

# Analysis of Factors Affecting Household Graduation from Ethiopian Productive Safety Net Program (PSNP): The Case of Babile District, Oromia Region, Ethiopia

Desalegn Yadeta Wedajo\* Yu Lerong

College of Humanities and Development Studies, China Agricultural University, No.17 Qing Hua Dong Lu, Haidian District, Beijing 100083 P.R.China

## Abstract

Productive Safety Net Program (PSNP) is planned as one of a social protection program for poor and food insecure rural households since 2005 in Ethiopia. From that point forward there is a low level of recipient family's graduation from PSNP in the review region. This is, accordingly, the fundamental goal of this study was to distinguish factors influencing household's graduation from PSNP in Babile district, as contextual investigation site. The total of 120 sample households was selected through simple random sampling techniques. structured questionnaire, focused group discussion and key informant interview guide-line questions were utilized to gather both quantitative and subjective information. Also, the review utilized binary logistic regression model to identify factors influencing family unit graduation from PSNP. The finding of the study revealed the recipients of the safety net program didn't trust the graduated households are food secured rather the respondents contend there is no critical contrast among the present and graduated recipients of PSNP. In addition, this review indicates PSNP has extensive parts on smoothing recipient household's food consumption pattern. But PSNP has disproportionate effects on poverty reduction and in building-up the ability of the poor households fundamentally because of poor administration, size of bundle, and method of conveyance, political preference, and targeting mechanisms. The binary logistic regression results showed that eight variables were found to be statistically significant out of twelve variables. Sex, access to irrigation, non-farm participation, targeting mechanism, access to credit, and agricultural farm inputs had a positive and huge effect on graduation and drove program members to have greater likelihood of graduation, while family size and drought adversely impact graduation. Subsequently, this paper prescribes that for PSNP to be successful in helping the poor the government ought to bolster recipients beyond PSNP. Furthermore, the program ought to be re-built in a way that helps recipients in long-term household asset creation and welfare of the general population through expanding their source of family income and providing integrated agricultural packages to the member of PSNP beneficiary families.

**Keywords:** PSNP, graduation, beneficiary household, Babile, Oromia, Ethiopia

## 1. INTRODUCTION

Ethiopia is the oldest independent country in Africa and one of the oldest in the world. Despite its long and remarkable history, it remains one of the poorest nations on earth where drought and famine have resulted in a sustained and deep-rooted poverty of its people. Poverty and food insecurity have long been followed by recurrent food crises and famines, and responses have conventionally been focused on emergency food-based interventions, which led its people into dependency on food aid (Teklay Tesfay, 2009).

Until recently, responses to acute food insecurity were dominated by emergency food aid (Devereux S. 2000<sup>1</sup>). From 1998 to 2005 the annual number of food aid beneficiaries fluctuated between 5 and 14 million (Devereux S etal. 2006). Although food aid has kept people alive, it has done little to address the underlying causes of food insecurity and the associated loss of productivity, cognition, and good health.

Recognizing this situation, the Government of Ethiopia initiated a new social protection program known as the Productive Safety Net Program (PSNP) was put in place in 2005 as a systematic detachment from emergency humanitarian food aid with the support of a group of development partners. The objective of the program is to fill the household food gap, protect and build community assets through public work, mitigate shocks such as drought, and ultimately attain food security (Devereux S etal. 2006).

Ethiopian Productive Safety Net Program (PSNP) is a seasonal social safety net program designed to prevent famine and household assets by anticipating in advance to the food access failure of chronic food insecure rural households. Besides, the PSNP operates mainly as a workfare program in which transfer was provided in exchange for labor in public works or essential infrastructural projects of the community.

The PSNP has two components, unconditional transfers (direct support) of cash or food to vulnerable households with no able-bodied members who can participate in public works projects and conditional transfers,

---

<sup>1</sup> Food Insecurity in Ethiopia a discussion per for Department for International Development (DFID), Sussex, UK: International Development Studies (IDS).

which support beneficiaries in exchange for public works on rural infrastructure projects such as road construction and maintenance, small-scale irrigation and reforestation. Most PSNP beneficiaries (84% in 2008) are conditional transfer recipients (Sabates-Wheeler R, Devereux S. 2010). These beneficiaries are supported through food or cash transfers for six months each year, and for a period of 5 years after which they are expected to achieve food security.

At its start in 2005, the PSNP targeted approximately five million chronic food insecure rural households in 262 Woredas<sup>1</sup>, but the number of PSNP beneficiaries was increased to eight million in 2006 (Ethiopia PSNP, 2006). The program is planned to be implemented for five years, at the end of which PSNP beneficiaries who have received predictable transfers and complementary interventions throughout the program period will be expected to graduate out of dependence on external support, except during food crises (Samuel, 2006 and PSNP, 2006).

The graduation<sup>2</sup> of Productive Safety Net Program is the ultimate goal of the program and will result in the reduction of the number of households requiring external food aid and assistance. As community assets are built and are linked to other agricultural and income generating programs family assets are protected and can actually increase. After a family's assets grow to an appropriate level, graduation from the PSNP will occur (Arega, B., 2012).

According to Gillingan et al. (2009), in their study in four regions of Ethiopia analyze the graduation performance has been very low. According to initial targets, all beneficiaries under the PSNP were supposed to graduate by 2009. However, only 104,846(1.3%) beneficiary households were graduated. Arega (2012), in his study, identified ads in total income, the number of livestock owned, total crop production and geographical location increase the likelihood of graduation of beneficiary households.

There are also some studies on factors affecting graduation of beneficiaries from PSNP by Sabates-Wheeler et al., 2012. However, these studies did not analyze the effect of targeting mechanism and natural factors for graduation through the quantitative approach and overlooked the perception of beneficiaries towards the program and its implementation process. Besides, the majority of the investigators try to analyze at national or regional level with the larger spatial recommendation and there is no any researcher with a similar study in Babile district which has its own specific socio-economic and natural contexts.

Babile district is one of the PSNP targeted districts defined by the government as chronically food insecure due to its prior experience of food insecurity and food assistance. PSNP started since 2005 in the district. However, since the inception of the program the number of households in need of PSNP support is increasing from time to time while the number of households supposed to graduate from the program stayed lower (meaning that only a few beneficiary households graduated from PSNP while large number of beneficiary households stayed in the program for further PSNP support). Even recent studies show that graduation rates fall far below expectation (MoARD<sup>3</sup>, 2009; Devereux, 2010). By the end of 2009 at the national level, about 9% of the beneficiary households have graduated leaving more than 90% of the households in need of safety net transfers to cover their food shortages. This is, therefore; this study tries to identify factors influencing household's graduation from PSNP.

## 2. Literature Review

### 2.1. Definition of Important Terms and concepts

Social protection is a new policy agenda. There is no agreement on the boundary of social protection, but most operational definitions include two elements: social assistance (protection against poverty) and social insurance (protection against vulnerability). A third component advocated by some definitions addresses social injustice and exclusion (social equity to protect people against social risks such as discrimination or abuse) (Devereux and Sabates, 2004).

A recent definition that includes all three components was proposed by the 2010 European report on 'social protection for inclusive development. "Specific set of actions to address the vulnerability of people's life through social insurance, offering protection against risks and adversity throughout life; through social assistance offering payments and in-kind transfer to support and enable the poor, and using inclusive approach that enhance the ability of the marginalized to access social insurance and assistance"(European Communities, 2010:1).

The primary function of social protection is to reduce income poverty and prevent vulnerability. Poverty alleviation or reduction is achieved through raising household incomes, while income or livelihood vulnerability can be managed or reduced by stabilizing incomes vulnerability also has a social dimension, related to marginalization and exclusion, and this can be addressed through strategies that empower people. Recent

<sup>1</sup> Ethiopian government administrative structure equivalent with district level

<sup>2</sup> Graduation means that the household is no longer chronically food insecure and also has the economic resilience to resist from falling back into chronic food insecurity in the future (Devereux et al. 2006)

<sup>3</sup> Ministry of Agriculture and Rural Development

paradigms on social safety nets in third world countries focus on ‘graduation’ and self-reliance for a low-income household that has labor capacity, social protection expected to provide temporary support, and should promote sustainable livelihoods rather than dependence on ‘handouts’ (Devereux, 2012).

## 2.2. The meaning of Productive Safety Net Program Graduation

Graduation in the context of this study has two components. The first is graduation from food security program which entails food security assurance of households. On the other hand, graduation from PSNP, which is the main emphasis in this study, indicates the state of food self-sufficiency by beneficiary households and thus the clients are no longer eligible for the transfer from the program (MOARD, 2007).

PSNP is expected to protect household assets and smooth consumption, while other complementary programs expected to help households in order to accumulate asset and generate income. PSNP has livelihood promotion and protection objectives. The former focus on filling the annual food gap and protect household’s assets, whereas livelihood promotion focuses on graduating of transfer after subsequent support and regular transfer for more than five years (Devereux et al., 2008). White et al. (2010), reveals the public work clients are those expected to graduate from PSNP that has a potential to transform from the state of chronic food insecure to food self-sufficient and participate in different livelihood packages. The direct support beneficiaries of PSNP do not expect to graduate from the program since they will not take loans and participate in complementary programs. Therefore, the direct support beneficiaries considered as ‘social welfare caseload’ which exists throughout the world for those in need of permanent support.

Graduation in Ethiopia has two stage processes. The first is graduation from the PSNP and the second is graduation from the Food security Program. Therefore, in this study graduation from the PSNP was the focal point of the researcher. The notion of “graduation” has been integral to thinking about PSNP since its inception. “Graduation” describes a process whereby recipients of support move from a position depending on external assistance to a condition where they no longer need this support, and can, therefore, exit the program. A “Graduation Guidance Note” describes graduation from PSNP as a transition from “chronically food insecure” to “food sufficient”, defined as follows: “A household graduated when, in the absence of receiving PSNP transfers, it can meet its food needs for all 12 months and is able to withstand modest Shocks” (MOARD, 2007)

## 2.3. Productive safety net program graduation benchmark

Graduation benchmarks use a measure of household assets to determine households’ potential for graduation. Graduation benchmarks describe the level of assets a food sufficient household is likely to have in each Region. This is because assets are considered a better indicator than income in reflecting lasting changes in chronic food insecurity status. The idea of asset-based graduation benchmarks was introduced by IFPRI, at the request of the Ethiopia government. The IFPRI<sup>1</sup> study indicated that incomes tend to fluctuate between seasons while assets are likely to remain stable except for periods of severe shocks (Hoddinott, 2006; MoARD, 2007). It is also difficult to accurately measure income as people are not willing to share such information openly. Devereux (2010) also considers asset ownership a better indicator of resilience than income because it provides better protection against livelihood shocks as they can be liquidated to bridge a food gap. Tolossa (2005) who undertook a study in Oromiya zone of Amhara region also reported that food insecurity is associated with lack of productive assets such as land and oxen. Though applying an asset based system of graduation benchmark seems feasible and might be thought to be simple to administer, it is not without critics. Asset based criteria are difficult to implement and do not always reflect the extent of household food self-sufficiency. This is partly because it doesn’t take savings, remittances and incomes from other off-farm activities into account which might have significant contributions to household food self-sufficiency.

