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Sumário

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Incentivando os meios de subsistência dos pequenos agricultores e construindo a segurança alimentar através da alimentação escolar doméstica: evidências do Norte da Gana

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Abstract

Globally, a new school feeding paradigm is emerging; one that incentivises smallholder farmers' access to reliable markets and boosts their incomes. Drawing on the Ghana School Feeding Programme and Netherlands Development Organisation's (SNV) Grain Banks initiative, this paper finds that besides accounting for about half of households' farm income, the grain banks approach has a strong potential for boosting farm households food security.

Keywords: Home-grown school feeding Smallholder farmers Market access Food security

Resumo

Um novo paradigma global de alimentação escolar está emergindo que incentive o acesso dos pequenos agricultores a mercados confiáveis e aumente a sua renda. Baseando-se no Programa de Alimentação Escolar de Gana e na iniciativa dos Bancos de Grãos da Holland Development Organisation (SNV), este artigo conclui que, além de representar metade da renda das famílias, a abordagem dos bancos de grãos tem um forte potencial para aumentar a segurança alimentar das famílias.

Palavras-chave: alimentação escolar doméstica; pequenos agricultores; acesso ao mercado; segurança alimentar

1. Introduction

Over the last decade, school feeding has emerged as an indispensable safety net world-wide. Whether in the form of in-school feeding or take--home ration, school feeding programmes bring significant benefits to

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In November 2016, the World Food Programme Centre of Excellence against Hunger in Brazil (WFP CoE) completed five years of existence. Since its foundation, the Centre of Excellence has been working to build countries´ capacities to fight hunger and malnutrition through South-South and Triangular Cooperation, further contributing to achieve the Sustainable Development Goals (SDGs). In order to celebrate its anniversary, the WFP CoE, in partnership with the Universitary Centre of Brasilia (UniCEUB), launched a contest for researchers working with food and nutrition security (FNS) and related areas. This paper came fifth in the anniversary contest. It was considered a valuable contribution to research in FNS and to WFP´s purpose of achieving Zero Hunger worldwide.

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children's overall development.[1] Aside from guaranteeing children's right to food as enshrined in the International Human Rights Declaration, school feeding programmes form part of a broader policy effort for assuring food and nutritional security, improving health as well as making an important contribution to educational outcomes.[2]

Across the developing world however, a new school feeding paradigm is emerging, one that purports to address the twin challenges of poverty and food and nutrition insecurity amongst smallholder farmers and their families while underscoring the need for greater policy complementarity between food transfers and smallholder agriculture. That, by adopting a local purchase approach for foodstuffs used in the delivery of school feeding interventions, smallholder farmers' access to reliable markets increases which, in turn, translates into increased incomes and guarantees them secured livelihoods.[3] This new paradigm to school feeding, referred to as home-grown school feeding, is making in-roads in developing countries particularly in Africa. Given its high prospects for boosting local food production and improving farmer livelihoods, African governments, with support from organizations such as the New Partnership for Africa's Development and Food and Agriculture Organization, World Food Programme, and the International Fund for Agricultural Development are transitioning their conventional school feeding schemes into home-grown ones.

The transition to home-grown school feeding (HGSF) in low and middle income countries is already making inroads in expanding markets for smallholder farmers, who, paradoxically, make up the majority of the poor and food insecure worldwide.[4] Ghana, like many other African countries, has reformed its national school feeding programmes to accommodate the HGSF model. The Ghana School Feeding Programme (GSFP) was originally launched in 2005 with a three--fold objective of increasing school enrolments levels, improving food security and reducing malnutrition as well as boosting local food production. While significant gains have been made in terms of educational and nutrition outcomes[5], the agricultural production component of the GSFP, which encourages the use of locally produced food by smallholder farmers, is yet to take root.[6] A study by Ernst and Young[7] showed limited evidence of smallholder farmer involvement in the implementation of the GSFP.

While the 'home-grown' element of the GSFP struggles to stay afloat, some development partners like the Netherlands Development Organization (SNV), together with other local non- governmental organizations, are partnering with local governments to strengthen these school feeding and agriculture linkages. For example, SNV, through its grain banks initiative, is facilitating smallholder farmers' access to school feeding market in the Sissala East District of the Upper West region of Ghana.

Amidst these developments, however, research that investigates how such collaborative efforts are increasing smallholders' access to stable markets and triggering livelihood transformation amongst farmers and their dependents is limited.[8] In Ghana, this assertion still holds true as empirical evidence on the impact of school feeding on local farmers is nearly non-existent. Thus, the objective of this paper is two-fold: first, it examines the extent to which the SNV grain banks initiative is incentivising local farmers' access to the GSFP market; second, it assesses how local farmers' access to GSFP market through the grain banks initiative is helping them construct food and nutritional security for themselves and their families.

2. Smallholder farmer livelihoods and home-grown school feeding

While smallholder farming remains an important livelihood source for many across the world, the majority of these farmers continue to face numerous challenges.[9] Despite accounting for about 87% of the world's 570

1 Bundy, 2009.

2 see Tomlinson, 2007; Adelman, Gilligan & Lehrer, 2008; Bundy, 2009; Jomaa, McDonnell & Probart, 2011; FAO, IFAD & WFP, 2014.

3 Devereux, Sabates-Wheeler & Martinez, 2010; Sumberg & Sabates-Wheeler, 2011.

4 Sanchez & Swaminathan, 2005.

5 See Government of Ghana, 2010.

6 Drake et al., 2016; Government of Ghana, 2016; ECASARD/ SNV Ghana, 2009.

7 2012 cited in Drake et al., 2016.

8 Bundy, 2009; Devereux et al., 2010; Sumberg & Sabates-Wheeler, 2011; WFP, 2013; Masset & Gelli, 2013; WFP, 2015; Miranda, 2018).

