. *Desalegn et al (2017)* found larger family member slower the speeds. But Habib (2022), in Dire Dawa found family member no impact on graduation.

iii. Farm size (Cultivated land)

Availability of farm land positive effects on graduation, better farm size positive association with PSNP graduation at significant level $P=.018, <.05$. When things are remaining the same, the binary logit model result odd ratio shown clients farm size increased by one hectare the graduation probabilities of a household raised by 95.556 %. Thus, clients who have better farm land graduated sooner in the studied area. Similarly, Study by *Ren et al. (2019)*, highlighted that enough farm land had positive aspect for a farmer to enhance net agricultural profit & also improved economic development PSNP clients.

iv. Irrigation access of respondent

Irrigation and PSNP graduation have a positive relation and significant at probably level at $p=.01, < 5\%$. That means irrigable land holder graduated faster than that did not have and vice versal, the model odd ratio results confirmed irrigable land user graduated faster by 4.407 % than non-irrigated user, its holders true when other variables under the same condition. *Irmak, S., & Kukal, M. (2019)*, found that irrigation agriculture produces more than double when compared rainfed. This proper management irrigation leads achieved better crop production more consistently.

v. Off farm participation

Non -farm activities are another critical factor in study area. It was a positively association with graduation and strongly significant. According to model result with $p=.018$ and 3.409 coefficient this variable indicates statically significant at the 5%. Additionally, the binary logistic regression the odds ratio of for this variable 3.41 indicates that assuming other factors are kept in constant, clients who participated on farm activity 3 times a probability gradated than did not participated. Participation in non-farm activity a potential to accelerate in come source. (*Mulugeta ,2021*), stated households who participated non-farm activities has a strong positive relationship with graduation.

VI. Frequency of extension service

The odd ratio 1.77, with a p-value of 0.02 household heads that had frequency contact with DAs statistical significance at 5% (<5%). A household who makes use of extension service approximately 77% more likely to graduate than those with little or no advice, but all other variables remain the same. Therefore, extension services and graduation have positive relationships. The same to with (Wasie, 2018), he found frequently extension service positively significant with graduation status in west Belesa.

vii. Credit access

Credit access in studied area critical and strongly associated with graduation at significant level at 1% (p=001). The odds ratio 23.94 indicted credit access most effective predictors. A client who has access to credit nearly 24 times chance of graduation than who did not access. But it holds true all other variables stay constant. Mulugeta, (2021), binary model highlighted a household who were used credit, graduating from the program by 0.072 times than clients who have no access to credit.

4.4 Effects of PSNP Graduation on Household Income

Table 13, indicated annual average incomes of graduated and non-graduated household were 27792.93 and 22499.07 respectively. The mean difference was 5293.855, standard deviation 427.488. The result showed graduated HH have greater mean income by 5293.855. Similarly, the T test showed graduated household has significant higher total annual income than non-graduated at 1% probability level (T (df (205) =-6.8, P=.000). The study by *Hoddinott et al. (2014)* found a household who graduated from PSNP have better asset such as livestock and land holdings, but their difference from area to area.

Table 13. Independent two-test household income comparison b/n graduated with non-graduated

Group	Sample	PSNP Graduation			T -value
		Mean	Std. Err.	Std. Dev.	
Non - graduated	108	22499.07	526.5444	5472.01	-6.8**
Graduated	99	27792.93	569.0082	5661.56	
combined	207	25030.92	427.4881	6150.482	
diff		-5293.855	774.1023		
			Mean=25030.92	S. D=6150	

Source: Own survey data (2025)

Based on inversely probability weight model (IPW) (Table 14) graduated HH roughly 6,224 earns

more than non-graduated. The model shown graduated 28,529 and non-graduate 22305.4 annual income pre yearly. This research indicated average treatment effects (ATE) of graduation status on total annual income by IPW logistic propensity scores result showed that graduation was associated with a statistically significant in annual income of nearly 6,225 at .05. ($p < 0.001$). In line with *Merkeb et al. (2024)*, found that food security status non-graduated and graduated not similar, that was graduated HH had better food security & income status when compare to current beneficiaries.

According to Trading Economics, as of November 1, 2025, the national minimum wage rate for an individual in Ethiopia ranged between \$1.8 and \$2.0 USD per day. When converted using the National Bank's exchange rate, \$1 USD equals approximately (120- 130 ETB). This means the daily minimum wage rate to roughly 234 to 260 ETB pre dally. In comparison, the average annual income of households that graduated from the Productive Safety Net Program (PSNP) was about 28,529 ETB, when convert to daily, it equals around 79.25 ETB. For non-graduated households, the annual income was approximately 22,305 ETB, or nearly 62 ETB per day.

This shows that the national minimum daily wage is nearly three times higher than the daily incomes of both graduated and non-graduated PSNP households. These households earn significantly less than the expected minimum annual wage rate. This indicating that many clients still remain under food insecure and struggle to meet their basic needs to maintain their livelihoods at the household level in Shebedino Woreda.

Table 14. Treatment effects of income B/n graduation and non-graduation by IPW model

Income		Treatment income effects (on IPW)				
		coef.	st, dev	robo.	t-value	P
		Err.				
ATE	Graduation PSNP (Yes V no	6,224.89	5661.56	1008.48	6.17	.000
PO mean	Non graduated (no)	22305.4	5472.01	874.223	25.51	.000

Source: Own survey data (2025)

4.5 Perceptions of Respondents on Graduation and PSNP

4.5.1 PSNP transfer delays, and causes of monthly transfer delays

Out of a total of 207 sample respondents, 108 (52%) were non-graduates, while 99 (48%) were PSNP graduates (Table 15). The study indicated (100%) transfers were always not paid on time.

Beneficiaries at the FGD emphasized that transfer delays occur even when payments are made through the banking system. Key informants further explained that these delays are not limited to the woreda and kebele levels but also extend to regional financial offices. According to the PSNP Program Implementation Manual (PIM, 2020), clients have the right to receive timely transfers regardless of any administrative or logistical challenges.

In line with this, Kassaw & Worku (2024) found that 99.3% of their respondents reported transfer delays; while only 0.7 said transfers were made at the right time.

Regarding average time transfer delay (Table 15), both categories (graduated and non-graduated), reported PSNP household 50 (24.7%) and 103 (49.7%) transfer delays for 1-2 weeks and for 1 month, respectively. Another 53 HH (25.6%) told that regular transfer days more than a month. During the FGDs, respondents indicated that they did not know the reasons for transfer delays. They received transfers only when the woreda food security office provided information to them to receive. The kebele administration and Development Agents (DAs) also unaware of the causes of delays. Most of the time, the woreda food security office explained that the delays are from regional finance offices.