Assets owned by households are converted into their monetary value in order to assess whether a household reaches the graduation benchmark or not. The benchmarks differ across regions (Table 1). The regional food security bureau of Oromiya Region, where this research was implemented, adopted a regional benchmark of 19,187 Birr per household. According to the regional graduation guidance note, until a household reaches this point, it remains eligible to participate in the PSNP and cannot be removed from the program unless households decide to leave the program by themselves - a term which is described as self-graduation (MoARD 2007). This occurs when a household decides that investing labour in other activities (like wage employment or own production) are more profitable than participating in the PSNP (MoARD, 2007). There were no self-graduated households in the study area of this research.

Table 1 illustrates the regional graduation benchmarks adopted by four major regions of the country. It describes the difference both in terms of graduation benchmarks and the use of asset elements across different regions.

<sup>1</sup> International Food Policy Research Institute

Table 2-1: Indications of Regional Benchmarks PSNP graduation in Ethiopia

| Region  | Initial-IFPRI Benchmark* | Average-asset value according to FGGN** | Benchmark as adopted in the RGGN*** | Asset Benchmark Elements   |
|---------|--------------------------|---|-------------------------------------|--|
| Amhara  | 4,800 Birr per capita    | 4,200 Birr per capita                   | 4,200 Birr per capita               | Livestock, agricultural technologies, perennial crops, savings, capital, store, weaving equipment's, and other income generating items   |
| Oromiya | 10,000 Birr per capita   | 19,187 Birr per household               | 19,187 Birr per household           | Livestock, crop production, perennial crops, income from income generating activities  |
| SNNPR   | 4,000 Birr per capita    | 2,998 Birr per capita                   | 75% or more based on regression     | Land holdings, level of schooling, capital based on agricultural tools and livestock availability, family size and sex of household head |
| Tigray  | 4,300 Birr per capita    | 5,600 Birr per capita                   | 5,600 Birr per capita               | Productive assets and must have repaid 75% of outstanding loan   |

Source: Adapted from the IDL group 2010

\*Based on the 75% benchmark (a potential exclusion error of 25%) and a land holding of less than 1 ha.

\*\* Federal Graduation Guidance Note

\*\*\* Regional Graduation Guidance Note

## 2.4. Graduation in principle

Figure 1 below shows the implementation scheme of the PSNP in conjunction with credit and other supports from other food security programmes. These programmes will enable chronically food insecure households to build productive assets while keeping their consumption smooth. As their assets base increases, PSNP beneficiary households will reach a point where they no longer need safety net support and graduate from the program. After graduation, however, households are still entitled to receive support in terms of credit and extension, and to participate in other development interventions to further develop their productive assets until they finally become entirely independent from the Food Security Programme (de Gramont et al., 2007; MoARD, 2009).

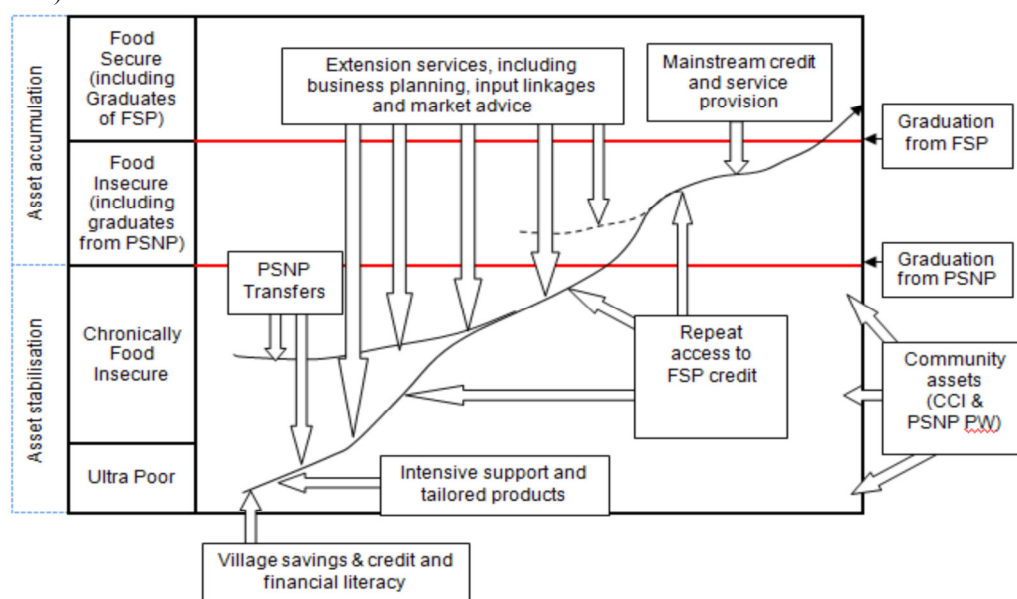


Figure 2- 1: Linkages between PSNP, OFSP<sup>1</sup> and other development interventions

Source: Adopted from Food Security Programme 2010-2014 (MoARD, 2009: 16)

One of the core principles of the FSP is that the community should play a crucial role in the graduation

<sup>1</sup> Other Food Security Programmes

process. It is, therefore, the responsibility of the Community Food Security Task Force (CFSTF) to decide on graduation. This taskforce is formed by elected representatives of an elder, youth, female, male, and a health extension worker together with a development agent and representative from the Kebele food security task force. (MoARD, 2007)

While the CFSTF should decide on graduation, the assessment of the households is undertaken by government officials, the so-called development agents (DAs). The DAs in each Kebele prepare an overview of the asset holdings of PSNP beneficiary households. Once information on household assets has been collected, they calculate the value of household assets per household member using a set of agreed asset values. On the basis of the resulting household profiles, the CFSTF will prepare a list of households that can graduate from the PSNP. Those households with asset holdings equal or higher than the benchmarks will be proposed for graduation to district authorities. The district will review and approve these proposals for graduation. For effective implementation of the benchmarks, the regional graduation guidance note emphasizes the establishment of a strong institutional framework from the district down to the village level. Nevertheless, as it will be shown later in this paper, some of these institutions established were not effective in executing their intended tasks specially those institutions at Kebele and Community levels.

## 2.5. Evidence on Households Graduation

There are two ongoing social protection programmes in Africa that have grappled with defining and implementing graduation operationally are the Productive Safety Net Programme (PSNP) in Ethiopia, and the Vision 2020 Umurenge Programme (VUP) in Rwanda. Both programmes have two main components: Public Works for households that can provide adult labour in exchange for cash or food, and Direct Support for households with no adult labour capacity.

The Productive Safety Net Programme was introduced as one component of Ethiopia's Food Security Programme (FSP) in 2005, with several objectives, including: (a) to break Ethiopia's dependence on food aid by shifting to cash transfers; (b) to remove millions of 'chronically food insecure' Ethiopians from the annual emergency appeal process and provide them instead with predictable transfers on a multi-annual basis; (c) to protect household assets against 'distress sale' for food purchases; (d) to provide complementary support to assist these families to graduate out of dependency on food aid or cash transfers. So the PSNP aims to smooth food consumption and protect household assets – it is not in itself a mechanism for 'graduation'. Instead, graduation is to be achieved through complementary interventions – 'Voluntary Resettlement' and 'Other Food Security Programmes'.

The Vision 2020 Umurenge Programme – “an integrated local development programme to accelerate poverty eradication, rural growth, and social protection” – is a flagship programme in the Government of Rwanda's Economic Development and Poverty Reduction Strategy (EDPRS). It aims to eradicate extreme poverty by 2020, through an integrated set of interventions. Three pathways to poverty reduction are identified: (a) cash transfers will accelerate monetisation of the rural economy and stimulate local economic growth through income multipliers; (b) creation of community assets will increase on-farm and off-farm incomes for VUP participants and non-participants; (c) “better targeting of social protection will not only break the dependency syndrome but also improve the effectiveness of social protection for the benefit of all *others* in an inclusive society” (Government of Rwanda, 2007<sup>1</sup>).

### 2.2.1. What does 'graduation' mean in Ethiopia and Rwanda?

In Ethiopia, a 'Graduation Guidance Note' (FSCB, 2007<sup>2</sup>) describes graduation from the PSNP as a transition from 'chronically food insecure' to 'food sufficient', defined as follows:

*“A household has graduated when, in the absence of receiving PSNP transfers, it can meet its food needs for all 12 months and is able to withstand modest shocks”* (FSCB, 2007: 1).

Although this definition seems clear, it is far from straightforward to implement in practice, because there is no simple and robust indicator of a household's ability “to withstand modest shocks”. Rwanda's VUP is distinguished by a decentralized and participatory approach to defining eligibility and assessing graduation. In all eligible sub districts (or *Umurenge*), communities classify all local households into six wealth categories – four poor and two non-poor – in a public social mapping exercise, before the VUP starts. Households classified in the two poorest categories – “those in abject poverty” and “the very poor” – in this baseline mapping are eligible to participate in the VUP, provided they also have less than 0.25 hectares of land. VUP eligibility therefore combines a subjective and an objective targeting criterion. Graduation from the VUP occurs in an equally participatory way. After six months, each VUP community does another *Ubudehe* social mapping. Any household that has moved out of category 1 or 2 into category 3 or above is judged to have graduated out of extreme poverty, and is removed from the programme. Any VUP participant whose landholding has increased to

<sup>1</sup> Government of Rwanda (August 2007) *Vision 2020 Umurenge: EDPRS Flagship Program Document*. Kigali: Government of Rwanda.

<sup>2</sup> Food Security Coordination Bureau (FSCB) (2007) *Productive Safety Net Programme: Graduation Guidance Note*. Addis Ababa: Ministry of Agriculture and Rural Development.

0.25 hectares or more is also disqualified from continued participation in the programme.

While the two programmes all aim at graduation of beneficiaries out of extreme poverty, each defines graduation in a different way. In Ethiopia, graduation is benchmarked against productive assets: when the value of household assets exceeds a threshold that is set in each region, the household is deemed to be ‘self-reliant’ and is graduated off the programme. In Rwanda, eligibility is defined in ‘social poverty’ terms: households graduate when they move from one community-defined wealth category to a higher category. Although they monitor different indicators, all two approaches benchmark graduation against complementary measures of poverty—asset poverty and social poverty, respectively. The fact that Ethiopian PSNP programmes choose to benchmark graduation against a continuous variable asset values — highlights the essentially arbitrary nature of these definitions, and raises questions about the sustainability of graduation defined against a continuous variable. But, in Rwanda is there a discrete categorical separation between eligible and ineligible households, so graduation is more intuitively logical in this context than in the Ethiopian programmes.

## 2.6. Overview of Food security strategy in Ethiopia

Maxwell (1996) defined food security as physical, social and economic access by all people at all times to sufficient, safe and nutritious food which meets the dietary needs for an active and healthy life. This definition shows that food security can be ensured if and only if three conditions are fulfilled. First, sufficient food shall be available through domestic production and/or import. Second, people must have adequate resources to get the appropriate food. Third, food must be used in combination with adequate water, sanitation, and health to meet nutritional needs.

According to Haddad (1997), food security is achieved when people at all times have access to sufficient food for a healthy and productive life and has three main components: food availability, food access, and food utilization.

