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Transnational Large Scale Agricultural Firms in Gambella Regional State, Ethiopia: Local Potentials, Opportunities and Constraints for Market Linkage and Contractual Farming Schemes

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Table of Contents

Abstract.....	4
Acronyms.....	5
1 Introduction.....	6
1.1 Background and problem statement.....	6
1.2 Methodology and Concepts.....	6
1.3 Challenges and Limitations of the study.....	7
2TNCs, Market Opportunities and Enclaves Development.....	7
2.1 Transnational Corporations and Market Opportunities.....	7
2.2 The response for Enclaves development.....	8
2.3 Contract Farming (CF) and Transnational Land Acquisition (TNLA) - Ideological Debates.....	9
2.3.1 Contract Farming	9
2.3.2 CF and Transnational Land Acquisition.....	9
2.3.3 Contract Farming Models and Contract Arrangements.....	10
3TNLAs, Contract Farming, and Local potentials.....	12
3.1 The State of TNLAs in Gambella Region.....	12
3.2 TNCs and Contract Farming: Potentials, Constraints and Enabling Environment in Ethiopia.....	14
3.2.1 Domestic demand as a potential and/or opportunity for linkage?.....	14
3.2.2 Farmers Potential for CF and Labour Supply in the Region.....	16
3.2.3 Capacity of Local Institutions.....	17
3.2.4 Government Support, Physical and Social Environments.....	18
4 Current Status of the TNCs in Gambella and Market Opportunities Created.....	19
4.1 Current Status of the Projects.....	19
4.2 TNCs and Actual/Potential Market Opportunities.....	19

4.2.1 Saudi Star Project.....	19
4.2.1.1 Job Creation and Training.....	19
4.2.1.2 Other/non-employment linkages/potentials.....	20
4.2.2 Karuturi Plc.....	20
4.2.2.1 Job creation and Training.....	20
4.2.2.2 Other linkages/Non-labour linkages.....	21
4.3 Appraisal of Backward and Forward Linkages.....	21
5 Current Challenges Facing Contract Farming in Gambella.....	23
5.1 Challenges at the Local Level.....	23
5.2 Challenges with the Firms.....	23
5.3 Government - rules and regulations.....	25
6 Local Context and Alternatives for Linkage.....	25
6.1 Alternatives for Market Linkage- Contract Farming and Share Cropping.....	25
6.2 Nucleus and Multipartite Models.....	26
7 Conclusion.....	27
End notes.....	29
Reference.....	29

Abstract

Even though TNCs yield a huge potential in supporting the local economy, this opportunity is not realised yet. Concerns on weak market linkage with TNCs are not keenly explored in the literature, if weak linkages result from TNCs failure to utilise local market opportunities or if it is associated with weak local capacity with regard to labour availability, institutional capacity, market demand, and legal support. This study, based on annual import data, discovered that there is potential demand for TNCs products (particularly rice, palm oil, maize, sugar and wheat) to establish forward linkage. Hence, high foreign currency expenditure might be cut, if imports can be substituted by TNCs supply to local market. The government, however, seems to focus on acquiring foreign currency more than reducing its expenditure through local transaction with TNCs. On the other hand, local economy's capacity in providing inputs for TNCs is weak indicating challenge in backward linkage. Since the introduction of TNCs in Gambella, five years down the line, the most dominant and visible linkage happened in the form of labour [unskilled] employment. The volume of jobs created is insignificant compared to other countries standard. Thus far, due to poor performance of TNCs government's expectation of employment generation, infrastructure development, market linkage and foreign currency acquisition are not realised adequately; as a result, it regarded them as 'failed' projects. Absence of linkage with the local economy may lead to enclave development in the near future where there is limited market or economic benefit. Contract Farming (CF), if managed well, can be a viable means to enhance linkage with the local economy. However, there are considerable challenges to establish and facilitate CF in Gambella region. Undefined land tenure system in the region, less government emphasis on CF in low land areas, TNCs business interest and financial problems, quality of farmers products and lack of modern inputs, and limited experience in CF, among others, are the main current and future challenges. It is concluded that weak linkage happens from both corners due to: lack of TNCs realisation and interest of local potentials and inadequate local capabilities.

Acronyms

TNCs	Transnational Corporations
CF	Contract Farming
TNLA	Transnational Land Acquisition
WB	World Bank
FDRE	Federal Democratic Republic of Ethiopia
MoA	Ministry of Agriculture
NBE	National Bank of Egypt
CSA	Central Statistical Authority
EARI	Ethiopian Agricultural Research Institute
FAOSTAT	Food and Agricultural Organization Statistics
ILRI	International Livestock Research Institute
EEA	Ethiopian Economist Association
AISE	Agricultural Input Supply Enterprise
ICRA	Investment Information and Credit Rating Agency of India Limited
ADLI	Agricultural Development Led Industrialization
TVET	Technical and Vocational Education Training
IIRR	International Institute for Rice Research
HRW	Human Rights Watch
MoTI	Ministry of Trade and Industry

1 Introduction

1.1 Background and problem statement

Globalisation has accelerated economic integration and resource sharing across global borders. This phenomenon is exacerbated by limited availability of natural resources such as water and arable land. Companies are increasingly crossing borders in order to exploit comparative advantages of certain places and gain access to such scarce resources. Similarly, the recent global financial crisis and escalating food price have initiated a new trend of Transnational Land Acquisition (TLA) for outsourced food production. Africa became the new frontier for global food production. Up to 50m¹ hectares of land has either changed hands or is in the process of being sold in 2009 in Africa for 10 to 99 years (Vidal 2010). This trend is the highest compared to annual average expansion of agricultural land of less than four million hectares before 2008 (WB 2010:VI). Host countries mostly involved in this business in Africa are Ethiopia, Sudan, Kenya, Nigeria, Tanzania, Malawi, Congo, Zambia, Uganda, Madagascar, Zimbabwe, Mali, Sierra Leone, and Ghana (Cotula et. al, 2009).