Table 15. PSNP Transfer delays and the cause of monthly causes of delays

variables		Non -graduated HH		Graduated HH		Total	
		N-108	%	N-99	%	N-207	%
Do you observe any delays in transfers	yes	108	100	99	100	207	100
Days of transfer delays	for 1-2-week	28	26	22	22.2	50	24.7
	for 1 month	59	54.6	44	44.4	103	49.7
	more than 1 month	21	19.4	33	33.3	53	25.6
The cause of transfer delays	Financial constraints (cash liquidity)	74	65.5	46	46.4	120	58
	I did not know the reason delays	34	31.4	53	53.5	87	42
		108	100		100	207	100

Source: Own surveyed data (2025)

4.5.2 Respondents perception on adequacy of PSNP transfer

As shown in (Table 16) 108 (100 %) of non-graduated households answered monthly cash transfers are insufficient to cover a family's basic needs, did not buy enough cereals due to current raise market price. Focus group discussion participants in 3 kebeles said they got 126 ETB pre day; which is not enough to buy 3kg of cereals, and thus the monthly cash transfer did not cover

the family food gap. Similarly, Kassaw (2024) highlighted that those clients did not buy enough food with their transfers which are not enough to achieve household food self-sufficiency and asset building process.

Table 16 Respondent Perception on Adequacy of transfer

variable			non graduated (108)		%
Non - graduated	Is monthly transfer can cover basic needs of your families?	no	108	100.0	
		yes	0	0.0	
					100.0

Source: Own surveyed data (2025)

4.5.3 Respondents perceptions and awareness on PSNP graduation

On (Table 17), Outs of the total 207 respondents, 131(63.3 %) the clients have no awareness about the program major principle. Only 76 (36.71%) clients were aware about the objectives of graduation. 61% of the graduated and 66 % of the non-graduated were did not award about the graduation criteria. There was high communication, information gap b/n program clients and program implementers. At Darira kebele FGD participants conformed that there were some clients exit from the program, but they did not know how graduation process was done, while, kebele administration and kebele DAs informed them, typically with a message such as, “You are graduated; you are no longer a PSNP client, Similarly, *Berhane et al, (2014)* stated that there is information gap b/n clients and implements of PSNP about the program objectives.

Similarly (Table 17), out of the respondents,19 (57.49%) of the survey respondents answered graduation from PSNP is important for sustainable development. Whereas, 88(42.51%) of the respondents perceived PSNP graduation not important. Particularly, 63 (64%) PSNP graduated and 56 (52%) non-graduated believed that graduation was important. When discuss with key informants, including the Shebedino Woreda Food Security Head and the PW Coordinator, indicated that most program beneficiaries do not have a positive understanding of graduation, they think that clients were graduated from the program, they loss regular transfer, most beneficiaries believed that transfer was free fee that come to poor, they think that did not loss this opportunity. Due to this client did not give real information and they hidden their annual income.

Table 17. Respondents Perceptions, awareness and importance of graduation

	Are you aware the criteria for graduation			Total	Do you believe that Graduation important		
	response	no	yes		no	yes	Total
Non - graduated	N	71	37	108	52	56	108
	%	66	34	100	48	52	100
Graduated	N	60	39	99	36	63	99
	%	61	39	100	36	64	100
Total	N	131	76	207	88	119	207
	%	63.3	36.71	100	42.51	57.49	100

Source: Own surveyed data (2025)

4.5.4 Respondents perception on the process of PSNP graduation

As indicated in (Table 18,) only 14 % of PSNP clients knows graduation bench mark, whereas 32 (29.6%) of non-graduated and 20(20) % of graduated clients believed that graduation takes place by woreda and kebele administration pressure. Surprisingly, in both categories 121 (58 .4%) clients did not know by what means PSNP graduation process takes place. Also, Mulugeta (2021), reported that from total sample survey 187(69.5%) respondent response shown that the graduation process and its criteria not clear, transparent.

The data in (Table 18) also displayed the role and responsibilities of kebele actors such as DAs, CFSTF and KFSTF on PSNP graduation. Respondents believed that graduation decided by DAs, KFSTF and CFSTF made up 20(9.7%) ,109(53%) and 14(6.4%) respectively. Across all the majority respondents 64(30.9%) did not know who decide graduation process at kebele level. PSNP graduation guidance note (2017) clearly stated that the process of graduation started at kebele level and is given by CFSTF. In reality the process of PSNP graduation is very complex.

Table 18. Cause of graduation from PSNP and responsible for graduation

Variables /Questions		PSNP HH status					
		Non graduated HH		Graduated HH		Total	
		No,	%	N	%	N	%
The trends graduation(exit) your area	bench mark)	13	12	16	16	29	14
	Government	32	29.6	20	20	52	25
	self-graduated	2	1.8	3	3	5	2.4
	I don't know	60	56	61	61	121	58.4
Total		108		100		207	
Responsible bodies for graduation	DAs,	10	9.2	10	10	20	9.7
	KFSTF	61	56.4	48	48.5	109	53
	CFSTF	11	10	3	3	14	6.4
	I did not know	26	24	38	38.3	64	30.9
Total		108		99		207	

Source: Own surveyed data (2025)

4.5.5 Respondent's participation on PSNP activities

Based on the PSNP, PWs operational and maintenance Guide line (MoA,2014) PSNP planning and all program out puts perform at community level, community participation starting program planning, PWs site selection, graduated client selection implementing PWs activity, targeting) at grass root level is a crucial point for program success and sustainability. About 60 (60 %) of non-graduated PWs respondents indicated each program activities (Table 19). whereas from 108 ,48(48%) non graduated clients did not participant each program activities. The extent of participation was almost nearly the same for participant and non-participant. This 48% clients would do not participant about information about the program, low participation the challenges the program performances. This finding agrees with, Habib (2022) found that 81.54% respondents graduation took place without community participation.