In Ethiopia, the problem of food security has to a large extent been addressed by annual emergency aid from external donors. The emergency relief for a long period of time is not predictable and provided in the form of emergency assistance. Even though demand for relief assistance is related to the failure of rainfall but in Ethiopia, it indicates an increase in the depth and extent of poverty.

Ethiopia has experienced a long history of food insecurity for decades. During the past two decades, Ethiopia has been the largest recipient of food aid in Africa and one of the largest recipients in the world (Little, 2008). For the individual beneficiary, food aid has been characterized by uncertainty, poor timing, and inappropriate. The food security strategy of Ethiopia which designed in 1996, highlighted in the government plan to address cause and consequence of food insecurity in Ethiopia (MOARD, 1996). The strategy has “Top-down Approach” where the regional food security programs and projects were subsequently designed on the basis of the Federal government strategy.

In 2002/2003, 15 million Ethiopians were in need of emergency food relief and the government forced to undertake a consultation with collaborators called “New Coalition for Food Security” (MOARD, 2006). As a result, the discussion between the government and the partners resulted in strong mindset which shifts away from characterizing Ethiopia annual food needs as a short term which created as a result of specific natural shocks. Therefore, the new understanding recognizes that food assistance was a result of chronic poverty which is difficult to address in short-term consumption smoothing efforts rather it requires emergency relief efforts to be complemented by other livelihood programs.

The revised food security strategy of the country was developed in 2002 which updated the original 1996 FSS<sup>1</sup> by sharpening the strategic element to address food insecurity using the lessons from previous achievements and challenges (FDRE<sup>2</sup>, 2002). This strategy is mainly assisted by Agricultural Development Led Industrialization (ADLI) which focuses on creating abilities for national food self-sufficiency. Thus, in an effort to ensure food security to the rapidly growing population, the Ethiopian government collaborated with institutional donors and partners in the development of an initial poverty reduction strategy paper (PRSP) in July 2001. Drawing from the first PRSP, and aligning itself with the findings of a millennium development goal (MDG) needs assessment for Ethiopia, the government has since established the plan for accelerated and sustained development to end poverty (PASEDP). The PASEDP considered as the vehicle for the achievement of the MDG’s and have a 5-year time frame (2005-2010) (MOARD, 2003; &Sharp & Amdissa, 2006).

In addition to the revised food security strategy, food security program (FSP) was designed in 2004 to enhance the food security status of some fifteen million rural Ethiopians within five years starting from 2005. The FSP was designed with two core objectives. The first objective was to help five million chronically food insecure people to attain food security while the second was expected to significantly improve the food security status of ten million additional food insecure people within five years. The program had three main components

<sup>1</sup> Food Security Strategy

<sup>2</sup> Federal Democratic Republic of Ethiopia

namely, resettlement, productive safety nets and other food security programs (the new HABP). The resettlement program aimed at enabling about 440,000 chronically food insecure households to attain food security within three years through voluntary resettlement program the other two components are OFSP (MOARD, 2004).

However, recently the components of the program increase to four including other food security program (OFSP) (now Household Asset Building Program), complementary community investment, resettlement, and Productive Safety Net Program (MOARD, 2009).

The newly revised food security in PASDEP give a due emphasis to changing the emergency relief from food to cash and when there are conditions of demand food transfer the procurement should be conducted in the domestic market. The other issues which give a new way to differentiate between chronic and transitory food insecurity. This all paves the way for the introduction of the productive safety net program (Amdissa, 2006).

In 2005, to combat the persistent problem of food insecurity and to move away from the previous systems of annual emergency appeals, the Ethiopian government and a group of donors (including the World Bank, U.S agency for international development, Canadian international development agency, and several donors) launched a new social protection program called the productive safety net program (PSNP) With an annual budget of nearly US\$ 500 million, the PSNP is a huge program, reaching more than 7.5 million Ethiopians(Gilligan et al., 2008).

Consequently, PSNP was the result of the discussion which launched in January 2005. The program was established with a promising objective of changing the traditional, short-lived approach of responding to chronic food insecurity through the creation of a program which not only smooth consumption but also protects household assets. The program was designed as one component of the Ethiopia government overall food security programs which give an emphasis on the household livelihood enhancing areas. In the previous phases, there are two complementary components; the 2010-2014 phase of the intervention incorporates three complementary programs (Household asset building, resettlement, and complementary community investment) (Barn& Lane, 2010).

Again based on robust evidence of large-scale impact, the Government has requested donor support for another five-year phase (PSNP-4, 2015-2020). The Government and donors are now coming to the end of a process of review, lesson learning and design for the next phase, in which the PSNP will move from being a relatively self-contained program to an integral part of national systems for social protection, disaster risk management and nutrition (DFID Ethiopia, 2015).

The Ethiopian PSNP is a seasonal social safety net program designed to prevent famine and household assets by anticipating in advance to the food access failure of chronical food insecure rural households. In addition to this, The PSNP operates mainly as a workfare program in which transfer was provided in exchange for labor in public works or essential infrastructural projects of the community. The PSNP represents a significant logistical achievement, reaching 7.5 Million individuals, and is cost efficient in its delivery of transfers. Moreover, PSNP prevents the emergence of famine in Ethiopia since 2005. While the PSNP has been successful at addressing the predictable food gaps of the poorest 10 percent of the population, it has been less successful at addressing the underlying factors reproducing food insecurity in the long term, and there has been little effective graduation from the program since its inception (Frank, 2013).

## **2.7. Productive Safety Net Program Objectives and Components**

PSNP was launched in 2005 with USD \$203 million budget, supporting 4.5 million target beneficiaries in 192 districts. The program has steadily expanded over the years with the number of beneficiaries reaching 7.6 million in 2012 and 8.3 million in 2015. Similarly, annual program budget averaged around \$310 (2005-2009) and \$460 (2010-2014). The corresponding figures for PSNP 4 (2015-2020) are planned to be more than double the amounts at the launch of PSNP – a number of beneficiaries further rising to 10 million and budget moving up to a whopping \$720 per annum.

The objective of the productive safety net program (PSNP) is to provide transfers to the food insecure population in a way that prevents asset depletion to the beneficiary households and creates assets in the community. The program will thus address immediate human needs while expected to (i) support the rural transformation process (ii) prevent long term consequences of short term consumption shortages, (iii) motivating households to engage in production and investment (iv) promoting market development by increasing household purchasing power. Furthermore, the program has two components namely, (i) labor intensive public works component; and (ii) a direct support component to ensure support to those households who have no labor at all, no other means of support, and who are chronically food insecure(MOARD, 2006).

According to Devereux (2009), PSNP was becoming an instrument to eight million Ethiopians to smooth their consumption and prevent their assets, either through “public works” activities or as “direct support” for households that are labor-constrained, with three distinct objectives including (i), Smoothing food consumption to chronically food insecure households, through food or cash transfer to purchase food in a time of “Hunger Gap” months(ii),Protecting household assets: to damaging ‘coping strategies’ such as selling productive assets

or taking high-interest credit to purchase food, (iii) Building community assets through selecting public works activities that create infrastructure with developmental potential (e.g. roads). These objectives correspond to three functions of protection, prevention and promotion, of the Productive Safety Net Program.

The PSNP aims to provide predictable transfer to meet predictable needs. Chronically food insecure household receive support for six months each year for up to five years, bringing their annual food consumption gap, protecting their assets against distress sales and building their resilience against shocks. 'Direct support' delivers unpredictable transfer to the minority of participants (16% in 2008) in households with no able-bodied members. Unlike the emergency appeals, PSNP conceived as a multi-year program so as to provide recipients with predictable and reliable transfers. In selecting these beneficiaries, geographic, administrative and community targeting is used (Sababtes-Wheeler and Devereux, 2010).

The program operates in the 318 most food insecure districts in rural Ethiopia defined in terms of their past experience of food aid needs. Within these localities local committees called "kebele food security task force" with the mandate to choose beneficiaries. While there are program-wide targeting criteria, these task forces have discretion in how these are applied. Most beneficiary households do public works (PW): criteria for selection into these are that these households are poor (for example, if they have low farm size or with few/ no productive assets) and chronically food insecure but with able-bodied labor. Only a few (16%) proportion of beneficiaries receive Direct support (DS); these households are poorer than those receiving public works employment and lack labor power; this includes those whose primary income earners are elderly or disabled. From 2005-2007, the PW component paid beneficiaries either 8 birr per day in cash or 3 kilograms of cereals for work (depending on where they lived) on labor-intensive projects for building community assets (Alemayehu et al., 2009).

The first phase of the PSNP was completed in 2009 after five years of implementation. The second phase, from 2010 to 2014, was implemented with an aim of making a substantial contribution to achieving food security for both chronically and transitory food insecure households in the rural parts of the country. The program aims to achieve improved food security for male and female members of food insecure households in chronic food insecure (CFI) districts (Sabates et al, 2012). The higher-level goal to which the PSNP aims was the graduation of beneficiary households from the program. The PSNP is necessary but not sufficient for the graduation of household. Thus, a critical assumption to reach this higher-level goal is that the necessary complementary programs and investments are in place, as well as that linkage exists to a broad-based rural economic growth process (Julie van & Coll-black, 2012).

## **2.8. The Linkage of PSNP, Household Graduation, and Food Security**

The food security program distinguishes between chronic and transitory food insecurity. While people suffering from temporary problems receive emergency assistance, the PSNP is a cash and food-for-work program established in 2005 to provide medium-term support to chronically food-insecure households. By securing the consumption needs of these households, the program aims to prevent distress sales of productive assets, which would damage future production (MoARD 2009). Furthermore, the FSP includes programs that complement the PSNP and designate paths to food security for different types of food-insecure household. If correctly followed, these are expected to provide a minimum income, enabling them to 'graduate' from assistance.

In the impact evaluation of the PSNP, using a dose-response model, Berhane et al. (2011) examine the impact of the duration of participation in the public works component of the PSNP on food security and asset outcomes. They find that there has been a statistically significant impact on food security and asset holdings (including livestock) of beneficiaries who have been on the program for five years as compared to beneficiaries who have been in the program for just one year. These results are even more pronounced when they consider the joint effect of public works and access to complementary asset-building programs and credit on the same outcomes.

The PSNP is undoubtedly an improvement on the previous system of emergency relief. However, recognition of its successes should not prevent acknowledgment of its shortcomings. While past research has rightly highlighted positive impacts on household consumption and distress sales of productive assets, the FSP has had little success in achieving graduation and finding a sustainable solution to food insecurity (Gilligan et al. 2009; IDL Group 2010; Berhane et al. 2011).

It is important to recognize that several constraints remain to the implementation of comprehensive social protection programs at scale. Several African countries introduced social protection programs only because donor agencies advocated for these and have provided financial and technical assistance. Many governments remain skeptical about social protection and are especially wary of rights-based approaches, believing that they are fiscally unaffordable and can create 'dependency'. However, costing exercises and micro-simulations by the ILO<sup>1</sup> have shown that a "basic social protection package is demonstrably affordable" (ILO, 2008: 18), even in low-income African countries. Also, evaluations have found no evidence for 'dependency syndrome' in African

---

<sup>1</sup> International Labour Office



social protection programs, because food aid and cash transfers are neither guaranteed nor large enough to justify behavioral change such as stopping work, and because public works programs have substantial access costs in terms of the work requirement (Little, 2008).