9 Kiers et al., 2008; Poulton, Dorward & Kydd, 2010.

million farms[10], past and current agricultural development policies have failed to adequately prioritize small and family farms. With the penchant for high agricultural productivity, most often than not, commercial farmers have found a strong place in agricultural policy; a situation that has resulted in the relegation of smallholder farmers down the list of priorities.[11] Low market access, poor storage, lack of credit coupled with stiff competition from commercial farmers are amongst factors that imperil smallholder farmers' productive capacity.[12]

In Ghana, like many other African countries, farming is pre-dominantly subsistent, with more than two-thirds of farms being 3 Hectares or smaller.[13] Access to reliable markets remains a major setback for smallholder farmers in Ghana.[14] Also, smallholder farmers "…produce fewer marketed crops and are less likely to sell the crops they do produce."[15] For instance, in the savannah areas where the Sissala East District is located, farmers cultivating less than 3 Hectares are able to sell only 40% of maize produced as compared to 57% for those 3 Hectares or more.[16] This reveals a certain level of skewness in terms of market participation. Also, the remoteness of their location from major market centres partly contributes to their limited access to output markets.[17]

The resulting effects of these market access challenges on the lives of smallholder farmers have been utter poverty and chronic food insecurity – making them the most vulnerable to poverty and hunger.[18] In the Sissala East District, even though the food basket of the Upper West region, poverty is rife, with the 2010 population and housing census putting the share of poor people at 47.3%.[19] To reverse this phenomenon, national governments, as part of their agricultural output market policies, ought to use public food procurement as a lever for increasing farmers' access to market for their produce.[20]

It is from this reasoning that the urgency to link food transfers such as school feeding to smallholder farmer livelihoods has emerged. That, in countries where markets for smallholders are barely existent and unstable, food-based transfers in the form of school feeding are relied upon to induce the necessary markets for local producers.[21] Thus, HGSF is a new variant of structured demand. Such initiatives "connect large, predictable sources of demand for agricultural products to small farmers, which, in theory, reduces risk and encourages improved quality, leading to improved systems, increased income, and reduced poverty".[22] HGSF combines local procurement and conventional food-for-education programmes.[23] Thus, the transition from conventional school feeding to HGSF promises to be a 'game changer' for the many hungry-poor smallholder farmers in developing countries in several respects.

In Brazil, where HGSF programmes have gained roots, significant impacts have been recorded for participating smallholder farmers. As of 2012, about 67% of states and municipalities are using part of their school feeding budget to procure foodstuffs from smallholder farmers.[24] Through increased access to stable markets, incomes of farmers have consequently increased, serving as an incentive for increased productivity and livelihood diversification – guaranteeing the security of farmers' livelihoods.[25] Thailand's School Lunch and School Milk Programmes have also embraced the HGSF model to some extent. While the School Lunch Programme lacks a clear-cut procurement arrangement, about 90% of perishable food stuffs used in preparing the meals are sourced from local farmers, with the remaining 10% sourced from urban areas.[26] The School Milk Programme, on the other hand, places emphasis on the need for beneficiary schools to purchase raw milk from local dairy cooperatives. Consequently, the dairy market quadrupled between the early 1990s and 2003.[27]

In African countries like Kenya, the need to integrate smallholder farmers to school feeding programmes is gaining traction. Through local School Management Committees, Kenya's Home-Grown School Feeding Programme makes food purchases from "local farmers,

10 Lowder, Skoet & Raney, 2016.
11 Annan & Dryden, 2015.
12 see Chamberlin, 2008; Aliber and Hall, 2012; WFP, 2015.
13 Chamberlin, 2007; Molini & Paci, 2015.
14 Chamberlin, 2007; ECASARD/SNV Ghana, 2009.
15 Chamberlin et al., 2007: unpaged.
16 Ibid.
17 Chamberlin, 2008.
18 FAO, IFAD & WFP, 2014.
19 Ghana Statistical Service, 2015.
20 WFP, 2015:25.
21 Downward et al., 2006 cited in Sabates-Wheeler, 2009.
22 Mitchell, 2011 cited in Coles, 2013:1.
23 Coles, 2013.
24 Soares et al., 2013.
25 Swensson, 2015; Soares et al., 2013; Sumberg & Sabates-Wheeler 2011; FAO, IFAD & WFP 2014.
26 Kanemasu, 2007.
27 Ibid.

cooperatives and traders".[28] In baseline study to examine smallholders' involvement in HGSF programmes across three countries, it was found that in Kenya, maize and beans purchased from smallholder farmers for school meals were 585.97 and 155.36 metric tons respectively, thus providing reliable markets for the maize and beans to producers in the 11 districts where the study was undertaken.[29]

Consequently, this study, draws on SNV's grain banks initiative in the Sissala East District to show how HGSF schemes are nourishing markets or otherwise for local farmers as the cases presented above sought to do. Second, cognizant of the fact that communities within the catchments of the five grain banks have been victims of chronic food insecurity in past, I attempt to explore the possible pathways by which farm income realised from GSFP market through the grain banks initiative to influence farm household food consumption.

3. Ghana School Feeding Programme and SNV's Grain Banks Initiative

The implementation of School Feeding Programmes dates back as far as the 1950s, where Catholic Relief Services, a Non-Governmental Organization, provided free nutritious lunch to pupils of some select Catholic administered schools in northern Ghana.[30] Over the decades, the WFP, alongside NGOs, such as World Vision, Adventist Development Relief Agency and the Netherlands Development Organization (SNV), have supported similar initiatives particularly in northern Ghana.

Realizing the leverage these programmes brought to school enrolments and hunger reduction amongst beneficiary schools, the Government of Ghana launched the Ghana School Feeding Programme in 2005 with a three-fold objective of increasing school enrolments levels, improving food security and reducing malnutrition as well as boosting local food production. The GSFP uses a home-grown concept, where pupils in public schools in poor areas are served "one hot, nutritious meal per day", using locally produced food crops.[31]

Even though currently the programme is not backed by any legislative instrument, a National School Feeding Policy was launched in 2016. The overall goal of the new policy is to have a "well- organized, decentralized intervention providing disadvantaged school children with nutritionally adequate, locally produced food thereby reducing poverty through improved household incomes and effective local economic development."[32]

Piloting with one primary school from each of the ten regions in Ghana, the GSFP today supports more than 1.7 million primary and kindergarten pupils across 216 districts.[33] The GSFP operates a caterer or decentralized outsourced system, where private caterers are contracted by Metropolitan, Municipal and District Assemblies through open tendering. The program is implemented by the GSFP National Secretariat with oversight supervision from the Ministry of Local Government and Rural Development.