Table 19. Respondent Participation each program activities

Variables		Reponses			
			Yes	No	Total
Do you participate PSNP (on planning, PWs, meeting, targeting.) actively	Non graduated HH	No	60	48	108
		%	60%	48%	100
Total			60	48	108

Source: Own surveyed data (2025)

4.5.6 Respondents perceptions of the transparency of PSNP graduation

According to PSNP, PIM (MoA, 2020), beneficiaries exit the program only after fulfilling the graduation criteria. The graduation process requires active participation from clients and must be conducted in a fully open and transparent manner. At (Table 20), indicated that PSNP graduation and the program itself transparency for clients or not. The result showed that 50% of clients did not agree the process of graduation process fair and transparent. Only 25(52 %) graduated household and 23(48 %) non-graduated has positive thinking about the process fair and open for all clients. Therefore, the process of graduation and targeting activities not transparent in studied area. Similar study Mulugeta (2021), report illustrated that from total sample survey 187(69.5%) respondent response shown that the process of graduation process and its criteria not clear, transparent and fair.

Table 20. Transparency and participation on graduation process

	Do you believe graduation process transparent				Total	
	Yes		no			
	No,	%	No,	%	No.	%
non-Gra	23	48	85	53	108	52
Graduated	25	52	74	47	99	48
Total	48	100	159	100	207	100

Source; Own surveyed data (2025)

4.5.7 PSNP training and its importance for graduation

To develop client’s skill different kinds training is deliver for beneficiaries. Based on (Table 21), among non-graduated HH 12(11 %) PSNP training effectively and it is very important, and 37(34%) respondent answered training was no change in their life. Also 12(12%) respondents also answered it was efficient and 28 (28%) told that it was not enough. This indicated PSNP training delivery approach not evaluated by program implementer. Mulugeta (2021) study found that (40.9%) respondent no properly training and did not improve PSNP client’s graduation.

Table 21. PSNP Training and Its importance for graduation

		Do you receive PSNP training		Total
		no	yes	
graduation status	Non-graduated	60	48	108
	graduated	59	40	99
Total		119	88	207
		Importance of Training		Total
		no	yes	
graduated status	no graduated	68	40	108
	graduated	50	49	99
Total		137	70	207

Source: Own surveyed data (2025)

4.5.8 Constraints regarding delays of PSNP graduation

As shown (Table 22,)108 non graduated HH (37%) & 99(53.4%) of graduated replied the main problems of graduation delay due to limited financial resources. The remaining both categories 49% and 43.4% believed lacks financial resources and lack of sufficient assets. During FDG there was few financial institutes at woreda level which avail financial credit service for program beneficiaries like OMO; however, RUSACCOs did not have a capacity to deliver credit PSNP beneficiaries. Mulugeta (2021), found that access of credit critical for graduation in study area.

Table 22. Respondent perception regarding delays of Graduation

Variables	Which one Constraints regarding delays of Graduation					No challenge	total
	No	Lack of sufficient income	Inadequate training	Limited access to credit	all		
Non graduated	No	14	2	40	53	-	108
	%	13	1.9	37	49	-	100
Graduated	No	3	0	53	43	-	99
	%	3	0	53.4	43.4	-	100
Total		17	2	93	96	-	207

Source: surveyed data (2025)

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

Productive Safety Net Programs (PSNP) was introduced in Ethiopia in 2005 as one of the food security strategies. Its main objective protects beneficiaries' asset depletion and produce community assets, ultimately enabling them to graduate (exit) from the program. However, different studies and reports showed that performance of graduation from the PSNP still remains below in the country.

Thus, this study was conducted to understand determinants and challenges of PSNP graduation Shebedino Woreda, Sidama region. For this study a total of 207 sampled households, 108 non graduated and 99 graduated respondents were selected through random sampling method. Respondents agreed that due to low PSNP resource at each kebele, full family targeting was not done, regular transfer delay and insufficient transfer were also other problems that hindered the graduation.

The finding of this study showed that low awareness on the importance of graduation, low community participation in the graduation process, inadequate transfer and financial constraint for credit were the main influencing factors that hinder the implementation of graduation in the study area. Binary logit model results indicated that age, education level, family size of a household, farm land size, access to irrigation, livestock ownership, participation on off farm activity, frequency extension contacts to farmers with development agent and credit access are major determinant factors of graduation from PSNP in the study area.

Out of the 207 respondents, 119 (57.49%) respondents from both graduated and non-graduated have positive perception for graduation. However, there is no statistically significant difference between graduated and non-graduated respondents. This result shows that even though the communities have a positive perception on graduation, most beneficiaries did not graduate from PSNP. This indicated that beyond graduation, clients still needed other activities (skill, access to credit, irrigation access off farm activities,) needed to timely graduation.

PSNP beneficiaries actively participation at the grassroots level in each program activities are crucial for program success and sustainability. However, in the study area, PSNP client's participation in the graduation process was relatively low. The data show that 36.3% of graduated households participated in program activities, compared to only 21% of non-graduated households. This low level of beneficiaries' participation negatively affects the timely graduation of households from the PSNP.

Based on finding, the study result concluded that the average annual income of graduated households become more than that of non-graduates' nearly by 6,225 ETB. The inversely probability weight model (IPW) shows graduated HHs received 28,529 ETB and non-graduate 22,305.4 ETB annual income. This indicated that relatively graduated HHs had better food security status than non-graduated HHs; implies that graduation also contributes to improving food security and overall status of beneficiaries.

But when compared national wage rate, as Trading Economics, 2025 national minimum daily wage is nearly three times higher than the daily incomes of both graduated and non-graduated PSNP households. Both clients earn significantly less than the expected minimum annual wage rate. This indicating that both are still remain under food insecure and struggle to meet their basic needs to maintain their livelihoods at the household level.

5.2 RECOMMENDATIONS

Based on the findings of this research the following recommendations were forwarded: added irrigation on recommendation.

◆ Local-level implementers should follow the graduation guidance note and the PSNP implementation manual (MoA,2007) to improved graduation performance at household level.

◆ Timeliness, adequacy, and transparency of transfers were identified as the main factors affecting household-level graduation in the study area. Therefore, program implementers (Government and Donors) should adjust daily wage rates and cash transfers according to time and area that aligning them with crop market prices through market analysis. Transfer delays should be avoided, preferably by using an e-payment system instead of manual payments

◆ Delivering quality education is essential to improve farmers' adoption of technology and good agricultural practices. Consequently, education centers and partners should focus on enhancing farmers' skills to adopt improved agricultural methods and achieve better production for sustainable rural development, thereby supporting PSNP graduation.

◆ Family size, esp. large dependency ratio, is significant negative factor of determinate PSNP client graduation in study area. Thus, family planning program and women health education, and creation of different job opportunities particularly off-farm activities are recommended. Should full family be targeting implement as PIM.