Another challenge is that sustainable 'graduation' from social protection programs has not yet been achieved on a large scale in Africa. Building resilient livelihoods require a comprehensive, multi-year approach, with strong linkages between social protection and sectors such as agriculture and health. Food security cannot be achieved with either a single policy instrument or a time bound program. As social protection in Africa moves inexorably in the direction of integrated systems and national strategies underpinned by rights-based legislation, so the potential for social protection to contribute to the household and national food security will continue to grow.

Authors Rachel Sabates-Wheeler and Stephen Devereux (2013) argues that Social transfers are an inadequate instrument on their own for building sustainable livelihoods and resilience against fluctuations and shocks; they can be effective in smoothing consumption and protecting existing assets, but complementary interventions are needed to increase incomes and assets to the point where participants are ready to graduate from the program. Delivering both livelihood protection and livelihood promotion requires a 'package' approach, including both support to household consumption and support to livelihoods.

In contrast to a 'minimum package' that targets one specific intervention at each vulnerable group, the 'Food Security Program' in Ethiopia delivers an integrated package of interventions to the same households in an effort to 'graduate' them from chronic food insecurity to 'food sufficiency'. Graduation is promoted through a combination of instruments that have both 'livelihood protection' objectives (stabilization of consumption and assets) and 'livelihood promotion' objectives (raising consumption and accumulation of assets). First, PSNP Public Works transfer cash or food and create rural infrastructure; second, the Household Asset Building Programme supports agricultural and non-agricultural livelihoods through asset transfers, extension services, and subsidized credit; and third, Complementary Community Investments address community-level needs, such as large-scale irrigation systems to raise and stabilize crop yields (Stephen Devereux 2015).

A common theme uniting all these approaches is the need to tackle food insecurity with integrated social protection packages that both protect minimum subsistence (in economic terms, reducing the variance of consumption) and also offer opportunities to increase incomes and assets (raising mean consumption). Only this two-pronged strategy has the potential to achieve sustainable food security and 'graduation' off dependence on social protection programs in the medium to longer term. Importantly, the PSNP offer regular unconditional cash transfers ('Direct Support') to poor and food insecure individuals who are unable to work, recognizing that not everyone has the potential to graduate. Moreover, graduation is proving difficult to achieve at scale, especially in the challenging environmental and economic contexts of rural sub-Saharan Africa. In Ethiopia, the ambitious initial targets for 'exciting' participants out of the PSNP are being reconsidered (Stephen Devereux 2015).

The study conducted by Kaleab B.etal.(2014) were highlighted that beneficiary households receiving cash had better household dietary diversity than households receiving food, a result suggesting that cash transfers may be more effective. However, the continuing rise in food prices may offset these benefits unless cash transfers are index-linked to food price fluctuations.

According to Camilla A. et al. (2009), it appears that there is no trend toward increased livestock holdings as a result of the program, despite the fact that this is one of its goals. On the other hand, the program does appear to encourage additional tree planting, which may have become more profitable in recent years. Thus, the program does seem to have raised the long-term income earning a potential of the households in the survey suggest that increased forestry activity is taking place as a result of PSNP, although perhaps not in an intended manner. Whether households will, in fact, be able to graduate from the program at its scheduled end date in 2010 remains to be seen, but it does appear that their incomes may be higher than before. (Camilla A.etal.2009). To the extent that PSNP has lasting effects on household welfare, their effects appear to be more complex and indirect than expected.

Furthermore Camilla A.etal. (2009) found no evidence that the PSNP protects livestock in times of shock. Shocks appear to lead households to disinvest in livestock, but not in trees. Conceivable explanations are that livestock is a more liquid asset and that livestock may die due to shocks, such as bad weather conditions. Another explanation can be that while households may harvest trees in times of shock, they may replant in sufficient numbers so that the total number of trees does not change much; replanting trees appears to be easier than reinvesting in livestock.

Tom L. (2013) argues the PSNP has made important advances by providing reliable, medium-term support to vulnerable households, in certain parts of the country, the government has used the program to support failing policies, avoiding difficult choices regarding agricultural reform, while contributing to growing food insecurity. In doing so, the PSNP supports the political objectives of the land policy, namely limiting urban migration and ensuring state control over the rural population. The paper concludes that while the PSNP and land policy together provide minimal security for landholders, land shortages and the problematic nature of agricultural

production are such that there is little chance that the PSNP and its complementary programs can achieve food security. As a result, the PSNP is used to support failing agricultural policies, limiting urban migration in the interests of political stability and state domination over a dependent rural population. Nevertheless, past research has largely neglected these connections. In particular, research and policy on food insecurity have treated the problem as a naturally occurring phenomenon, rather than an outcome of government policy, focusing on the efficiency of targeted and temporary social protection policies.

## **2.9. Empirical Evidence on Factors Affecting Household graduation from PSNP**

### **2.9.1. PSNP Graduation and Socio-Economic Factors**

Livestock ownership is considered in rural Ethiopia as the most crucial asset because as household's increases their number of assets there is a high likelihood of becoming food secured. In addition to this, ownership of livestock enhances the capacity of the beneficiaries to adopt shocks (Anderson, et al, 2009).

Irrigable land ownership is among the determinants of household's graduation from PSNP. Households with access to irrigation have the chance to produce more than twice in a year. The annual total production of these households will become two or three times bigger than the beneficiaries who have no irrigable land. As a result, households with irrigable land have the higher probability of leaving the program within a shorter period of time (Yibrah, 2012).

The land is the most crucial factor in agricultural production in the least developing countries since the majority of the economy is dominated by subsistence and backward agricultural sector. As a third world nation, Ethiopia has also large population engaged in this sector. Farm size one of the factors expected to determine households path to food self-sufficiency because other things remain constant, the difference in farm size among PSNP beneficiaries will have a significant effect on their graduation. As a result, land size is one of the criteria for the graduation of households (Frankenberger and Sutter, 2007).

### **2.9.2. PSNP Graduation and Institutional Factors**

Institutional factors are crucial for graduating PSNP beneficiary households at the specified time. Therefore, beneficiaries are expected to participate in Household Asset Building Program which one of the institutional factors in this study. HABP includes financial services and other technical advisory services in order to diversify beneficiaries' income and develop their potential for the productive asset. Those households receiving HABP are expected to graduate from the program.

Beneficiaries under HABP<sup>1</sup> belong to agricultural and non-agricultural packages (Assefa, 2013). The PSNP beneficiary's accession HABP differs from one region to the other. Access to HABP was lower in Oromiya and SNNPR which is only 12 and 20 percent of the public work beneficiary households have access to HABP respectively. In the Tigray region, 69 percent of the public work program clients have the access to at least one component of HABP. Amhara followed by 29% of public work beneficiaries receiving support from at least one component of OFSP (Gilligan et al., 2009).

Predictability of transfer is the other institutional factor expected to affect graduation from PSNP. Transfers can be considered to be predictable if PSNP participants have timely knowledge of their eligibility for the program and know what their entitlement is comprised of (how much of what resources and when). Secure financing is fundamental if transfers are to reach the PSNP participants predictably, but is also necessary to enable better planning, investment in institutional arrangement and implementation. Predictability is considered important as it better enables participating households to plan on the basis of their knowledge concerning transfer and to manage risk. It is hoped that predictability of transfers can act as a form of income insurance for risk averse poor households, and give them the confidence to make investments in their future (Save the children the UK, 2008).

The study conducted by Fekadu and Mberengwa (2009), in SNNPR, confirms that the unpredictable nature of PSNP transfer affects the livelihood of beneficiaries because the payment was not transferred during better grain markets. The transfer was given during months of little grain in the market mainly of September and October. Even if there is grain at that time it is difficult to purchase because of its expensiveness coincided with "Hungry season" a period of chronic food shortage in most parts of the country. Generally, they conclude the transfer is not demand driven and such kind of problems should be solved by the concerned bodies in order to enhance graduation.

Slater et al. (2006), finds propose that targeting mechanism affects household's graduation from productive safety net program. The PSNP implementation manual states each beneficiary household need to receive full family targeting. However, according to sharp et al (2006), in practice, there is a dilution of transfer in all regions. This affects the graduation of households from PSNP because the transfer distributed to households with the smallest amount and affects the ambition of households to be food self-sufficient and dampen the positive effect of PSNP. The common form of dilution is cutting the family size which follows inclusion family members who

---

<sup>1</sup> Household Asset Building Programme

have the able bodied and neglecting those members unable to participate in public works.

Rachel Sabates-Wheeler and Stephen Devereux( 2013 ) elaborates the theory of change underpinning the notion of graduation and explores the range of enabling and constraining factors that facilitate or undermine this change process, The authors distinguish ‘threshold’ graduation from ‘sustainable’ graduation and argue that multiple factors operating beyond the household level such as market conditions, community investment, and scale effects have significant implications for the graduation potential of social protection program.

### 2.9.3. Graduation and Occurrence of natural calamities

Bene et al. (2012), the study indicates drought as the main natural shock affected PSNP. From the four regions (Tigray, Amhara, Oromiya, and SNNPR) 57% of the clients reports that they are forced to lose some assets and food gap due to subsequent drought. Loss of agricultural crops was the second natural factor affected households during their stay in PSNP which makes 36% of beneficiaries vulnerable. Next was frozen which affect the production of crops and other cash crops. 22 of the beneficiaries affected by natural calamities induced by the fresh flood is another exogenous factor included under natural factors hampering beneficiaries and their graduation. Finally, serious illness, the death of relatives and family splitting affected more than 32 percent of the beneficiaries.

Devereux and Sabates –Wheeler (2011), on their study on transforming livelihoods for resilient future in Bangladesh, Rwanda, and Ethiopia tries to identify the main factors enabling and constraining graduation by dividing to program specific, market specific, beneficiary-specific and environment specific enablers and constrainers. Consequently, inappropriate benchmark, lack of complementary programs and partial family targeting are the major program specific constrainers. In addition to this, the study analyzes price change and lack of market for goods, labor, and credit as market specific constrainers. Lack of desire to graduate, initial household asset and business know how are the beneficiary enablers and constrainers of graduation. Finally, the study also considers natural shocks as the environment specific constrained. Thus, solving the constrainers of graduation in this study considered as enablers to graduate from the program.

Apart from the above studies, Sabates-Wheeler et al. (2012), suggest that their investigation on enablers and constrainers of graduation in Tigray and Oromia regions describes, graduated households were asked if they had been ready to graduate during their time of graduation 56.8 in Oromiya and 42.5 in Tigray reported their unwillingness to graduate which indicate high degree of dependency syndrome. Additionally, there is low confidence among current beneficiaries (32.9 percent of the sample households in Tigray and 46.9 percent in Oromiya have no confidence to graduate from the PSNP). The reason for high dependency syndrome among the beneficiaries’ households is fear of recurrent drought and limited opportunities to access easily after graduation. Moreover, Berhane et al. (2013), study suggest that the main incentive and disincentives of graduation from PSNP in 10 beneficiary regions in Ethiopia through Cascading approach. Pride in graduation (perception), access to agricultural inputs, external livelihood options, and district level incentives are the main positive determinant for graduation. Contrary to his, dependency, lack of access to irrigation, lack of agricultural technology, lack of Kind transfer, low initial asset, price fluctuation and natural shocks (mainly drought) are examined as disincentives for graduation from PSNP.