In the Sissala East District, implementation of the GSFP rests with the District Implementation Committee, with a District Desk Officer overseeing the day-to-day of the programme. The programme started in 2006 with only three caterers catering for 849 pupils from three schools namely Pieng Primary School, Pina Primary School and Basissan Primary School.[34] As of 2017, all 56 primary schools are covered by the feeding scheme with just three new kindergartens pending inclusion. This makes Sissala East one of few districts in country with almost 100% coverage. A progress report in 2013 showed that some 17,914 pupils from 56 schools were benefiting from the school feeding. Currently, 63 caterers have been engaged by Sissala East District Assembly (SEDA) to prepare school meals for the 56 schools. Prior to the initiation of SNV's grain bank model in 2014, caterers engaged by SEDA purchased their foodstuffs especially grains mostly from the open market.[35]

Even in cases where some procurement was made, they were largely unorganized and irregular, especially in the communities where SNV's grain banks initiative operate now. The grain banks idea emerged as a food security response to disaster-prone communities in the Sissala East District. The grain banks which was an existing intervention by ActionAid was a food security ini-

28 Langinger, 2011: 34.
29 Commandeur, 2013.
30 WFP, 2007.
31 GoG, 2010: 7.
32 Ibid.
33 GSFP, 2014 cited in Drake et al., 2016.
34 Sissala East District Assembly, 2013.
35 SNV, 2015.

tiative that stocked food produce by farmers during the times of plenty and then during times of want (lean season), they release these back to the farmers. While initial objectives of ensuring "food security all year round at the household and community level in the beneficiary communities and to also ensure the small holder farmers' access to market" were realised to a large extent, the initiative became dormant few years into its implementation (SNV, 2015). This was the period when the challenge of food insecurity had been addressed.

Seeing this, SNV came in to revive the initiative but, this time, the focus was more on increasing the access of farmers in the communities and catchments to reliable markets with a specific focus on the Ghana School Feeding Programme. This version of the grain banks idea operates under the theme 'Procurement Governance for Home Grown School Feeding Programme' and is hinged on the need to provide sustainable market for poor farmers. It places emphasis on structured demand by leveraging institutional markets such as GSFP.

For a start, SNV provided a loan worth GHC 31,700.00 (equivalent to US$10,000) to be disbursed to the 5 Grain Banks for purchases from smallholder farmers.[36] Based on initial success recorded, SNV donated the loans to the grain banks with even an additional top-up of "GHC 103, 185 to the grain banks to leverage on their financial and logistical capacity to sustain their operations and even increase SHF share in the GSFP market."[37] As part of this support, SNV engaged the services of Action for Sustainable Development (ASUDEV), a local NGO operating in the district, to provide capacity building services and field oversight for the project.

As of 2016, the initiative has run for three farming cycles. In all, 25 GSFP caterers out of a total 62 in the district, feeding 6417 pupils, have signed contractual agreements to source grains (maize, beans and groundnut) from local farmers through the respective grain banks within their catchments of operation.[38] For now, the initiative is operational in schools within the 5 grain bank communities and its environs. Currently, 244 farmers are supplying food to the 5 grain banks. Of these, female farmers make up 47%. These banks are managed on a volunteer basis by the Grain Banks Committee (GBC), comprising of six members who are farmers and drawn from grain bank host communities and adjoining one.

4. Materials and methods

4.1. The study area

The Sissala East District is situated in the North-Eastern part of the Upper West region of Ghana with an estimated population of 61,499 and landmass of 4,744 sq km – making up about a quarter of the total landmass of the region. Tumu is the district capital and the largest settlement, followed by Sakai, Wellembelle, Nmanduanu and Nabulo.

The majority of the people depend on the agricultural sector for their livelihood. Nearly 95% of rural dwellers live-off farming while a little under 60% of urban dwellers farm for a living.[39] Major food crops produced are mainly grains such as millet, sorghum and maize, rice. Other food crops grown are roots and tubers, particularly yams and legumes, including groundnuts and beans. Even though the district is the food basket of the Upper West region, the Ghana Comprehensive Food Security and Vulnerability Analysis puts its food insecurity at 7%.[40] Meanwhile, about 47.3% of persons are poor.[41] For the purposes of this study, farm households interviewed were drawn mainly from the communities where SNV's five grain banks that are sited in: Sakai, Bujan, Banu, Kasana and Gwosi. In addition, farm households from adjoining communities such as Nanchalla and Tafiasi that supply food produce to the grain banks, were interviewed.

4.2. Sampling and data analysis

The study was conducted between December 2016 and February 2017, and adopted a case study approach. Case studies allow the researcher to critically examine a contemporary phenomenon in close relation to

36 See ASUDEV, 2016. Procurement Governance for Home-Grown Ghana School Feeding Project: A Report on Follow-Up Activities on Grain Bank Initiative in Sissala East.

37 Ibid.

38 Ibid.

39 Ghana Statistical Service, 2014.

40 WFP, 2012.

41 Ghana Statistical Service, 2015.

its surroundings.[42] Data was collected using a blend of quantitative and qualitative methods – questionnaires, semi-structured interviews and focus groups. Adopting Data was collected mainly from farmers supplying some or all of their food produce to SNV's five grain banks; grain banks committee members; GSFP caterers working in school within the catchments of the grain banks; school principals and officials from the Sissala East District Assembly, Ministry of Food and Agriculture, Ghana Education Service and ASUDEV.

Of the 244 farmers who supplied food produce to SNV's five grain banks in the last farming season, 120 were randomly sampled. Farmer lists were obtained from the records of each of the five grain bank committees and from these, farmers were selected at random. However, given the fact that some of the farmers were from the same household, the final sample size translated into 100 farm households. Eleven (11) GSFP caterers were interviewed and five (5) school principals. In addition, of the 100 household respondents, five were selected for in-depth interviews. In all, five focus groups were held with the grain banks committee. The quantitative data analysed using Stata version 14, where descriptive as well as inferential statistics such as correlations were used. Qualitative interviews were analysed by drawing themes from the various data sources.