◆ Access to credit has a significant role for PSNP graduation. Thus, strengthening access (by supporting initial capital) for financial institutions (RUSACCOs, OMO) and establishing cooperatives facilitate, which provides positive impacts on clients' income.

◆ Irrigation; -Irrigation agriculture can produce double crop production when compared rainfed, in study the model results confirmed irrigable land user graduated faster by 4.407 % than non-irrigated. Therefore, PSNP participate should use alternative potential irrigation technology in the area like hand dug hole, motor pumps at household level and avoid salty management soil important in shebedino woreda.

◆ Increasing client participation in PSNP activities in every step including program planning, implementation, and monitoring of PSNP activities that lead to graduation is vital. The graduation process should be implemented in accordance with the PSNP (PIM). This involves actively mobilizing the community beginning at the community level and providing frequent training and skill development in livelihood skills, financial literacy, and resource management.

◆ The findings showed that extension service is more associated with PSNP graduation. Farmers that were continuously trained on different agricultural production systems and use of technologies have more probability to graduation. So, it is recommended to strengthen and give more attention for farmers training and awareness creation.

Future research study should be conducted by using longitudinal data. Other variables included environmental factors like (climate shock, pests& disease management), market access, social capital and household health status in the study should be considered in the future research to have a more compressive understanding of the factors that determine PSNP graduation

References

- Adato, M., Ahmed, A., & Lund (2004). Linking safety net, Social Protection, and poverty reduction; direction for Africa .2020 Africa conference Brief No.12.Washington DC; IFPRI
- Anderson., &Cook, J.T. (1999). Community Food Security: Practice in needs of theory. *Agriculture and Human Values* ,16(2),141-150.
- Anderson., & Elisabeth, F. (2015). USAID office of Food for Peace food security country frame work for Ethiopia FY 2016 -2020.Washington, D.C.
- Arega. B. (2012). productive SafetyNet program and Household level graduation in drought prone area of the Amhara region of Ethiopia: A cause study in Lay Gaint Distracts
- Asfaw, M., Geta, E., & Mitiku, F. (2019). Economic efficiency of smallholder farmers in wheat production; the case of Abuna Gindeberet District, western Ethiopia. *Review of agricultural and Applied Economics*,22(1),65-75. <https://doi.org/10.15414/raae.2019.22.01.65-75>.
- Ayalew, M.A. (2020). Graduation Determinates of Productive SafetyNet Program in Wuchale Woredas of Oromia Reginal state, Ethiopia
- Azariadis, C., & Stachurski, J. (2005). Poverty traps. In A. V. Caplin & J. Leahy (Eds.), *Handbook of Economic Growth* (Vol. 1A, pp. 295–384). Elsevier.
- Barrientos, A., & Holmes. R (2007). Social Protection in poor country: A review of the evidence. *Journal of development studys*,43(4)
- Beegle., Coudouel, A., & Monsalve, E. (Eds.). (2018). *Realizing the full Potential of social SafetyNet in Africa*. Africa development Forum series. Washington, DC;
- Berhane, G., Hoddinott,J., Kumar ,N., & Taffesse, A.S.(2014).The Productive safety Net program and food security in Ethiopia. International food policy research institute
- Birhanu, M. (2018) Determinants of Rural Households Graduation from Productive Safety net Program in Doyogena Woreda, SNNPR, Ethiopia.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press

- Beyene, T. (2008). Measuring validity in food grain prices and its impacts on the demands of for fertilization and improved seeds in cereal production in Ethiopia. CGAP, & Ford Foundation, (2009, May). Graduation program hand out, CGAP.
- Chambers, R. and G. Conway. Sustainable Rural Livelihoods: Practical Concepts for the 21st Century, Institute of Development Studies Discussion Paper 296, 1992: 1-27.
- Cirillo., & Tebaldi. (2016). Social protection in Africa; Involuntary of non -contributory programmes. International Policy Centres of for Inclusive growth /UNICEF.
- Cochran., & Tamaru. (2016). Ethiopia productive SafetyNet program; Power, politics and Practice. Journals of International Development ,28(5),649-665
- Corporate finance. (2024). variance inflation -overview formula, Uses. Retrieved from <https://corporatefinanceinstitute.com/resources/data-science/variance-inflation-factor-vif/>.
- Council of European Union. (2010). Council decision of 26 July 2010 establish the organization and function of the European External action service (2010/427/EU). official Journals of the European Union, L201,30-40
- Data Camp. (2024). Variance Inflation Factor: How to Detect Multicollinearity.
- Department for International Development. (1997). About the Department for International
- Department for International development (DFID). (2000). Sustainable Livelihoods guidance sheets.
- Department for International Development. (2001). Departmental Report 2001. Her Majesty's Stationery Office.
- Department for International development (DFID). (2005). Social Protection: A key to sustainable development
- Department for International development (DFID). (2005). government policy: Hunger and Malnutrition in developing country's policy paper 2010 to 2015.
- Devereaux. (2000). Famine in the Twentieth century (IDS working paper 105).

- Devereaux.S., Sabates-Wheeler, R. (2004). transformative social protection (IDS working paper 232)
- Devereaux.S., Sabates- Wheeler, R., Taye, M.T., Sabates,R.& Sima, F.(2014).Graduation from food security program in Ethiopia :FAC Ethiopia final report.
- Desalegn Yadeta Wedajo & Yu Lerong. (2017). Analysis of factor affecting household graduation from Ethiopian productive SafetyNet program's: Case of Babile district.
- Dharmadasa, H., Orton, I., & Whitehead, I. (2016). Mainstreaming graduation in to Social Protection floors. Brasilia: International Policy centre for Inclusive Growth.
- De Waal, A. (1991). Evil days: Thirty Years of war and famine in Ethiopia. Human Rights of Watch.
- Easterly, W. (2006). The Big Push Déjà Vu: A Review of Jeffrey Sachs's The End of Poverty. *Journal of Economic Literature*, 44(1), 98-116.
- El-Mefleh,M .A., & Shotar ,M.M.(2008).A contribution to analysis of the economic growths of Qatar. *Applied Econometrics and International Development* .8(2),147-154.
- Encyclopaedia Britannica, Inc. (2024). Irrigation
- Ethiopia. (1985). Drought /famine (1983-1985). United states of Agency for International Development.
- Ethiopia. (1996) Food security strategy (FSS). Addis Ababa: Governments of Ethiopia
- European University institution. (2010). The 2010 European report on development: Social Protection for inclusive development. San Domenico di Fiesole, Robert Schuman Centres for Advanced Studies, European University Institute.
- FAO. (1973). Conference and Council decision 1945-1972.FAO, Rome.
- FAO. (1996). Rome declaration on food security and World Food Summit plans of action.
- FAO. (2009). Declaration of the World Food Summate on Food Security.