## 3. Methods and Materials

### 3.1. Description of the Study Area

**Babille:** It is the name of the district as well as the administrative center of the district which is located at 35 km away from Harar town, East Hararge zone capital in East direction on the main road to Jijjiga. Babile district is located to 557 km from Addis Ababa the capital city of Ethiopia and situated at 9012’ 930” N and 420 18’ 061” E with an elevation of 1200-1800m above sea level. The district is bordered by Somali region, Fedis, Gursum in South and East, West and North direction respectively. The district has 21 kebele<sup>1</sup> administrations 1 town dwellers. Agricultural production is the main means of livelihoods for the district. The main crops produced in the area include maize, sorghum, groundnut, khat, sweet potatoes, and pepper. In the study district, farmers most of the time grew chat in the form of intercropping with other crops such as sorghum and maize. Moreover, livestock rearing is another agricultural activity practiced in the district. The major Livestock husbandry is dominated by cattle, sheep, goats, chicken, camel and donkey (Babile district DARD<sup>2</sup>, 2009).

Babile district is characterized by Semi-Arid conditions having sandy loam soil and an annual rainfall of over 600 mm (Mitiku, 1989; Tefera and Tena, 2002). The area coverage of this district is estimated to 5,120.63 square kilometers. The altitude of the district ranges from 950 to 2000 meters above sea level. The temperature and rainfall of the district range from 14 - 32-degree centigrade and 532 – 710 mill meters respectively based on figures published by the Central Statistical Agency (2008)

This district has an estimated total population of 99,379 of whom 50,025 are men and 49,354 are women

<sup>1</sup> Lowest tier of administration next to the district composed of groups of villages

<sup>2</sup> District Agriculture and Rural Development Office

(Babile district DoARD, 2009). Out of the total population of the district, about 81.1 percent live in rural set-ups while the remaining 18.9 percent live in Babile town. The crude population density of the district is estimated at 27.24 people/ km<sup>2</sup> and the average household family size is estimated to be 4.35 for rural and 4.21 for urban. Concerning the sex ratio, men constitute 50.6 percent while the remaining 49.4 percent are women (DARDO, 2011).

### **3.2. Food Security Situation of the District**

According to DARDO (2016), there are 21 KAs that are found in the district in arid and semi-arid agro-ecological zones. From the total of 21 KAs; 18 KAs that are found in the arid agro-ecological zone are food insecure and depends on food aid obtained from both governmental and nongovernmental organizations. While others 3 KAs that are found in the semi-arid agro-ecological zone are food secure. Due to the erratic rainfall pattern; the district is mostly cited as food insecure in the zone.

### **3.3. Research Design**

The study employed a combination of quantitative and qualitative approaches. These days mixed method is considered as a tool to triangulate the result of single approach through multiple methods and also to reduce the limitations that may be there if only one approach is used (Johnston, 2010; Creswell, 2003:15) Therefore, the researcher adopted a mixed method in order to make the study more reliable through triangulation, in order to obtain data from different sources, harness diverse ideas about the same issue and assist in crossing checks the results. Thus, it increases the validity, reliability of the finding and eases data collection.

The qualitative approach is more appropriate for understanding process questions, understanding the “how” and “why” regarding what is going on in practice in relation to the implementation of PSNP and perception of beneficiaries households towards PSNP in the study area. Moreover, the quantitative approach used to identify factors affecting household graduation from productive safety net program. Generally, the objectives were analyzed using both qualitative and quantitative approach.

### **3.4. Target population**

The study area consists of 21 kebeles with a total population of 99,379. There is 6899 PSNP public work beneficiary household head in the study district in the year of 2016-PSNP-4. Moreover, out of 21 kebele's in Babile district 18 kebeles are benefiting from the productive safety net program. Taking these kebeles from the district can effectively represent the study area. Therefore, the target populations of this study were PSNP public work beneficiary households head.

### **3.5. Sampling Techniques and sample size**

A multi-stage random sampling procedure was used to select sample households from Babile district. According to DARDO (2011), there are 21 Kebeles are found in the district. Thus, in the first stage of sampling, PSNP participating kebeles were identified in the district and three PSNP participating kebeles namely Shek-Hussen, Abdulkadir, and Barkale were selected by simple random sampling technique among PSNP beneficiary kebeles in the study area.

In the second stage of sampling, Rosters, which consist of recent lists of PSNP beneficiary households, were obtained from Babile DARDO. District PSNP technical assistant, Extension Agents, and PA committee members were consulted to include all beneficiary household heads if there were some individuals who were not in the list and exclude those whose names were on the list but were not in the area before selecting the sample households, subsequently among three selected kebeles households those who participated in PSNP were identified and stratified into two groups based on graduation status into non-graduate and graduate beneficiary households from the list in each kebele.

Thirdly, based on the numbers of PSNP households beneficiary listed in the respective list of each 3 kebeles, the sample beneficiary household percentage proportion to be selected per each sample kebeles was calculated by using probability proportional to size technique from each kebeles based on their graduation level from PSNP. However, proceeding with probability proportional to size procedure doesn't help to obtain the desired proportion of the target strata as the number of PSNP graduated households would be under-represented. The distribution of non-graduate is skewed against the distribution of graduated. Since the major desires of the study were PSNP graduates, the desired level of the sample units to be included in the graduated stratum was deliberately determined.

Sudman (1976), indicated that an adjustment in the sample size may be needed to accommodate a comparative analysis of subgroups (e.g., such as an evaluation of program participants with non-participants). Many authors were decided using ratio methods (2:3 for the small stratum and 1:3 for the large stratum) in their studies in a circumstance where one stratum is a small size (Aziz, 2013; Jemal, 2015).

Accordingly, 2:3 ratios of PSNP graduated households and 1:3 ratios of non-graduate PSNP beneficiary

households were selected randomly by a lottery system from the sample frame in order to generate a statistically valid sample household. Following this procedure, 120 households (80 graduated and 40 current PSNP beneficiary households) were selected from the three kebeles.

Regarding the qualitative data, unlike the quantitative case, the sample was not predetermined by the researcher, rather it was accepted up to when the saturation point was reached. Accordingly, 4 non-graduates and 4PSNP graduate households were randomly selected and contacted for a focus group discussion and individual in-depth interviews. Besides, head of WOARD<sup>1</sup>, one district PSNP technical assistant, 6 DAs who were involved in supervising PSNP, were participated in the formal discussion for key informant interview. The total sampled household from each sampled kebele is given in the following table 3.1.

Table 3.1: Number of sampled Head Households: Babile Woreda, East Hararge Zone, Oromia region, Ethiopia.

| Name of Village | Total of population PSNP public works |            |             | Number of sample household head |           |                  |
|-----------------|---------------------------------------|------------|-------------|---------------------------------|-----------|------------------|
|                 | GHHs                                  | NGHHs      | Total HHs   | GHHs                            | NGHHs     | Total sample HHs |
| Shek-Hussen     | 78                                    | 426        | 504         | 34                              | 18        | 52               |
| Abdulkadir      | 60                                    | 172        | 232         | 26                              | 8         | 34               |
| Barkale         | 45                                    | 339        | 384         | 20                              | 14        | 34               |
| <b>Total</b>    | <b>183</b>                            | <b>937</b> | <b>1120</b> | <b>80</b>                       | <b>40</b> | <b>120</b>       |

**Source: WOARD and Own computation, (2016) Note: GHHs-Graduated households, NGHHs-Non-graduated households**

This study applied a simplified formula provided by Yamane (1967) to determine the required sample size at 95% confidence level, degree of variability 0.5 and level of precision = 9% (.09)

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

n= is the sample size, sample drawn from the total households of the selected kebeles (120)

N= is the population size, the total households estimated to benefited from PSNP of the selected kebeles (1120)

e= is the level of precision/sampling error tolerated for the study =9% was used. The above formula required a minimum of 111 respondents. But, the study had 120 sample respondents, avoiding sampling problem which is at 9 % (0.09) level of precession.

### 3.6. Types and Sources of Data

The study employed both quantitative and qualitative types of data. The quantitative data used to gather information related to factors affecting household graduation from productive safety net program using semi-structured questionnaire. Additionally, the qualitative employed to get reliable information about the perception of the beneficiaries towards PSNP and assess its implementation processes.

To achieve the objectives of the study both primary and secondary sources were used, primary data sources were used to collect first-hand information. The sources of primary data are PSNP graduated and current beneficiary household heads in the study district from a questionnaire survey of 120 households. Furthermore, key informant interviewed including WFSTF<sup>2</sup> coordinator, Woreda cabinet representative and WARDO department head, PSNP technical assistant and focus group discussion including development agents, elders, appeal committee and KFSTF<sup>3</sup> are also part of the primary data.

To enrich the household-level survey of the primary data the researcher also applied secondary data that collected from published and unpublished documents of the program office, working papers, regular and statistical reports of the MoARD, CSA, and PSNP graduation reports were also among the sources for secondary data.

### 3.7. Methods of Data collection

**Questionnaire:** This method employed to cover three kebeles that consist of 120 both graduated and non-graduated household heads. To collect data, structured questionnaires developed. A question related to the determinant factors of PSNP graduation and process of implementation of PSNP and perception of beneficiaries were part of the questionnaire. The questionnaire was pre-tested and modified before the execution of the survey. Three (3) experienced enumerators recruited based on their proficiency in the local language and then train on the data collection techniques and on the content of questionnaire by the student researcher. The questionnaire was administered by the enumerators.

**Key informant Interview guide-line questions:** Key informant interview at district undertaken with officials to assess the implementation of PSNP in the district. An open-ended questionnaire was prepared for the key

<sup>1</sup> Woreda Agricultural and Rural Development Office

<sup>2</sup> Woreda Food Security Task Force

<sup>3</sup> Kebele Food Security Task Force

informants. The interview was conducted ones with each interview. The respondents were PSNP technical assistant, WFTSF, DARDO coordinator apart from the household heads to enrich the quantitative results. The respondents selected purposefully because of the graduation guidance note (2007), give the mandate of implementation of PSNP graduation for the above-listed government bureaus.

**Focus Group Discussion guide-line questions:** This method used to check the reliability of the data collected through survey questionnaire and a key informant interview. The number of participants in each focus group was 8 persons. One focused group discussion is conducted in each kebele two times. As a result development agents, elders, kebele administrators, women and youth representatives, community food security task force representative, kebele appeal committee, and representatives of the graduated and non-graduated households participated in the discussion. The participants selected purposefully because they have active participation in PSNP issues.

### 3.8. Methods of Data Analysis

The data collected were analyzed through both descriptive and inferential statistics. After compiling, screening & cleaning the data in the interview schedule, responses of 120 beneficiary household heads were readily available for analysis. Qualitative data obtained from interview and discussion were analyzed and described through concepts and opinions, by sorting out, grouping and organizing in the field in order to supplement the survey result.

Descriptive statistics was used to describe farmers' response to their attitude towards the program. On the other hand, both descriptive statistics and econometric models were employed to study the relationship between the dependent and explanatory variables of household graduation from PSNP.