5. Results and Discussion

5.1 Sourcing foodstuffs for school feeding

Given the fact the GSFP runs a caterer model, interviews were held with 44% of the 25 caterers signed unto the GSFP-Grain Banks procurement arrangement in the Sissala East District. All eleven caterers interviewed were female between the ages of 26 and 50 years, with each catering for 252 pupils on the average. Also, each caterer employed two additional cooks to assist in the preparation of meals. Based on the officially adopted school feeding menu in the district, two main categories of foods are procured by caterers: grains and vegetables/condiments. Vegetables procured by caterers included fresh tomatoes, pepper, okro, and other leafy vegetables. Main grains crops sourced by caterers include rice, maize, beans, soya beans and groundnut. Of these grains, demand for maize and rice was high, with each caterer buying on average 8.3 maxi bags[43] and 14.4 bags[44] per academic term[45] respectively. As shown in Table 1, these foodstuffs were sourced from varying sources.

Table 1: Sources of foodstuffs for GSFP in the Sissala East District (n=11)

Food Category	Response	Sources				
		Grain bank	Open Market	Direct purchase from farmer	Farmer-Based Organization	Own production
Grains	Yes	11	-	1	-	1
	No	-	11	10	11	10
	Total	**11**	**11**	**11**	**11**	**11**
Vegetables & condiments	Yes	-	11	1	-	-
	No	11	-	10	11	11
	Total	**11**	**11**	**11**	**11**	**11**
Average number of pupils catered for per caterer					252	
Average quantity of rice used per term per caterer					14.4 bags	
Average quantity of maize used per term per caterer					8.3 maxi bags	

Source: Field Survey, December 2016 – February, 2017.

From Table 1, grain banks, direct purchases from local farmers and own production were the sources of grains supply for caterers. In the case of vegetables and condiments, two sources were identified: open market and direct purchases from farmers. While caterers procured most of their vegetables and condiments from the open market, the majority of grains like maize, groundnut and beans were sourced from grain banks.

As per the grain banks-GSFP procurement arrangements, caterers first express their grains demand for the school year/term, and based on this, the grain banks buy the required quantities from local farmers from within

42 Flyvbjerg, 2011.

43 1 maxi bag of maize = 100kg.

44 1 bag of rice = 50kg.

45 This connotes 12-14 weeks spent in school at the basic level.

the local communities and adjoining ones. During one of FGDs in Sakai, the GBC intimated that "… our grain bank buy and pay instant cash to the farmers in the community." The purchases made by GBCs are then sold to caterers on credit basis and at a social price. By social price, GBCs sell to caterers at a price a little below the price of on the open market. Comparing this pricing model to what pertains on the open market; the Bujan GBC asserted: that "Our price and the local market price, there is difference. Let assume if we are buying a bag of maize at GHS60.00[46], we can decide to attach something small like GHS 5.00, in order to help us sell [the grains] faster."[47]

Thus, the social pricing mechanism adopted by the GBCs in a way incentivizes caterers to buy from local farmers through the grain banks. This arrangement is made possible by SNV's seed funding it supported the grain banks with, which allows them to pay instant cash to farmers and resell to caterers on credit basis. This arrangement, in part, lifts the burden of delayed payments by government off the caterer while allowing cash purchases from local farmers. It is therefore not surprising that all 11 caterers interviewed indicated that they were either satisfied or very satisfied with the grain bank arrangement. Commenting on the benefits caterers derive from the grain banks procurement arrangement, a caterer said:

> When the grain bank supports the caterer, what is left, even if you have GHC 1000 or GHC 2000, [I] buy the ingredients and manage without going to a business woman … and so the grain bank is even very good than the business woman. Like the grain bank they will give me [a bag of] maize at GHC 80, the business woman sells it to the [caterer] for GHC 100. Even with the GHC 100, if you are delaying, she will just decide to increase it to GHC 150…but with grain banks, when they sell [maize] to you at GHS 80.00, even after a year, you will still pay the same amount. (Fatima Mahama)[48]

Thus, with this arrangement, caterers do not have to pay interest even if they should go beyond their stipulated credit period for some months. Fatima Mahama was however quick to add that:

> While the grain banks are helping the school feeding programme, the delayed payment [by government] is not making the grain banks grow fast…imagine, as we speak, I owe the grain banks for about eight months. This is because government is yet to pay me for my services.

Indeed, the remaining 10 caterers interviewed also pointed out delayed payment as a major setback to their catering services for the school children. Florence Abutinga, for example, expressed her frustration about the situation, claiming that she has not been paid for two consecutive terms. She then asked rhetorically: "will government pay my arrears?" What is apparent is that even though caterers working with the grain banks are benefiting, delayed payment of food purchases made from grain banks has the tendency to stifle the operations of the grain banks. These claims were further corroborated by interview with an ASUDEV official. He said:

> The key challenge [facing the grain banks initiative] is late payment of loan by caterers. And that is a consequence of late payment of government subventions to the caterers. That's why they also pay late. And the fear is that … if it's time for them to purchase from the farmers and the caterers do not pay on time, it means they cannot buy to service the next season so that affects the cycle.[49]

For caterers who do not benefit from the grain banks grain banks arrangement, the impact of non-payment could be very harsh.