- FAO. (2014). The State of Food Insecurity in the world. Strengthening the enabling environment for food security and nutrition.
- Federal Democratic Republic of Ethiopia. (2003). The new Coalition for Food Security in Ethiopia, food security program. Addis Ababa, Ethiopia.
- Food and Agricultural Organization Corporate Statistical Database (FAOSTAT) (2009). Food Security Cluster. Tropical Livestock Unit (TLU)-FSC Indicators Hand book.
- Food Security Coordinating Office. (2019). Rapid assessment on PSNP graduation and intuitional factors: The case of highland regions in Ethiopia's.
- Garcia, M., & Moore, C. (2012). The cash dividend. The Rise of cash transfer programmes in Sub-Saharan Africa. Washington, DC: World Bank.
- Gentilini, U. (2002). Sviluppo dell aiuto alimentare ed aiuto alimentare per lo sviluppo. Universal Degli Studio di Rome Tre, Facolata Di Economia.
- Gentilini, U., Omamo, S. W. (2009). Unveiling social SafetyNet. World Bank.
- Gill, P. (2010). Famine and foreigners: Ethiopian since Live Aid: Oxford University
- Graduation With Resilience to Achievement Sustainable Development (GRAD) 2011-2016: Final narrative report.
- Habib, M. U. (2022). Determinates of household graduation from productive SafetyNet program; The case of rural kebeles of Dire Dawa administration.
- Hanlon, T., Schmader, K. E., & Sloane, R. J. (2010). The clinical consequence of polypharmacy in elderly. Journal of the American Geriatrics Society.
- Hamel, Tong, & Hofer. (2019, March 28). Poverty in Africa is falling—but not fast growth.
- Hill, D., & Porter. (2015). Ethiopian Food Crisis: A critical analysis of the 2002-2003 drought and its impacts.
- Holzmann, R., & Jorgenson, S. (2000). Social risk management: A new conceptual framework for social protection, and beyond (Social Protection Discussion Paper No. 0006). Washington.
- Hobson. (2014). Pathways to graduation; A work in progress in Ethiopia. World Bank.

- Hoddinott, J., Berhane, G., Gidey, S., Kumar, N., Taffesse, A. S., Yohannes, Y., Lind, J., Handino, M., Roelen, K., Tefera, M., & Nishan, B. (2014, May 7). Operationalising graduation in Ethiopia's Productive Safety Net Programme.
- Hoddinott, J., Lind, J., Sabates-Wheeler, R., & Taye, M. T. (2021). Graduation after 10 years of Ethiopian productive SafetyNet program; Surviving but still not thriving. *Development Policy Review*, 39(4), 511–531.
- Horvitz, D. G., & Thompson, D. J. (1952). A generalization of sampling without replacement from a finite universe.
- International Labour Organization. (2001). Guidelines on occupational safety and health management system (ILO-OSH 2001).
- International Labour Organization. (2019a). Universal Social Protection for Human dignity, social Justice and sustainable development. International labour conference 108th session. Geneva international Labour organization.
- International Monterey Fund & World Bank. (1980s). Economic Shocks, Inequality and Poverty: the need for SafetyNet.
- IPCC (2021). Climate change 2021: The physical science Basis. Contribution of working Group I to the fifth Assessment report of intergovernmental Panel on climate change.
- Irmak, S., & Kukal, M. (2019, August 12). Gap growing between irrigated, rain -fed crop yields. Phys.org. <https://phys.org/news/2019-08-gap-irrigated-rain-fed-crop-yields.htm>.
- Kassahun, A., & Hoddinott, J. (2009). Child survival during the 2002-2003 drought in Ethiopia. *International Journal of Epidemiology*, 38(4), 1020-1028.
- Kassaw, K., & Worku, M. (2024). The contribution of productive safety net program for household food security and asset building in drought prone woredas of northeast Ethiopia.
- Kassaw, K. (2024). The contribution of productive safety net program for households' food security and asset building in drought-prone areas. *Journal/Publisher name if available*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10844108/>
- Kaur, M., Singh, L (2016). Knowledge in the Economic growth of development

Economics African Journal of science, Technology, Innovation and development ,8(2),205-212.

Khan, Nshafi, M., Islam, Z., Arif, M., Javed, R., & shah, N. (2011). Review of past literature on agricultural credit in rural area of Pakistan. *Sarhad Journal of agriculture*,27,103-110.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*.

Kolliar, M. and St. Gamper. *THE SUSTAINABLE LIVELIHOODS APPROACH, Input Paper for the Integrated Training Course of NCCR North-South, Zurich: Univeristy of Zurich, 2002.*

Krantz, Lasse. “The Sustainable Livelihood Approach to Poverty Reduction,” *An Introduction to SIDA, 2001: 1-27-]0*

Mamo, B (2018). *Determinates of rural household graduation from Productive SafetyNet program in Doyogena Woreda, SNNPR, Ethiopia.*

Merkeb, Y., Yasunobu, K., Elias, A., & Endalew, B. (2034). *comparative analysis of household food security and its determinates among productive SafetyNet program (PSNP)beneficiaries graduated, and non-beneficiaries in North western Ethiopia.*

Messay , M., Teferee ,M., and Bechaye , T (2022). *Achievement and Challenges of the Productive SafetyNet program in overcoming chronic Food insecure in Ethiopia.*

Ministry of Agriculture. (2014). *Productive SafetyNet program Phase IV: Program Implementation Manual. Addis Ababa*

Ministry of Agriculture. (2014). *Productive SafetyNet program Public Work operation and maintenance guideline, Addis Ababa, Ethiopia.*

Ministry of Agriculture. (2020). *Productive SafetyNet Program Phase V: Program Implementation Manual. Addis Ababa.*

Ministry of Agriculture. (2024). *Productive SafetyNet program Phase V: September annual plan. Addis Ababa, Ethiopia.*

Ministry of Agriculture and rural Development (MoARD) of Ethiopia. (2007). *Productive SafetyNet Programme (PSNP) programme; Graduation Guidance Note. Addis Ababa: Ministry of agriculture and Rural development.*