#### 3.8.1. Descriptive statistics

Descriptive analysis is largely the study of the distribution of variables and it provides us with brief profiles of respondents (Kothari, 2003). In the present study, descriptive statistical tools like mean, standard deviation, frequency and percentage were used. Econometric analysis was employed to study the determinant factors of graduation from PSNP presented using SPSS20 version. In addition to this, the textual analysis was used to analyze the FGD and key informant interview results.

#### 3.8.2. Econometrics model specification

The household graduation from PSNP in this case is a selection process. The fundamental reasons are in the frameworks of PSNP, the beneficiaries are expected to graduate from the program after they have reached the households graduation benchmark within the five years PSNP supports for the targeted clients. In this Five years process of PSNP support the beneficiary household are free to exit from the program by themselves which they call self (voluntary) graduation; if they were not satisfied to the support process or if they see any other comparable advantages over the PSNP support or related to when household leave the program that they know they are food sufficient or Self exit without food sufficiency occurs when clients leave the program without reaching food self-sufficiency because of many reason. Furthermore, even after households existed/graduated from PSNP support there is an idea to reclaim back to the PSNP program support by bringing their case to the community food security task force for more assistance claim that they were not reached the households graduation benchmarks, when households graduated without having reach the threshold reflected in study region. Besides, authors like Hayalu G., Arega B., Yibrah H. and et al were used binary logistic model to reveals the main factors determining the households graduation from the PSNP and the same cases. These all reasons made the appropriate choice of the econometric model of binary logistic models for the proper analysis of the same cases.

Hence, this study employed logistic regression model specifically binary logistic regression which is a non-linear regression model specifically designed for the binary response of a dependent variable system. It is a non-linear model that can be linearized using appropriate transformations. It is called "binary logistic regression model" when the dependent variable is expressed in two categories and called "multiple logistic regression models" when more than two categories (Gujarati, 2004). A binary logistic regression model was employed to address the likelihood of households' PSNP graduation due largely to the binary nature of dependent variable, graduation; that can be expressed as yes or no responses.

The logistic regression model is an alternative to discriminate analysis and cross tables when certain assumptions (such as the presence of normality and common covariance) cannot be obtained. When the dependent variable is a discrete one consisting of, 0 and 1, or more levels, the logistic regression model can be properly used. In addition, mathematical elasticity and simplicity of interpretations increase the popularity of the model (Tathdil, 2002).

A binary logistic regression model was employed for this study, where Y is a graduation from PSNP and independent variables are depicted by X's. In order to explain the model, the following logistic distribution function will be used (Wooldridge, 2002)

$$P_i = \mathcal{E} \left( Y = \frac{1}{X_i} \right) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} \dots\dots\dots 1$$

In the logistic distribution,  $P_i$  is the dependent variable,  $X_i$  is the data,  $i$ , the possibility of response by an individual (possibility of having 1 and 0 values by  $i$ th individual). When  $\beta_1 + \beta_2 X_i$  in equation 2 is obtained.

$$P_i = \frac{1}{1 + e^{-Z_i}} \dots\dots\dots 2$$

$Z_i$  is between  $-\infty$  and  $+\infty$ , and  $P_i$  is between 1 and 0. When  $P_i$  shows the possibility of graduating from PSNP, the possibility not graduating from PSNP is  $1 - P_i$  (Harrel, 2001). Then the possibility of not graduating can be explained as in equation 3 as follows:

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \dots\dots\dots 3$$

Equation 4 is obtained by dividing the graduated by non-graduates:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} = e^{Z_i} \dots\dots\dots 4$$

When the natural logarithm of both sides of the equation is written, Equation 1 is obtained:

$$L_i = \ln \left( \frac{P_i}{1 - P_i} \right) = Z_i = \beta_1 + \beta_2 X_i \dots\dots\dots 5$$

Thus, a non-linear logistic regression model is liberalized based on both its parameters and variables. "L" is called "logit" and models such as this called "logit models" (Gujararti, 1995, 2004). When there is more than one independent variable, ( $X_1, X_2, \dots, X_k$ ), binary and logistic models apply. In these situations, equation 1 is used for proper transformations:

$$P_i = \mathcal{E} \left( Y = \frac{1}{X_i} \right) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_1 + \beta_3 X_2 + \dots + \beta_k X_k)}} \dots\dots\dots 6$$

In logistic regression models involving a binary code, the categorical dependent variable has the following assumptions (Agresti, 1996 & Tuzunturk, 2007):

- I) Conditional mean of logistic regression has a value between 0 and 1
- ii) If the data is  $X$ , the possibility of  $Y$ 's being 1 is  $P_i$ , that is,  $E(Y = 1 | X_1, \dots, X_k) = P_i$
- iii)  $N$  number of observation about the dependent variable is statistically independent
- IV) Defining variables are independent of each other

$$Z_i = \beta_0 + \beta_i X_i + U_i \dots\dots\dots 7$$

Where  $Z_i$  = the dependent variable (Graduation)

$X_i$  = a vector of explanatory variables

$\beta_i$  = a vector of estimated coefficient of the explanatory variables (parameters)

$u_i$  = disturbance term

$Z_i = (\beta_0 + \beta_1 \text{SEX} + \beta_2 \text{AGE} + \beta_3 \text{EDUCATION} + \beta_4 \text{FAMILY} + \beta_5 \text{FARM SIZE} + \beta_6 \text{IRRILAND} + \beta_7 \text{NONFARM} + \beta_8 \text{CREDIT} + \beta_9 \text{TARGMECH} + \beta_{10} \text{FOLLOW UP} + \beta_{11} \text{INPUTS} + \beta_{12} \text{DROUGHT})$ . Where, SEX=Sex of households, AGE= Age of household, EDUCATION= Formal Education of head household, FAMILY=Family size, FARM SIZE= Land size, IRRILAND= Ownership of irrigable land, NONFARM=Nonfarm participation, CREDIT= Access to Credit, TARMECH= Targeting Mechanism, FOLLOWUP=Follow up by development agents, INPUTS=Access to agricultural inputs, DROUGHT=Drought

### 3.9. Definition of variables and hypothesis

#### 3.9.1. Dependent variable

The dependent variable in this study is household graduation from PSNP at the household level; was designed to measure the determinants of PSNP graduation in the study area. It's dummy value in the model. It is represented by 1 if households are graduated and 0 otherwise.

#### 3.9.2. Definition of Explanatory variables and hypothesized relations

The following 12 independent variables are hypothesized to determine beneficiary household graduation from productive safety net program.

**Sex of household head:** Sex of household head is dummy variable (1 = male, 0= female). According to Chirwa et al (2011, the likelihood of graduation of male headed households is much better and sooner than their counterparts.

**Age of household head:** age is a continuous explanatory variable. As the age of household increases, it is assumed that beneficiary could acquire more knowledge and experience. On the other hand, another study insists that as age increase the efficiency or productivity of households decrease. Therefore, its expected sign in affecting graduation cannot be determined in prior.

**Education of HH:** It is a continuous variable defined as a number of years of formal education. It is hypothesized that households with better enrollment will have more likelihood to graduate from PSNP.

**Family size** is continuous variable and defined as a number of people in the household. This refers to the total number of family members of the household.

**Farm size:** Refers to the size of cultivated land and is a continuous variable measured in a hectare. Frankenberger and Sutter (2007) illustrates households with large farm size have a higher probability of

graduation. It is also hypothesized that households with large farm size will have more likelihood to graduate from PSNP.

**Access to irrigation:** the potential of households to irrigate their land and is dummy variable (1= households with access to irrigation land, 0=otherwise). It is expected that beneficiaries with irrigable land have more likelihood to graduate. Berhane et al (2013) find access to irrigation as a significant factor affecting graduation i.e. household with access to irrigation graduate sooner.

**Access to credit services:** the likelihood of getting access to credit service and it is dummy variable (1=households with access to credit, 0 = otherwise). According to Hashemi and Montesquieu (2011) and Devereux and Sabates (2011) beneficiaries with access to credit have more likelihood of graduating.

**Targeting mechanism:** Whether all household members are benefiting from PSNP and is dummy variable (1 = full family targeting<sup>1</sup>, 0= otherwise). It is expected that households with partial family targeting have a low likelihood of graduation and vice versa.

**Follow up by DA:** follow up is a dummy variable (1= for households with access to follow-up by DAs, 0=otherwise). Devereux and Sabates (2011) indicates follow up by development agents enhance the likelihood of graduation from PSNP.

**The occurrence of drought:** It is dummy variable (1= if drought occurs, 0=otherwise). It is hypothesized that households vulnerable to drought will have a low likelihood of graduation.

**Access to agricultural inputs:** the likelihood of getting access to agricultural inputs and it is dummy variable. It is hypothesized that household's access to agricultural farm inputs will have a higher likelihood of graduation and vice versa.

**HHs Non-farm income:** Income earned from non-farm activities. In this regard, it's hypothesized as households engaged in non-farm activities will have high likely to graduate.

## 4. RESULTS AND DISCUSSIONS

### 4.1. Econometric Model Results

This section describes the econometric analysis. The study aimed to examine the factors determining household graduation from PSNP and describe the magnitude of the effect of these factors. 12 potential variables were examined in this study namely, demographic factors (Age, Education, Sex and family size) socio-economic, (irrigable land, Farm size, and Non-farm participation), institutional (follow-up, credit service, access to agricultural inputs, and targeting mechanism) and natural factors (Drought). As indicated earlier the dependent variable in this model is binary whether the household was graduated from PSNP take a value of 1 and 0 otherwise. Before undertaking the economic estimation, different econometrics assumptions were tested using relevant techniques. First the presence of strong multicollinearity among the independent variables, power correlation has been tested that actually lets the researcher drop variables that correlate highly. There are two measures that are often suggested to test the existence of multicollinearity. These are Variance Inflation Factor (VIF) for association among the continuous explanatory variables and contingency coefficients for dummy variables.

A statistical package known as SPSS was employed to compute these values. Once VIF values were obtained the R<sup>2</sup> values can be computed using the formula. The larger the value of VIF, the more "troublesome" or collinear will be the variable Xi. As a general rule, if the VIF of a variable exceeds 10, there is multicollinearity. According to Gujarati, 2003, to avoid serious problems of multicollinearity, it is quite essential to omit the variable with value 10 and more from the logit analysis. Thus, the variable inflation factor (VIF) was employed to test the degree of multicollinearity among the continuous variables. The values of the VIF for continuous variables were found to be small (i.e. VIF values less than 10) indicating that the data have no serious problem of multicollinearity. In a similar vein, contingency coefficients were computed from survey data to check the existence of a high degree of association problem among discrete independent variables. The decision rule for contingency coefficients states that when its value approaches 1, there is a problem of association between the discrete variables, i.e., the values of contingency coefficients ranges between 0 and 1, with zero indicating no association between the variables and the values close to 1, indicating a high degree of association. The result of the correlation coefficient reveals the absence of multicollinearity or a high degree of association problem among independent variables. All the screened variables, therefore, were decided to be included in the model analyses.