> Payment of caterers is not regular at all. You know if [the caterer] feeds the children for a whole term, they should be paid. That's the contractual agreement. But sometimes caterers are not paid for two terms yet they are expected to prepare meals for the children. How will they work? … Payment on the part of government has been very poor. This affects the programme because the women complain bitterly.[50]

5.2. Incentivizing farmers' access to GSFP market through Grain Banks: *To what extent?*

More than two-thirds of household respondents interviewed were males. Also, 72% of them have not had any formal education. The average household size was 6, the same as the district-level average.[51]

Crop farming constitutes the main livelihood activity of respondent households. All 100 households interviewed indicated crop farming as their primary

46 Local currency of Ghana (GHS). 1 US Dollar (US$) is equivalent to GH₵4.5 as of February, 2017.

47 FGD with Bujan Grain Bank Committee, Bujan, 1 February, 2017

48 Pseudonyms have been used for all quotations for farmers and caterers.

49 Interview with ASUDEV Official, Tumu, 30 January, 2017.

50 Interview with Sissala East District Assembly Official, Tumu, 2 February 2017

51 Ghana Statistical Service, 2014.

livelihood activity. Of these, 53% depended solely on crop farming. Of those who undertook other livelihoods in addition to crop farming, approximately half of them were engaged in livestock production. 89% of farm households interviewed cultivated maize as their main crop, followed by groundnut and yam, 9% and 2% respectively. In addition to these, beans and rice were amongst other crops households cultivated.

Based on contractual arrangements between GSFP caterer and the 5 grain banks, local farmers currently supply three main grains: maize, groundnut and beans. These crops were chosen because of their local availability and the fact that they remain the main food crops cultivated by farmers within the 5 grain bank communities and their catchments. Given the fact that the district school feeding menu is highly reliant on maize, the bulk of food produce supplied to caterers is maize.

On the average, each farm household interviewed sold about 9.3 maxi bags[52] of maize to the GSFP through the grain banks (see Table 2). For smallholder farmer households (SHFHs), average quantity of maize sold was 6.3 bags as compared to 10.9 bags for emerging as well as commercial farmers. While across the board, average quantity of groundnut sold to the GSFP caterers per farm household was 6.3 maxi bags, no significant differences were observed for averages for SHFHs and non-SHFHs, 6 bags and 6.5 bags respectively. Average beans sales per farm household were 2.9 bags[53] across the board. The majority of these households comprised emerging and big farm households.

Table 2: Summary indicators for the size of output market accessed by farm households

Indicator		**SHFHs**	**Non-SHFHs**	**Combined sample**
Average quantity of food produce sold per farm household to GSFP through grain banks	Maize	**6.3** bags (n=38)	**10.9** bags (n=61)	**9.3** bags (n=99)
	Groundnut	**6** bags (n=21)	**6.5** bags (n=28)	**6.3** bags (n=49)
	Beans	**1** bag (n=2)	**3.1** bags (n=15)	**2.9** bags (n=17)
Average annual farm income (in GHS)		**1,652** (n=38)	**4,452** (n=62)	**3,388** (n=100)
Average annual income realised from sales to GSFP through grain Banks (in GHS)		**709** (n=38)	**1,312** (n=62)	**1,083** (n=100)
Average share of GSFP sales of total farm income		**59.7%** (n=38)	**49.8%** (n=62)	**53.6%** (n=100)

Source: Field Survey, December 2016 – February, 2017.

Put together, average annual income realised from sales to GSFP through grain banks per farm household translates to GHS 1,083 (about US$ 246.14 equivalence). When disaggregated by farmer type, average annual income realised by SHFHs was GHS 709 (equivalent to US$157.56). This is about GHS 603 less than the average income non-SHFHs realised from selling their produce to the GSFP in the last farming season. These earnings from across the board make up more than half of total household farm income, about 54%. Average share of GSFP sales of total farm income was respectively 60% and 50% for SHFHs and non-SHFHs.

Clearly, the farm households on the average obtain more than half of their farm incomes from the GSFP--Grain Bank procurement arrangement. Interestingly, even though average earnings by SHFHs were smaller compared to non-SHFHs, average income SHFHs earn from accessing GSFP market makeup a greater pro-

52 1 maxi bag of maize is 100kg.

53 1 maxi bag of groundnut is 100kg.

portion of their average total farm income, about 10% more than that of non-SHFHs. This difference is quite significant considering the fact that more than half of the respondents live-off crop farming alone.

The findings above, thus, validate the assertion that home-grown school feeding approaches has the potential to offer ready market for local farmers' produce, thereby boosting their farm incomes.[54] In his view, these earnings can "… support [farmers] in their socio-economic welfare. They can use it to pay their ward's school fees; they can buy food ingredients, and procure health services."[55] By implication, additional income farmers earn from accessing the school feeding market can mean more than just paying school fees.

It is also important to note that for some farm households, the only output market that might accessible to them is the GSFP-Grain Bank procurement arrangement as one-fifth of farm households interviewed earned all their farm incomes by selling to the grain banks. This makes the GSFP-Grain Bank procurement arrangement an important output market for these farmers and their dependents. Thus, with this arrangement, "… the farmer's suffering is reduced."[56]

For example, at Bujan, Shila Iliasu, a farmer, intimated that '…ready market provided for our produce by the grain banks helps us to save the cost of transporting our produce to Tumu to sell'. At Banu, Adiza Mariama, a farmer, had this to say:

> When I'm to take my [maize] to the open market, I will be paid GHS 110 per bag, the car alone will take GHS 5.00. The loading boys will take GHS 2.00 to load and GHS 2.00 to off load it, council ticket is GHS 1.00. So with these expenses, I will end up with only GHS98.00 or GHS 97.00. But when I sell it to the grain bank here, I will take the same amount, GHS 110.00.

Speaking on the benefits of having the GSFP-Grain Bank procurement arrangement in their community, participants of FGD at Banu also remarked the following:

> At first the [caterer] used to buy the food from outside the community and bring. We don't know where the foodstuffs come from and you know food is something that if [one] does not know the source, it is not the best. So now, we produce it ourselves, they [caterers] buy it and cook it here and our own children take it. It is good. And we the farmers also get money from it and we don't have problem with selling our produce anymore… Before the grain banks will come, we used to sell 40 bowls of maize for a bag which translates to 120 kg. Meanwhile, on the market, a bag of maize should measure 100 kg. So the buyers used to cheat us 20kg more per bag of sales but with this grain bank arrangement, we don't face this challenge anymore.

Also, during FGD with GBC at Kasana, participants remarked that 'The convenience of receiving cash for our produce while sitting in our homes in itself is a great benefit from accessing the school feeding market'.