- Ministry of Agriculture and Rural Development (MoARD) of Ethiopia. (2014). Productive SafetyNet Programme (PSNP) programme Implementation Manual (revised). Addis Ababa, Ethiopia.
- Ministry of Agriculture and Rural development (March ,2018). An assessment report on Oromia, SNNPR, Amhara and Tigray Regional PSNP beneficiaries' graduation performance. Addis Ababa: unpublished.
- Ministry of Agriculture Food Security Coordinating office. (2016). Annual report 2016. Addis Ababa, Ethiopia.
- Ministry of water Resource and National Meteorological Agency. (2007). Climate Change National Adaption Program of Action for Ethiopia. Addis Ababa, Ethiopia.
- Mohamed, A. A (2017). Food Security Situation in Ethiopia: A review study. *International Journal of Health Economics and Policy*, (3),86.
- Mohammed abdella,A., Kitila,A. w., & Tekalign ,S. (2023).Determinates of Productive SafetyNet program graduation: The case of Rural household of Kurfa Chelle District, East Hararghe Zone.
- Mulugeta, A. (2021). graduation Determinants of productive programme in Wuchale Woreda of Oromia, Ethiopia.
- Mulugeta, M., Mekonnen, T., & Tesfaye, B. (2022). Achievement and challenges of the productive SafetyNet programme in overcoming chronic food insecure in Ethiopia.
- Norton, A., Conway, T., & Foster, M. (2001). *Social Protection Concepts and approaches: Implication for policy and practice in international development.* centres for Aid and public Expenditure.
- O "Sullivan, Arthur; Sheffrin, Steven M. (2003). *Economics: Principle in action.* Needham, Mass: Pearson Prentice Hall.
- Rashid, L. (2017). BRAC's Ultra-Poor Graduation Programme: An end to extreme poverty in our lifetime [PDF]. United Nations Department of Economic and Social Affairs.
- Ren, C., Liu, S., van Grinsven, H., reis, S., Jin, s., Liu, H., & Gu, B. (2019). the impacts

of farm size on agricultural sustainability.

Reutlinger, S., Van Holst Pellekaan, J. (1986). Poverty and Hunger: Issues and options for food security in developing countries. A world Bank policy study. Washington, DC:

Sabates -Wheeler, R., Lind, J., & Hoddinott , J . F. (2012). Graduation after ten years of Ethiopian Productive SafetyNet programme: surviving but not thriving.

Sabates -Wheeler, R., Tefera, M., & Bekele, G. (2020). Assessing enablers and constrainers of graduation: Evidence from the food security Programme, Ethiopia.

Schultz, T. W. (1961). Investment in Human Capital. American Economic Review, 51(1), 1-17.

Seyoum, H. G. (2014). Assessments of factors affecting household level graduation from productive SafetyNet program: Evidence from Emba Alaje districts of Southern Tigray, Northern Ethiopia.

Sen, A. (1999). Development as Freedom. Oxford University Press.

Shaw,D.J. (2007). World Food security: A history since 1945. Palgrave Macmillan.

Shebedino woreda Agricultural office. (2024). Revised public work plan.

Statisticshowto.com. (2019, January 20). Contingency coefficient: Definition. Retrieved January 10, 2018, from <https://www.statisticshowto.com/contingency-coefficient/>.

Tadesse, T. (2022). The impact of the productive safety net program (PSNP) on food security: Mixed evidence from Ethiopia. Development Studies Review.

Tasew Tadesse & Tariku Gebremedhin zeleke (2022), The impacts of the productive SafetyNet program (PSNP) on food security and asset accumulation of rural households; evidence from Gedeo zone southern, Ethiopia, Cogent Economics & Finance ,10;1, 2087285, DOI: 10.1080/23322039.2022.2087285.

Tierney, N., Sabates- Wheeler, R., & Hoddinott, J. (2017). social protection and graduation from poverty: Evidence from Ethiopians productive safety net program. International Initiative for Impacts Evaluation.

Tong.B., Hofer, M., & Hamel, K. (2019). Poverty in Africa now falling, but not fast

enough

United Nation. (1995). The Copenhagen Declaration and Programme of Action: world summit for social development ,6-12 march 1995, New York, NY.

United Nation. (2019). Thematic brief on social protection.

United states Department of state (USDS). (2009). Global hunger and food security initiatives; consultation document.

Universal Declaration of Human Rights, UN General Assembly Resolutions 217A(III),10 December 1948(7th edition).

Van Ginneken, W. (1999). Social Security for the informal sector: A new challenge for developing countries.

Van Ginneken, W. (2003). Extending social Security: policy for developing countries. International Labour organization.

WFP. (2009). Hunger and Markets. World Hanger Series. Rome: World Food Program.

WFP. (2024). Ethiopian Humanitarian needs and food assistance over view.

Wasie, M. (2018). Determinates of household graduation from Productive SafetyNet program (PSNP): The case of Babile districts, Oromia region, Ethiopia

Webb, P., Von Braun. (1994). Famine and Food Security in Ethiopia: Lesson for Africa Washington, DC: International Food Policy research institute.

Wedajo, D. Y., & Lerong, Y. (2017). Analysis of factors affecting household graduation from Ethiopian productive SafetyNet program's case of Babile districts, Oromia region, Ethiopia

Welteji, D., Mohammed, K 7 Hussein, K. (2017). The Contributions of Productive SafetyNet Programme for Food Security of the rural household in case of Bable Zone, Southeast Ethiopia, Agriculture and food security ,6,53.

World Bank. (2001). World Bank annual report: Volume 1. Washington, DC.

World Bank. (2004). Ethiopian Productive SafetyNet Project: project information document.

World Bank. (2004). Project Appraisal Document for phase one of the productive SafetyNet program. Washington. D.C.

- World Bank. (2009b). Social SafetyNet: Lesson from rich and poor countries.
- World Bank (2010). Ethiopia Designing Implementing a rural SafetyNet in lower - Income setting: Lessons Learned from Ethiopian productive SafetyNet program 2005-2009.
- World Bank. (2010). the State of Social SafetyNet in 2014.
- World Bank. (2017). Ending Poverty: The road to 2030.
- World Bank. (2018) the State of Social SafetyNet. Washington, DC.
- World Bank. (2020). Social Protection and Labour strategy: From Evidence to action.
- World Bank. (2021). Ethiopia Productive SafetyNet programme. Retrieved from productive SafetyNet program.
- World Bank. (2024) Broad access to job and public service key to addressing inequality and reduce poverty in Africa.
- Yamane, T. (1967). Statistics: An introductory analysis (second ed). New York: Harper and Row.