According to the model result, there was no serious multicollinearity among the variables. For interpretation of the results, the marginal coefficient of the binary logistic regression was used. Marginal effect is the partial derivative of the event probability with respect to a predictor of interest. A more direct measure is the change in the graduation of households for a unit change in the explanatory variables. A logistic regression was used to

<sup>1</sup> Full family targeting refers to the provision of sufficient resources to households to meet all family member consumption need to help households avoid the sale of their productive assets to compensate for partial transfers.



determine the joint effect of different independent variables and to examine why some of the beneficiaries become graduated soon and others lag behind. The below table 4.11 presents, the estimated model using graduation as the dependent variable and demographic, socio-economic, natural and institutional factors as explanatory variables.

**Table 4.1: Illustrates Binary Logistic Regression Estimates for program graduation dependent variable: Whether a household graduates or not**

| Predictor Variables | Estimated Coefficient(B) | Odds Ratio(S.E.)        | Wald Statistics | Sig.level           | Exp(B) |
|---------------------|--------------------------|-------------------------|-----------------|---------------------|--------|
| SEX                 | 1.834                    | 0.904                   | 4.113           | 0.043**             | 6.258  |
| AGE                 | 0.033                    | 0.043                   | 0.578           | 0.447 <sup>NS</sup> | 1.033  |
| EDUHH               | -0.587                   | 0.347                   | 2.858           | 0.091 <sup>NS</sup> | 0.556  |
| FAMSIZE             | -0.625                   | 0.244                   | 6.583           | 0.010**             | 0.535  |
| FARMSIZE            | 1.222                    | 1.003                   | 1.482           | 0.223 <sup>NS</sup> | 3.393  |
| IRRILAND            | 2.529                    | 1.105                   | 5.243           | 0.022**             | 12.545 |
| NONFARM             | 2.406                    | 1.029                   | 5.472           | 0.019**             | 11.090 |
| CREDITSER           | 3.506                    | 1.063                   | 10.880          | 0.001**             | 33.328 |
| TARGMECH            | 0.705                    | 0.835                   | 0.713           | 0.039**             | 2.024  |
| FOLLOWUP            | -0.546                   | 0.838                   | 0.425           | 0.514 <sup>NS</sup> | 0.579  |
| FARMINPUT           | 1.782                    | 0.905                   | 3.874           | 0.049**             | 5.941  |
| DROUGHT             | -3.791                   | 1.562                   | 5.889           | 0.015**             | 0.023  |
| Constant            | 2.683                    | 2.635                   | 1.037           | 0.308 <sup>NS</sup> | 14.630 |
| N= 120              | Prob>Chi2=0.000          | -2Log likelihood=51.421 | LR              | Chi2 (12)=101.343   |        |

**Source: Own Computation Based on Survey Data, 2016** Note: \*\* significant at 5 percent significance level and NS=Not significant

Notes: Exp (B) shows the predicted changes in odds for a unit increase in the predictor

\*Omnibus Tests of model coefficients: Chi-square=101.343\*\*\*, Sign 0.000;

-2log likelihood=51.421\* Percentage of correct prediction=90.6

#### 4.2. Discussion on the Significant Explanatory Variables

The above table illustrates that the binary logistic regression estimates for program graduation dependent variable: whether a household graduates or not. There are might be multiple factors that affect graduation of Productive Safety Net Program beneficiary households thereby reducing the number of program participants in the program as a result can ensure food security. Based on the collected data and using the appropriate Econometrics model, Logit, the following analysis were drawn on the major graduation determinates of PSNP beneficiaries in the selected areas of the study and have been discussed here.

The estimated coefficient result of table 6-1 above shows that, eight explanatory variables affect households' PSNP graduation. Sex, Irrigable land ownership, access to agricultural inputs, Credit Access, Targeting mechanism was positively and significantly influenced households graduation from PSNP while family size and drought were found to have significant and negative influence on beneficiary's graduation from the program.

**Sex of Household Head (SEX):** sex of household was statistically significant and positively correlated with the probability of graduating from PSNP. The model estimation result shows, the likelihood of being food self-sufficient high when the household head is male-headed. Male's have the capability to participate in various income generating activities while the female is disadvantageous because they are often limited to certain income earning activities and overloaded with households reproductive roles. The likelihood of graduating beneficiary households from program increases by 6.258 marginal effects when the head of household was male. The percentage mean difference between male headed and female headed households were 0.234 which statistically significant at 5 percent significance level. The major constraints for female households delayed graduation were multiple burdens like child care, cooking food and other home tasks. The finding of this study found consistent with what had been found by Yibrah (2013) male headed households are more likely to graduate from PSNP in his study in eastern Tigray. Moreover, Chirwa and Matia (2011), indicates male households have had the potential to become food self-sufficient earlier than females.

**Family Size (FAMSIZE):** This variable was significant at 5 percent probability level. It has a negative and significant relationship with the graduation of households from PSNP. The negative relation indicates that households who have large family size have a low probability of graduating from PSNP. The likelihood of graduating from the program decreases by 0.625 marginal effects when the number of family size increases by

one unit other variables held constant in the model. The estimation result clearly shows households with a large number of family size struggles to graduate. This fully agrees with prior expectation.

**Irrigable Land Ownership (IRRILAND):** The sign of the coefficient of this value showed a positive relationship with graduation and is significant at 5% probability level. The positive relationship implies that households who own irrigable land have high chance to graduate than the beneficiaries who have no irrigable land. Households with the irrigable land have more likelihood of being food self-sufficient. This is because, the clients with irrigable land have the capability to produce more than two times in a season which will enhance their production, diversify their income and enable them to smooth their food consumption. Hashemi and Montesquieu (2011), Strengthen the finding of this study that, community infrastructure particularly irrigation enhances households path to food self-sufficiency.

**Non-farm Participation (NONFARM)** is another determinant factor which affects graduation of participants positively and significantly. Households with non-farm participation are more likely to graduate from PSNP. The result of binary logistic regression maintains this hypothesis. Being other things remains constant one unit increase in the household's participation in non-farm activities increase the likelihood of graduation by 11.090 marginal effects. The coefficient of this variable showed a positive relationship with graduation and is significant at 5% probability level. Further, the binary logistic regression results showed that engagement in non-farm activities can enhance the graduation of program beneficiary households. The regression result indicated that an increase in the participation of non-farm activities by one unit the odds ratio of being program graduate increases by a factor of 1.029 ( $P < 0.05$ ).

**Access to Credit (CREDITSER):** Credit is one component of HABP, the main complementary program for PSNP in graduating households from PSNP. The model result shows that credit is a crucial predictor variable in determining household graduation from PSNP. The model result shows that on average households with access to credit has more likelihood of graduating from PSNP than households who have no access to credit other variables remains constant in the model. Access to credit was significant at 5 percent significance level. This indicates access to credit have a strong, significant and positive relationship with households food self-sufficiency. This is due to the fact that credit gives the households an opportunity to be involved in income generating activities so that derived revenue increases financial capacity and purchasing power of the beneficiaries. In addition to this, it helps to smooth consumption when household faces with the temporary food problem. The finding is in line with Burns & Solomon (2010), in which credit played a key role in ensuring households food self-sufficiency. In contrast, Arega(2012) observes the insignificant impact of credit access for households graduation in his observation in Lay Gaint district of Amhara region.

**Targeting Mechanism (TARGMECH):** PSNP as a social protection program aims to provide full family targeting for a household under the intervention to increase their likelihood to graduate. The concept and practice of full family targeting were crucial for households which enable them to accumulate assets and enhance the way out for graduation. As illustrated in the descriptive result some of the beneficiaries' family members are not receiving full family transfer. Targeting mechanism affects graduation positively and significantly. The marginal effect of targeting mechanism implies that other variables remain constant, a shift in households targeting from partial to full family result in 2.024 higher likelihood of graduation from the program. Targeting mechanism was significant at 5 percent significance level. The study by save the children (2008), Bran & Lane (2010) were consistent with the finding of this study.

**Access to Agricultural inputs (FARMINPUT):** The household access to agricultural inputs: positive and significant relationship was found between access to farm inputs and the probability of a household to graduate. This means that the likelihood of graduation increases with household's access to agricultural farm inputs. In other words, the PSNP beneficiary households with access to agricultural farm inputs are more likely to be graduate than households with no access to farm inputs. According to the findings of this study, the probability of household graduation from PSNP was positive and highly significant at 5 percent significance level in the study area.

**Drought (DROUGHT):** Drought negatively and significantly affects household graduation from PSNP. The binary logistic result indicates other things remain constant; the likelihood of graduation of PSNP participants affected by drought decreases by 2.024 marginal effects than those households not affected by drought. Drought was significant at 5 percent significance level. This finding was in line with the observation of Bene et al. (2012), Burns and Solomon (2012) and Gillingan (2008) that, drought prone households struggle to become food self-sufficient and graduate from the program.

#### 4.3. Subjective analysis of PSNP implementation process

The Ethiopian food security program and in particular the PSNP, represents a major effort on the part of the Ethiopian government and the international donor community to assist millions of households to break out of households' dependence on humanitarian assistance and to achieve food security. Notwithstanding these efforts, there is an abiding question of how successful the program is going to be. Already, it is clear that graduation

rates have fallen far behind expectations, with only 9% of recipients having graduated until 2009 and a large number of them faced food shortages even after graduation. The first explanation of why graduation is not successful is found in the overwhelming numbers of food insecure households that dilute even the large resources mustered by the government and donors. The total number of people being assisted by the food security program has actually increased from 5 million in 2005 to 8.3 million people in 2015, rather than going down as it was expected due to graduation. And the program started covering 192 districts and the geographic coverage of program expanded over the years into 318 districts in 2015. The corresponding figures for PSNP 4 (2015-2020) is planned to be more than double the amounts at the launch of PSNP – number of beneficiaries further rising to 10 million. As a result, resources are spread thin. Moreover, there are not enough resources through the PSNP to allow the build-up of an asset base that renders households food secure. In addition, instead of receiving full family support, households cannot survive on limited resources provided by the safety nets alone. They have to use resources that are meant to expand their asset base to smoothen consumption.

Besides, this research also highlights the fact that there are major institutional impediments to a successful program. The PSNP and the process of graduation is quite complex and requires a high capacity level of the local bureaucracy. In practice, there appeared to be many problems. Graduation was not implemented according to the rules set out for its implementation. There was lack of uniform understanding of the graduation benchmark as well as processes across different levels of implementers. This is partly related to lack of training and misunderstandings. At the same time it was found that the setting of targets or quota works as a disincentive for the quality of the program. Local level officials have an overriding concern to meet the targets, which they perceive to be important for their future career prospects. As a result, they tend to use credit facilities as mechanisms to force households into graduation without examining households' food security status or productive assets. At the same time, the local committees that are responsible for implementing graduation do not function properly due to lack of organization and information. As a result, they do not act as a countervailing power or watchdog, but follow the proposals for graduation forwarded by the DAs and local administrators. There is no effective mechanism for households to complain against unjust graduation and the complaints committees exist only on paper. These institutional impediments result in the premature graduation of households. The major problem remains that the food security program, the PSNP has not resulted in a structural improvement of the food security capacities of households in the study area. They leave the program with a modest asset base. In order to survive, they depend on the sale of livestock, without being able to reproduce or restock their sheep and goats. Livestock in these cases, become a temporary safety net that is quickly depleting. Once depleted, households will likely become dependent again on external assistance. Despite all the efforts and good intentions, it seems that for most households, the food security program has not been able to sustainably break the vicious cycle of dependence on aid. From dependency on food aid, households have moved to dependency on the safety net program, and are now dependent on a rapidly depleting livestock base, with a risk of becoming dependent on aid again. The structural problems that have been identified as impeding factors of households graduation from PSNP, sex of clients, family size, lack of access to irrigation, and weather-induced drought, population pressure, targeting mechanism and lack of income generating opportunities outside of agriculture, have not been resolved and continue to frame the possibilities of households to overcome food insecurity. Instead of achieving sustainable food security, graduation from the PSNP has only meant for most families a re-allocation of their dependency. Taking this idea the result of the study shows, more than half of the respondents perceives, PSNP as the rationale behind their smooth consumption in the past decade and underlines their living will remain devastating when they are not targeted for the program.