From the above findings, it becomes clear that home-grown school feeding arrangements can deliver benefits beyond increased markets and incomes. Not only do farmers save on transport cost by selling their produce locally, but it also brings them some convenience. It also affords them better prices than they would have been offered in the open market or by middlemen. Other times, the mere fact that their own food produce is used to prepare school meals for their children is in itself enough motivation for them to sell their produce to the grain banks. This benefit is more socio-cultural than economic and is more inclined to the concept of food sovereignty (see Tomlinson, 2007). Also, incomes earned can be used to boost household food and nutrition security.

5.3. Constructing food and nutritional security

Linking the grain banks initiative to the GSFP offers participating farm households multiple pathways by which they can boost their food and nutritional security. First, school children within the catchments of the five grain banks get to eat diverse, nutritious meals with foodstuffs produced by their own parents, particularly for grains. As shown in Table 3, of the 98 households interviewed, about 92% of them had at least a child benefiting from the school feeding programme. Clearly, this could add to the overall household food security especially for households with more than two children benefiting from school meals.

54 See Devereux et al., 2010; Morgan & Sonino, 2007; Sumberg & Sabates-Wheeler, 2011; FAO, IFAD & WFP, 2014

55 Interview with ASUDEV Official, Tumu, 30 January, 2017.

56 Interview with Sissala East District Assembly Official, Tumu, 2 February 2017.

Table 3: Summary of food security indicators

Indicator	Result
% of farm households with at least a child benefiting from school feeding	92 (n=98)
% of farm households who received food loans in last farming season	16.3 (n=98)
% of farm households who experienced improvement in food security now compared to last five years	62.1 (n=95)

Second, savings made by households whose children are benefiting from the GSFP could be used to procure condiments or other food items for preparing family meal for example.

The third pathway by which beneficiary households can construct food security is through food loans. Focus group discussions with the 5 GBCs revealed that beyond meeting grains demand for GSFP caterers, about 20% stock for maize especially are stored and given out as loans to farmers and other community members during the lean farming season. Owing to the fact that the research site and the Upper West region in general experiences single rainfall pattern, there is usually food shortage in the months of May, June and July. For these farmers, having access to such food loans helps them to cope during such seasons. For example, of the households interviewed, 16% indicated that they accessed food loans in the previous farming season. These loans are repaid by borrowers after harvesting their crops. It is therefore not surprising that FGDs conducted in Sakai, Bujan Banu, Gwosi and Kasana had GBC members pointing to the food loans as important benefit they derive from the operations of the grain banks.

The fourth channel by which it can improve household food security is incomes from accessing GSFP market. This can be two-fold: first, using income to access better, nutritious food which ordinarily may seem intractable for them to access economically. Second, income realised can also be reinvested into their farming business top boost food production. For example, "… money realized from selling to the grain bank brings a lot of respite to the family. It also helps in our farming… …"[57]

> … It [grain bank initiative] encourages food production in the area because when they farm they get market so they can produce enough, feed themselves and sell the surplus to the market. Previously, some crops like soya beans were not grown in this district on a large scale. But because of the ready market through the school feeding programme, which stipulates that soya beans be in the school meals daily, demand for the crop has shot up…This has triggered a certain drive for soya bean production across the district including some of the school feeding farmers.[58]

It is therefore not surprising that about 62% of households interviewed indicated that overall, they are able to meet their food needs now compared to last five years.

6. Conclusion

Adopting local procurement for school feeding programmes holds a strong place in bringing prosperity to smallholder as well emergent farmers. In rural settings where poor smallholder farmers have limited access to markets and constrained by remoteness and poor transport infrastructure, embedding such inclusive food procurement models into institutionalized markets like school feeding could be transformative. While the 'special powers' of this home- grown approach to school feeding has dominated the rural development, agriculture and social protection discourse in recent years, empirical evidence on how such a potential is manifesting on the livelihoods of local farmers and their dependents remains limited.

The current study thus, explored this trajectory, drawing on the GSFP and SNV's grain banks initiative in the Sissala East District of the Upper West region of Ghana. Results from the study have shown that indeed, involvement of local farmers in school feeding incentivises their access to ready and stable markets for their food produce, offers them better prices for their produce than what pertains on the open market and insulates them from transport costs and risks associated with travelling long distances to sell their produce. All of this culminates into higher incomes for them. As the study revealed, school feeding market accounted for about half of households' farm incomes. It is however im-

57 FGD with Bujan Grain Bank Committee, Bujan, 1 February, 2017.

58 Interview with Sissala East District Assembly Official, Tumu, 2 February 2017.

portant to note that these gains are not confined to only smallholders. Emergent as well as commercial farmers in these local communities equally access the school feeding market through the grain banks. For some farmers, the satisfaction they derive from using their own food produce for preparing schools for their children is enough motivation for them to sell to the grain banks.

The study has also highlighted the potential a food bank's approach to home-grown school feeding delivers on beneficiary farm households' food and nutrition security. First, farm households' children in public primary schools get to benefit from free nutritious meal. Second, farm households' whose children benefit from school meals can use their savings to access better food at the household level. Third, food loans advanced to farm households especially in times of food shortages can be an important coping strategy for poor and food insecure households. Fourth, incomes earned from farmers by accessing the school feeding market can be used to maximize food consumption or re-invested into their farming businesses.

Moreover, in countries like Ghana, where caterers contracted to prepare school meals have to contend with perennial payments delays for their services, home-grown school feeding initiatives like the grain banks bring some respite to them. Caterers get to buy foodstuffs at cheaper prices and on credit basis thanks to SNV's initial funding. This credit purchase arrangement between caterers and the grain banks to a large extent shields caterers from the frustrations of payment delays on the part of government. In the same breadth, failure on the part of caterers to pay back credit purchases timely resulting from delayed payments from government may threaten the sustainability of such schemes.

All of this presents policy and governance implications when designing and managing local procurement and school feeding initiatives. First, depending on the objectives that a particular home-grown school feeding interventions intends to achieve, a specific implementation structure, be it grain banks or farmer cooperatives, is an important precondition. As could be observed, the use of the grain banks approach delivers benefits beyond increased markets and incomes to include food loans to community members in times of food shortages. Such structures become useful in settings that are susceptible to food insecurity. Thus, context matters. Different home-grown schemes may work better in different geographical settings.