Appendix -1

Binary Logistic Regression Results

variables	Coef.	St. Err.	T-v	p-value
Age	1.069	0.04	1.81	0.07*
Gender of HH	1.27	0.628	0.48	0.63Ns
Education of HH	3.414	1.563	2.68	0.007***
Family size	0.614	0.11	-2.74	0.006***
Farm size	95.556	183.522	2.37	0.018**
irrigation	4.407	2.552	2.56	0.01**
Livestock owner	2.391	1.12	1.86	0.063*
Off farm	3.409	1.764	2.37	0.018**
Frequency Extension	1.77	0.438	2.31	0.021**
HH perception	0.976	0.459	-0.05	0.959Ns
HH awareness	1.64	0.788	1.03	0.304Ns
Credit access o	23.944	12.089	6.29	0.000***
Constant	0.002	0.004	-2.7	0.007***
Mean dependent var	0.478	SD dependent var	0.501	
Pseudor-squared	0.516	Number of obs,	207	
Chisquare	147.906	Prob > chi2	0	
Akaike crit. (AIC)	164.665	Bayesian crit. (BIC)	207.99	

*** p<.01, ** p<.05, * p<.1 , Ns=nonsignificant

Own computation result from survey data (2025)

Appendix -2 Treatment-effects inverse-probability weights

Treatment-effects estimation Number of obs = 207

Estimator inverse-probability weights

Outcome model: weighted mean

Treatment model: logit

TOTAL_ANNUAL_INCOME | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-----+-----

ATE						
GRADUATE_PSNP						
(yes vs no)		6224.886	1008.479	6.17	0.000	4248.304 8201.468

-----+-----

POmean						
GRADUATE_PSNP						
no		22305.4	874.2227	25.51	0.000	20591.96 24018.85

Appendix -3 -Multicollinearity Diagnostics Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Ages of a respondent HH	0.918	1.089
Genders of a respondent HH	0.895	1.117
Education level of respondent	0.910	1.099
HH family size	0.880	1.136
Farm (cultivated) land size	0.879	1.138
Irrigation of a HH	0.742	1.348
Livestock owner ship	0.820	1.220
Participated on farm activity	0.714	1.400
Frequency Extension contact by DAs	0.843	1.186
House hold perception on PSNP graduation	0.881	1.135
Beneficiary awareness on PSNP Graduation criteria	0.855	1.170
Irrigation access	0.830	1.205
	b/n .1 and 1	<1.19

Source: Own computation result from survey data (2025).

Appendix -4- Independent T-tests (frequency of data) results

GENDE_HH GRADUATE_PSNP, chi2

GENDER- | AER YOU GRADUATED from PSNP

Head | no yes | Total

-----+-----+-----

Female | 62 50 | 112

male | 46 49 | 95

-----+-----+-----, Total | 108 99 | 207,

Pearson chi2(1) = 0.9910 Pr = 0.319

. 2. T-test AGE_HH, by (GRADUATE_PSNP)

Two-sample t test with equal variances

Group | Obs Mean Std. Err. Std. Dev. [95% Conf. Interval]

-----+-----

no | 108 40.87963 .5664127 5.886334 39.75678 42.00248

yes | 99 43.82828 .7151568 7.11572 42.40908 45.24749

-----+-----

combined | 207 42.28986 .4624295 6.653202 41.37815 43.20156

-----+-----

diff | -2.948653 .9048492 -4.732657 -1.164649

diff = mean(no) - mean(yes) t = -3.2587

Ho: diff = 0 degrees of freedom = 205

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0, Pr(T < t) = 0.0007

Pr(|T| > |t|) = 0.0013 t) = 0.9993

3. T-test TOTAL_FAMILYSIZE, by (GRADUATE_PSNP)

Two-sample t test with equal variances

7. tab AWARENESS_GRADUATIONCRITERIA

WERE YOU |AWARE of the | CRITERIA |for graduating from the from PSNP?

PSNP?	no	yes	Total
no	71	60	131
yes	37	39	76
-----+-----+-----, Total			108 99

207, Pearson chi2(1) = 0.5861 Pr = 0.444

8. tab IRRIGATION_USER DO YOU USE | use |

irrigation | to |diversified |your income | to |facilitate |

graduation?	Freq.	Percent	Cum.
no	137	66.18	66.18
yes	70	33.82	100.00
-----+-----+-----, Total			207 100.00,

Pearson chi2(1) = 9.5765 Pr = 0.002

9. tab LIVESTOCK_OWNERSHIP DO HAVE | |

Freq.	Percent	Cum.
no	91	43.96
yes	116	56.04
-----+-----, Total		207 100.00,

Pearson chi2(1) = 12.3220 Pr = 0.000

.10. tab RECIEVED_CREDIT GRADUATE_PSNP, chi2

| AER YOU GRADUATED RECIEVED_C | from PSNP

REDIT	no	yes	Total
-----+-----+-----			

0	87	20	107	
1	21	79	100	
-----+-----, Total				108 99 207,

Pearson chi2(1) = 75.3444 Pr = 0.000

11. OFFNONFARM_PARTICIPATION

|participate | OFF FARM |

activities | to addition | to agriculture |

acti	Freq.	Percent	Cum.	
-----+-----				
no	128	61.84	61.84	
yes	79	38.16	100.00	
-----+-----, Total				207 100.00,

Pearson chi2(1) = 27.2262 Pr = 0.000

12. tab HOUSEHOLD_PERCEPTION_

Do you believe | that | graduation | important? |

Freq.	Percent	Cum.	
-----+-----			
no	88	42.51	42.51
yes	119	57.49	100.00
-----+-----Total			207 100.00,

Pearson chi2(1) = 2.9351 Pr = 0.087

Appendix -5-Questioners

ADDIS ABABA UNIVERSITY

SCHOOL OF DEVELOPMENT STUDIES

Centre for Rural Livelihoods & Regional Developments studies

Greetings to you! I am Lijalem Ayteneu, Pursuing a Master's degree in Rural Livelihoods and Development at Addis University. I am here to learn from you about issues relating to graduating from PSNP. My research focuses on understanding the determinants of household graduation from the Productive Safety Net Program in selected kebeles of Shebedino districts. I appreciate your honest responses to my questions, as they will be instrumental in shaping this research and providing insights for future studies, PSNP implementers, and development agents. Your responses will be kept confidential, anonymized and analyzed with many other responses, and used only for the purpose of this study, will not be passed to any third party.

General Guidelines- For multiple-choice questions, kindly mark your chosen answer by circling it. For open-ended questions, provide brief and relevant answers.