## 5. Conclusions

The Ethiopian food security program and in particular the PSNP, represents a major effort on the part of the Ethiopian government and the international donor community to assist millions of households to break out of households' dependence on humanitarian assistance and to achieve food security. PSNP is among the integrated programs with the aim of enhancing food self-sufficiency and asset accumulation. Notwithstanding these efforts, there is an abiding question of how successful the program is going to be. Already, it is clear that graduation rates have fallen far behind expectations, with only 9% of recipients having graduated until 2009 and a large number of them faced food shortages even after graduation. This paper has investigated a group of PSNP beneficiary households that were targeted. Among the group, 80 graduated households and 40 non-graduate households.

The study showed that PSNP supports the beneficiary's households for smooth consumption in the study area. However, the finding of the study insists the program suffers a lot setback during the implementation process and household's potential in accumulating assets is very low and disproportionate effect in preventing sell off their assets. This leads to the low confidence of households to leave the program, develop a sense of dependency syndrome and to believe the graduation process is a matter of time rather than reaching the food self-sufficiency threshold. Moreover, the government support is limited to PSNP and lack of other development

interventions in the district hamper the food self-sufficiency of households.

Access to credit, full family targeting, non-farm participation and access to irrigation increase the potential of households' to become food self-sufficient and to achieve the broader food security program. While male participants in the program have had better performance, those with a large number of family size and drought prone were found to be at a grass-root level to be graduated. The process of graduating households from PSNP fails to follow the procedures of graduation guidance note and program implementation manual. This leads to low asset accumulation, low community participation in decision making, and high interest to stay in the program. Consequently, the beneficiaries leave the program without reaching the appropriate graduation benchmark and remain chronically food insecure.

## REFERENCES

- Amdissa, T. (2006). Agriculture, Growth and Poverty Reduction in Ethiopia: Policy Process Around the new PRSP (PASEDP). Research paper, 004, March 2006
- Arega, B. (2012). Productive Safety Nets Program and Household Level Graduation in Drought- Prone Areas of the Amhara Region of Ethiopia: A Case Study in Lay Gaint District. Ethiopian Journal of Environmental Studies and Management EJESM Vol. 5 no.4 (Suppl.2)
- Anderson, C., Alemu, M., and Stage, J. (2008): Impacts of PSNP in Ethiopia on Livestock and Tree Holding of Rural Households: Environment for Development, Discussion paper series.
- Assefa, A. (2012). The Making of Social Protection in Ethiopia. Available at [Aigaforum.com/articles/the-making-of-social-protection](http://Aigaforum.com/articles/the-making-of-social-protection). May 2013, Addis Ababa, Ethiopia.
- Bene, C., Devereux, S., and Sabates-Wheeler, R.(2012). Shocks and social protection in the horn of Africa: Analysis from the Productive Safety Net Program in Ethiopia: Institute of Development studies, center for social protection, IDS Working Paper Volume 2012, number 395, CSP working paper, number 005, June 2012, Brighton, England
- Berahne, G., Hodditnot, J., Kumar, N., Alemayehu, T., Michael D., Yishac, Y., Sabates- Wheller, R., Mulugeta, H., Lind, Mulugeta, T., and Frank, S.(2013) : Ethiopian strategy Support II (ESSP): International Food Policy Research Institute , Institute of Development Studies , University of Sussex Dadimos
- Creswell J. W (2003). Research Design Qualitative, Quantitative and Mixed Methods Approaches, 2nd Edition, SAGE Publications, University of Nebraska, London, p15.
- DARDO, 2011. District Agricultural and Rural Development Office
- Devereux, S., 2000. Food Insecurity in Ethiopia A discussion per for Department for International Development (DFID), Sussex, UK: International Development Studies (IDS).
- Devereux, S., and Sabates-Wheeler, R. (2004). Transformative social protection, IDS Working Paper, 232, Brighton: Institute of Development studies.
- Devereux, S., Sabates-wheeler, Slater, R., Mulugeta, T., Tefera, D., Borwon, T., and Amdissa, T. (2008). Ethiopia's Productive Safety Program (PSNP): Assessment report: Institute of development studies, Overseas Development Studies, Dadimos Development consultant and IDL group A-Z consult.
- DFID Ethiopia, February 2015. Ethiopia Productive Safety Net Programme: Annual Review Summary Sheet, Addis Ababa: DFID.
- Ethiopia PSNP, 2006.Trends in PSNP Transfers within Targeted Households. Discussion draft, Institute of Development Studies, Sussex, UK Indak International, Addis Ababa, Ethiopia.
- European Communities, 2010. European Report on Development: Social Protection for Inclusive Development, San domenico diFiesole: Robert Schuman Centre for Advanced Studies, European University of the institute.
- FDRE (Federal Democratic Republic of Ethiopia), (2002). Food Security Strategy. Ministry of Foreign Affairs, Addis Ababa, Ethiopia.
- Fekadu, N., and Mberengwa, I. (2009). Challenges of Productive Safety Net program Implementation at Local Level: the case of Kuyu Woreda, North Shewa Zone, Oromiya Region, Ethiopia: Journal of Sustainable Development in Africa Volume, 11, No, 1. Institutive of Regional and Local Development Studies, Addis Ababa University.
- Frank, E., 2013. The graduation of Households from Social Protection Programs in Ethiopia: Implication of Market Conditions and Value Chains on Graduation.
- Frankenberger, R., Sutter, P., Amdissa, T., Alemtsehay, A., Moges, T., Alemayehy, S., Bernard, T. and Spangler, T (2007): Ethiopia: The Path to Self Resiliency, Summary of findings: Prepared for CHF-Partners in Rural Development on Behalf of: Canadian Network of NGO's in Ethiopia (CANGO), July 2007
- Gilligan, D.O., Hoddinott, J., Seyoum, A.T. 2009. The impact of Ethiopia's Productive Safety Net Program and its Linkages. Journal of Development Studies, 45(10), 1684-1706.
- Gujarati, D.N, 2004. Essentials of Econometrics, 4th edition. Mc-Grew hill companies, 1003
- Haddad L., 1997. Achieving Food Security in South Africa: New Challenges, New opportunities, Washington,

- DC: International Food Policy Research Institute
- IDL Group 2010. Productive Safety Net Programme (PSNP): Assessment of Graduation Report. Bristol: The IDL Group.
- International Labour Office (ILO), 2008. Can low-income countries afford basic social security? Social Security Policy Briefings, Paper 3. ILO, Geneva.
- Julie van, D., and Coll-Black, S. (2012). Designing and implementing a rural safety net in a low-income setting, Lessons Learned from Ethiopia's Productive Safety Net Program, 2005-2009, World Bank, Washington, Dc.
- Little, P.D. 2008. Food Aid Dependency in Northwestern in Ethiopia: Myth or Reality? World Development 36(5): 860-874.
- Maxwell, S., 1996. Food Security: A Post-Modern Perspective. Food Policy, 21 (2):155-170.
- MOARD (Ministry of Agriculture and Rural Development), 2004. Productive Safety Net Program: Program Implementation Manual. Addis Ababa, Ethiopia.
- MOARD (Ministry of Agriculture and Rural Development), 2006. Productive Safety Net Program: Program Implementation Manual (Revised): Addis Ababa, Ethiopia
- MOARD (Ministry of Agriculture and Rural Development), 2007. PSNP: Graduation Guidance Note. Food Security Coordination Bureau, MOARD, Addis Ababa, Ethiopia
- MOARD (Ministry of Agriculture and Rural Development), (2009). Food security Program 2010-2014: MOARD, August 2009 Addis Ababa, Ethiopia.
- Rachel Sabates-Wheeler and Stephen Devereux 2013 Sustainable Graduation from Social Protection Programmes, Development, and Change 44(4): 911–938. International Institute of Social Studies. Published by John Wiley & Sons Ltd
- Sababtes-Wheeler, S., and Devereux, S. (2010). Cash Transfer and High Food prices: Explaining Outcomes on Ethiopia's Productive Safety Net Program, Institute of Development Studies and Center for Social Protection. University of Manchester, England
- Sabates-Wheeler, S., and Devereux, S. (2011). Transforming Livelihoods for Resilient Futures: How to Facilitate Graduation in Social Protection Programs, Future Agricultures. University of Brighton, Sussex
- Sabates-Wheeler, R., Mulugeta, T., and Girma, B. (2012). Assessing the Enablers and Constrainers of Graduation, Evidence from Food security Program, Future Agricultures, University of Sussex, Brighton Ethiopia, and April 2012.
- Save the Children UK (United Kingdom), (2008). Cash, food Payments and Risk: A review of the Productive Safety Net Program. Save the Children, United Kingdom, London.
- Sharp, K., Brown, T., and Amdissa, T. (2006). Targeting Ethiopia's Productive Safety Net Program (PSNP). Overseas Development Institute, London, UK the IDL Group Ltd, Bristol, UK, and A-Z capacity Building, Addis Ababa, Ethiopia, August 2006
- Slater, R., Ashley, S., Mulugeta, T., Mengistu, B., and Delelegne, E. (2006) Ethiopia Productive Safety Net Program (PSNP): PSNP Policy, Program, and institutional Linkages. Overseas Development Institute, the IDL group and Indak International Pvt .Ltd. London and Bristol, UK and Addis Ababa, Ethiopia
- Stephen Devereux, 2015 Social protection for enhanced food security in sub-Saharan Africa Centre for Social Protection, Institute of Development Studies, Brighton, UK
- Seymour Sudman, 1976 Quantitative studies in social relations: Applied sampling, London, academic
- Teklay Tesfay Kidanemariam 2009, "Building a platform for all to dance" To what extent does the Productive Safety Net Projects reflect cultural expressions of shame and poverty in Ethiopia? Thesis for the Master's Degree in International Social Welfare and Health Policy, Faculty of Social Sciences, Oslo University
- Tom Lavers (2013). Food security and social protection in highland Ethiopia: linking the Productive Safety Net to the land question. The Journal of Modern African Studies, 51
- White, P., Frank, E., Devereux, S., 2010. Frontiers of Social Protection: Johannesburg regional hunger and vulnerability program, Johannesburg.
- Yamane, T., 1967. Statistics, An introductory analysis, 2nd Ed. Harper and Row. New York.
- Yibrah, H. (2013). Graduation Determinants of Productive Safety Net Program beneficiary Households: A logistic Analysis. Journal of Economics. Vol.1