The second point relates to the important role government-NGO partnerships play in initiating effective and impactful home-grown school feeding schemes. Besides their technical support, NGOs can be vital sources of finance for setting up impactful home-grown school feeding schemes. Also crucial to the sustainability of home-grown school feeding schemes are delayed payments of caterers by governments. Such delays put heavy financial pressure on caterers who already struggle to buy foodstuffs on cash basis. This phenomenon has the tendency to affect caterers' ability to buy and pay farmers cash for their produce. Even in the case of the grain banks where caterers can buy on credit, failure on the part of caterers to timely pay back their credit purchases can result in the collapse of such schemes. It therefore becomes imperative that government pay caterers as stipulated so they, in turn, can sustain the home-grown school feeding scheme.

Moreover, the study has highlighted some critical issues that may require further research going forward. First, new research trajectory that focuses on exploring in detail the food and nutritional security impacts of farm households that participate in home-grown school feeding schemes like the grain bank becomes imperative. Again, this study has hinted how motivations for which farmers' access school feeding market can be socio-cultural than economic. Thus, investigating the factors drive local farmers to participate in institutionalized markets like school feeding can be useful in determining the extent of community participation in such schemes. Also, since the GSFP operates a caterer model, it may be interesting to investigate comparatively how such initiatives incentivise markets for local farmers under school feeding programmes that operate school model. Such a comparative study should help unpack key factors that underpin the home-grown element in school feeding and learn from the policy implications thereof.

Bibliographic References

Adelman, Sarah, Daniel Gilligan, and Kim Lehrer. How effective are food for education programs?: A critical assessment of the evidence from developing countries. Vol. 9. Intl Food Policy Res Inst, 2008.

Aliber, Michael, and Ruth Hall. "Support for smallholder farmers in South Africa: Challenges of scale and strategy." Development Southern Africa 29, no. 4 (2012): 548-562.

Annan, Kofi, and Sam Dryden. "Food and the Transformation of Africa: Getting Smallholders Connected." Foreign Aff. 94 (2015): 124.

ASUDEV. "Procurement Governance for Home-Grown Ghana School Feeding Project: A Report on Follow-Up Activities on Grain Bank Initiative in Sissala East" (2016).

Bundy, Donald AP. Rethinking school feeding: social safety nets, child development, and the education sector. World Bank Publications, 2009.

Bundy, Donald AP. Rethinking school health: a key component of education for all. World Bank Publications, 2011.

Chamberlin, J., Diao, X., Kolavalli, S. and Breisinger., C.,. "Smallholder Agriculture in Ghana. Ghana Strategy Support Program"-IFPRI Discussion Brief 3. IFPRI. 2007. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.226.5432&rep=rep1&type= pdf (Accessed 10 May 2015)

Chamberlin, Jordan. It's Small World After All: Defining Smallholder Agriculture in Ghana. Vol. 823. Intl Food Policy Res Inst, 2008. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.139.590&rep=rep1&type=p df (Accessed 10 May 2015)

Coles, Christopher. "What is known about the impact of structured demand activities on resilient food systems?." Overseas Development Institute, London, UK (2013). Available at: https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications- opinion-files/8618.pdfv (Accessed 13 April 2016)

Commandeur, D., "A Potential Market for Smallholder Farmers: School Feeding Programs: School Feeding Programmes & Their Challenges", Baseline 2012. USA, 2013.

De Carvalho, Francisco, Beattie Samuel Dom, M. Fiadzigbey, Sam Filer, Israel Kpekpena, Christine Lin, Daniel Lombardi et al. "Ghana School Feeding Program: Retooling for a Sustainable Future." Ghana: Partnership for Child Development and the Ministry of Local Government and Rural Development (2011).

Devereux, Stephen, Rachel Sabates-Wheeler, and A. Pascual Martínez. "Home-grown school feeding and social protection." Documento de trabajo 5 (2010).

Drake, Lesley, Alice Woolnough, Carmen Burbano, and Donald Bundy, eds. Global School Feeding Sourcebook: Lessons from 14 countries. World Scientific, 2016. Available at: http://documents.wfp.org/stellent/groups/public/documents/communications/wfp284904.pdf (Accessed 20 January 2017)

ECASARD/SNV Ghana. "Ghana School Feeding Programme (GSFP) Initiative and the Farmers Dream: A survey on the role of Farmer Based Organizations (FBOs) in the implementation of Ghana School Feeding Programme (GSFP) in Greater Accra Region" (2009). Available at: http://cleancookstoves.org/resources_files/ghana- school-feeding.pdf (Accessed on 15 May 2016).

FAO, IFAD, WFP. "The state of food insecurity in the world 2014: strengthening the enabling environment for food security and nutrition." FAO, Rome. (2014). Available at: http://www.fao.org/3/a-i4030e.pdf (Accessed on 19 January 2015)

Flyvbjerg, Bent. "Case study." The Sage handbook of qualitative research 4 (2011): 301-316. Gelli, Aulo, Edoardo Masset, Gloria Folson, Anthoni Kusi, Daniel K. Arhinful, Felix Asante, Irene Ayi et al. "Evaluation of alternative school feeding models on nutrition, education, agriculture and other social outcomes in Ghana: rationale, randomised

design and baseline data." Trials 17, no. 1 (2016): 37.

Ghana Statistical Service. "2010 Population & Housing Census: District Analytical Report – Sissala East District", Accra: (2014). Available at: http://www.statsghana.gov.gh/docfiles/2010_District_Report/Upper%20West/Sissala

%20East.pdf (Accessed on 20 January 2017)

Ghana Statistical Service. "Ghana Poverty Mapping Report." Accra: (2015). Available at: http://www.statsghana.gov.gh/docfiles/publications/POVERTY%20MAP%20FOR%20GHANA-05102015.pdf

Government of Ghana. "Ghana School Feeding Programme, 2010 Annual Operating Plan", Ministry of Local Government and Rural Development and Ministry of Education, Accra (2010).