Kebele Name -----

Enumerator's Name-----Date-----Signature-----

ID no. of respondents (or code) -

Demographic information's of a household

1. Age of household (years) -----
2. Gender of a household Head. [1] =male, [0] =female
3. Education level of a household (years of schooling) -----,
[0] = cannot read and write [1] =can read and write
4. Number of total households-----
5. Based on Q4, total numbers of PSNP clients-----
6. Are you graduated from PSNP? { 1}. =Yes, [0]. =No
7. What is your family primary source of income? Select apply all,

[1] =Agricultural activities (crop), [2] =Livestock rearing [3] = both crop & livestock,
[4] =non-farm income, [5]=from all

8. How much hector of land do you have own? -----,[0] =have no land
9. Did used agricultural inputs (seeds, fertilizers used? [0] = no,[1] = yes
10. Do you use irrigation to diversified your income to facilitate graduation? [0] =no, [1] =yes
11. Annual total crop production in birr -----,[0] =no income gets from crop.
12. Do have your own live stock? [0] =no,[1] =yes,
13. Your livestock number after joining PSNP?[1] = Increase, [2] =Decrease,[3] =the same [4] =no any livestock
14. Annually total income gets from livestock in Birr----,[0] =no income gets from livestock
15. Annually total income from (crop +livestock) in birr----,[0] = no income gets from both
16. Do you have got credit access in your woreda/kebele? [0] =no,[1] =yes,
17. Did you have participated off farm activities to addition to agriculture activities?
0= no, 1= yes, if say, yes specified-----
18. Did you frequently Extension contact from development agents? [0] =no [1] =yes
19. Have you observed any delays in PSNP transfers in your kebele? [0] =yes, [1] =no
20. If you answered Q19 “yes”, what is the average frequency of these delays?
[1] =for 1-2-week,[2] =for 1month, [3] =more than 1month, [4] = no any transfer delays
20. In Q19 yes, what you exacted the cause of transfer delays mostly in your kebele. [1] = Logistical problem,[2] = Administrative delays (paperwork), [3] = Financial constraints (cash liquidity),[4] = I did not know the reason delays [5] =no any transfer delays
21. Can monthly cash transfers sufficiently cover a family's basic needs and facilitate timely graduation from the program? [1] =yes, [2] =no
22. If answer is no, in Q #21, how to covered this food gap at HH level.[1] =reduce food consumption, [2] =participate other labor work, [3] = sold livestock, [4] =credited from relatives,[5] = yes, regular transfer cover basic need
23. Do you believe that graduation important? [0] = no, [1] = yes

24. If say yes Q# 23 which one the primary important of graduation? [1] = Increase food security, [2] = better income [3] = better education, 4. All [5] =never important
25. are you aware of the criteria for graduating from the PSNP? [0] =no, [1] =yes
26. Tell that the trends (practice) of primary reason for graduation takes place in your area mostly take place? [1] =increase food security (bench mark), [2] = income increase, [3] =by Government pressure (due to quota),[4] =self-graduated,[5] =I don't know
27. Do you believe that the graduation process was transparent?[0] = no,[1] = yes
27. Who decides client graduated HH? [1] = DAs, [2] = KFSTF, [3] = CFSTF, [4] =KAC, [5] =I did not know
28. Since after joining the program (PSNP), how to describe your income status --- [1] = significantly increase, [2] = increase, [3] = no change, [4] =observe some changes, [5] =decrease
29. What kind of support did you received from the program in addition to regular transfer? Select all that apply) [1] = training,[2] = access credit,[3] = agricultural inputs,[4] = all, [5] =never received additional support.
30. What do you observe that natural resource in your area (water resource, plants ...) after PSNP? [1] = significantly improved [2] = little improved [3] = no change [4] =other
31. Do you in each steps participation in PSNP activity? [1] = yes,[0] =no
32. if Q31 yes which one [1] = PSNP PWs [2] = Access to credit,[3] = training& meetings, [4] =client targeting, [5] = Never participate
33. Do you attending PSNP Training and community meeting related PSNP? [1] = yes,[0] =no,
34. Do you believed that PSNP Training received important? [1] = yes, [0] = no
35. Do you agree the training you received improved your skill [1] =yes, [0] = no
36. What was the reason you face not full participating training and other activities? Select all that apply,[1] = lacks of information, [2] = lacks of time,[3] = lacks of interest, [4] = all
37. Main challenges, did you face or occur during the graduation process? (Select all that apply) [1] =Lack of sufficient income, [2] = Inadequate training or skills,[3] = Limited access to financial resources,[4] =clients not fully food secure,[5] = all practical challenge,[6] =other
38. Your yearly total average income (in birr) **when you were graduated** -----

39. **After graduated**, your current yearly total average income (in birr) -----

40. Do you believe that PSNP had changed and more self-reliant on your family life after graduation?

[1] =Yes, [0] =No

41. How did you perceive (observe) PSNP support after graduation? [1] = good,[2] = no any support

42. Did you need continued PSNP support after graduation? [1] =Yes, [2] =No

43. If yes, Q42 what types of support did you have need to received? (Select all that apply) [1] = Business/entrepreneurship training,[2] = Financial services or loans access,[3] =Continued agricultural support,[4] = Social services,[5] =all support need [6] =no any support

44. Was the negative experienced since faced? Select you observed. [1] =Climate challenges, [2] =lacks market access,[3] =lacks credit access, [4] =lacks addition support [5] =all faced,[6] =no any challenge faced

Thank for your participation

Appendix -6 Research Questions for Focus Group Discussion (FGD)

1. What are the major factors that influence a household's ability to graduate from the PSNP?
2. Do you know the criteria of graduating from PSNP? and steps of graduation?
3. Who selected graduated HHs? Explain your participation on graduation process & and its transparency.
4. Do you think the process of graduation are accepted by all clients? If no, why not accepted?
5. Strong community participation all program output facilitates genuine graduation process and enhances client livelihoods? do you agree, in what way?
6. Pleas list types of support received from the program since starting exit from PSNP
7. Suggest additional point to improve HHs graduation and HHs need after graduation.

Appendix- 7 Question for Key Informant Interview (KII)

1. What are the major factors that influence a household's ability to graduate from the PSNP?
2. What specific criteria are used whether a household has successfully graduated from the program or not?
3. What challenges are faced during the graduation process?
4. How would you describe community participation (program planning up to implementation) the whole process graduation?
5. What changes have you observed in households that have graduated from the program compared to those that have not?
6. What suggest would you make to improve the effectiveness of the PSNP in helping households achieve sustainable graduation and development?