Government of Ghana. "National School Feeding Policy". Minister for Gender, Children and Social Protection. 2016.

Jomaa, Lamis H., Elaine McDonnell, and Claudia Probart. "School feeding programs in developing countries: impacts on children's health and educational outcomes." Nutrition reviews 69, no. 2 (2011): 83-98.

Kanemasu, Y. "Thailand: a desk review of the school feeding programmes". World Food Programme. (2007). Available at: http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp207425.pdf

?_ga=1.246438724.1955371633.1486168309 (Accessed 11 May 2015)

Kiers, E. Toby, Roger RB Leakey, Anne-Marie Izac, Jack A. Heinemann, Erika Rosenthal, Dev Nathan, and Janice Jiggins. "Agriculture at a crossroads." SCIENCE-NEW YORK THEN WASHINGTON- 320, no. 5874 (2008): 320.

Langinger, Nica. "School feeding programs in Kenya: Transitioning to a homegrown approach." Stanford Journal of International Relations 13, no. 1 (2011): 30-37.

Lowder, Sarah K., Jakob Skoet, and Terri Raney. "The number, size, and distribution of farms, smallholder farms, and family farms worldwide." *World Development* 87 (2016): 16-29.

Masset, Edoardo, and Aulo Gelli. "Improving community development by linking agriculture, nutrition and education: design of a randomised trial of "home-grown" school feeding in Mali." Trials 14, no. 1 (2013): 55.

Miranda, A. Public food procurement from smallholder farmers: literature review and best Practices. International Policy Centre for Inclusive Growth (IPC-IG) Working Paper No. 176. (2018).

Molini, Vasco, and Pierella Paci. Poverty Reduction in Ghana—Progress and Challenges. No. 22733. The World Bank, 2015. Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/22732/K8485.pdf?sequence=5&isAllowed=y (Accessed 15 January 2017)

Morgan, Kevin, and Roberta Sonnino. "Empowering consumers: the creative procurement of school meals in Italy and the UK." International Journal of Consumer Studies 31, no. 1 (2007): 19-25.

Morgan, Kevin, and Roberta Sonnino. "Rethinking school food: the power of the public plate." State of the World (2010): 74.

Poulton, Colin, Andrew Dorward, and Jonathan Kydd. "The future of small farms: New directions for services, institutions, and intermediation." World Development 38, no. 10 (2010): 1413-1428.

Sabates-Wheeler, Rachel, and Stephen Devereux. "Transformative social protection: the currency of social justice." Social protection for the poor and poorest: Concepts, policies and politics (2008): 64-84.

Sabates-Wheeler, Rachel, Stephen Devereux, and Bruce Guenther. "Building synergies between social protection and smallholder agricultural policies." (2009). Available at: https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/2343/FAC_Workin g_Paper_006.pdf?sequence%253D1 (Accessed on 10 June 2016).

Sanchez, Pedro A., and Monkombu S. Swaminathan. "Cutting world hunger in half." Science 307, no. 5708 (2005): 357-359.

Sissala East District Assembly. "Report on Ghana School Feeding Programme (GSFP) in the Sissala East District". Tumu, (2013).

SNV. "Procurement Governance for Home Grown School Feeding Programme: Grain Banks Evaluation Draft Report", Accra: (2015).

Soares, Fábio Veras, Ryan Nehring, Rovane Battaglin Schwengber, Clarissa Guimarães Rodrigues, Guilherme Lambais, Daniel Silva Balaban, Cynthia Jones, and Andrea Galante. "Structured demand and smallholder farmers in Brazil: The case of PAA and PNAE." Brasilia: IPC/WFP (2013). Available at http://www.ipc- undp.org/pub/IPCTechnicalPaper7.pdf (accessed March 1 2017).

Sumberg, James, and Rachel Sabates-Wheeler. "Linking agricultural development to school feeding in sub-Saharan Africa: Theoretical perspectives." Food Policy 36, no. 3 (2011): 341-349.

Swensson, Luana F. Joppert. "Institutional procurement of food from smallholder farmers." Rome, FAO (2015). Available at: http://www.fao.org/3/a-bc569e.pdf (Accessed 12 September 2016)

Tomlinson, Mark. "School feeding in east and southern Africa: Improving food sovereignty or photo opportunity." Health Systems Research Unit, Medical Research Council. Equinet Discussion Paper 46 (2007). Available at: http://www.equinetafrica.org/sites/default/files/uploads/documents/DI-

S46nutTOMLI NSON.pdf (Accessed 11 March 2015)

Wiggins, Steve, and Sharada Keats. "Leaping and learning: linking smallholders to markets in Africa." London: Agriculture for Impact, Imperial College and Overseas Development Institute.(2013).Availableat: https://cgspace.cgiar.org/bitstream/handle/10568/35246/L%26L%20Link%20SF%20t o%20Mkt%20final%20May%202013.pdf?sequence=1&isAllowed=y (Accessed 9 February 2016)

World Food Programme. "Comprehensive Food Security and Vulnerability Analysis 2012: Focus on Northern Ghana." Accra: WFP. (2012).

World Food Programme. "Home-Grown School Feeding field case study". Ghana: WFP. (2007).Available-at: http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp207421.pdf?_ga=1.504451 61.1955371633.1486168309 (Accessed 2 June 2015)

World Food Programme. "P4P Purchase for Progress The Story: Connecting farmers to markets."Rome:WFP. (2015). Availableat: http://documents.wfp.org/stellent/groups/public/documents/communications/wfp2873 08.pdf?_ga=1.214127703.1955371633.14861 68309 (Accessed February 2016)

World Food Programme. "State of School Feeding 2013". Rome: WFP. (2013). Available at: http://documents.wfp.org/stellent/groups/public/documents/communications/wfp2574 81.pdf?_ga=1.20993275.19 55371633.1486168309 (Accessed 28 December 2015).

World Food Programme. Home-grown school feeding: A framework to link school feeding with local agricultural production. World Food Programme, 2009. Available at: http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp204291.pdf?_ga=1.60 390253.1955371633.1486168309 (11 December 2015)

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