Large-scale Land Acquisition/TNLA/ (also known as “land grabbing”²) is an emotive issue in the contemporary development discourse. The Ethiopian government has identified close to 3.5 million hectares of fertile agricultural land for investment purposes. Among others, investors from Saudi Arabia and India are mainly participating in agricultural investment in different parts of the country. Despite potential development opportunities (employment, guaranteed market outlets, revenue generation, technology transfer, investment in infrastructures and productivity rise), a major worry arises whether such aggressive TNLA creates local economic linkages and spill-overs. Except for unskilled labour employment, minimal linkages exist with the local economy, hitherto. Enclave’s formation is the next possible consequences of weak or no economic linkage with the local economy. If weak linkages result from the inability of TNCs to utilise local opportunities or is associated with lack of available market potential in the locality lacks research attention. Moreover, little has been understood and documented on the current status of investment projects, opportunities they created and associated challenges the face in formulating market linkages. Likewise, the potential of the local economy and the prevailing constraints to establish linkages (such as Contract Farming) with Transnational Corporations (TNCs) are not sufficiently addressed. With this background, the study which focuses on Saudi-Star Plc and Karuturi Plc has the following major objectives:

- To assess the potential of the national economy for market linkage and its constraints to form market linkages with TNCs in the study area.

- To review the current market opportunities and linkages TNCs created with the local economy in Gambella.
- To suggest feasible alternative contract farming models for market linkages, and
- To appraise government assumption for establishing CF in Gambella region.

1.2 Methodology and concepts

Land acquisition is taking place in different parts of Ethiopia; most significantly in Gambella region. Due to high concentration of TNCs and commencement of business operation, Gambella was selected as a case region. Karaturi Plc and Saudi-Star Company were considered due to their size, impact creation potential, information accessibility and operational status. Primary data sources were Ministry of Agriculture (MoA), Regional Government Investment Promotion offices, development agents in the region, community development organizations, local communities and farmers, corporation employees and managers, research institutions, and non-governmental organizations. Secondary sources such as Ethiopian Statistical Authority reports, land lease reports, farmland/landgrab websites, documentaries, research reports and others case documents were used. The study employed purely qualitative approaches including: interviews, document analysis, synthesis of land deal documents and case studies.

This research followed a three step approach. Firstly, it identified local actors, among others, smallholder farmers, farmer associations, co-operatives, small and large scale enterprises, and processing industries and then it studied their capacity and potential to form linkage with TNCs. After local market potentials are assessed; secondly, the current market linkages with TNCs were examined. This step is followed to observe if there exists a gap between local potential for linkages and actual linkages created. It led to the third step of evaluating policy and institutional frameworks that initiate, support or inhibit market linkages in the local economy in order to seek a probable explanation for the situation in the region and Ethiopia as a whole with regard to market linkage formation.

The two core concepts in this study are market potential and market linkage. Market potential with TNCs is the local economy’s potential to establish forward or backward linkages (including Contract Farming, Out-growers, share cropping etc...). It specifically examines the potential and capacity of the domestic market and actors (farmers, institutions, and enterprises) to engage in market linkage with TNCs. Likewise, farmers and enterprises potential for production for market and/or processing TNCs produce, employable skilled and unskilled labour supply, local demand for TNCs produce, suitable physical and social environments, and government support are assessed

as critical factors for linkage. The other core concept, market linkage, refers to production linkages which are also categorised as forward and backward linkage (refer section 2.1). Backward linkages were evaluated in terms of TNCs use of inputs such as labour, fertilizers, chemicals, pesticides, machinery, local transportation, energy, and other services from local sources. In relation to that, challenges to establish market linkages including CF and existing potentials were explored. Forward linkages were evaluated in terms of linkages TNCs established either for domestic supply for final consumption or for further processing with domestic industries. This paper, hence, is organised to assess potentials and opportunities for market linkages and put forward alternative strategies to develop the linkages within a supportive regulatory environment.

1.3 Challenges and limitations of the study

The major challenge for this research was lack of information/data. Being a thorny one, the issue of TNCs is highly politicised making access to data difficult. TNCs are also suffering from research fatigue and thus they were not ready to offer required information. The recent security threat in the study area had been an impediment to conduct field study; hence, data collection for this paper was limited to administration offices. It was also difficult to access and review documents such as TNCs marketing strategies and government evaluation reports of the farms which would be supportive to incorporate credible information on marketing plans, current status and government reactions. These, alongside partial operation of the case TNCs have made the study more speculative on future linkages. In addition, lack of updated rural unemployment survey, unsystematic records of crop imports and TNC's inefficiency (not fully operational) limited complete explanation of domestic labour supply, local demand for imported crops and interaction of the organisations with the local economy, respectively. In order to fill the gap, hence, the researcher deliberated on other reliable sources (MoA reports, company websites, land lease reports, and earlier research outputs).

2 TNCs, Market Opportunities and Enclaves Development

2.1 Transnational corporations and market opportunities

TNCs can create opportunities for the local economy through market linkages which can also be categorised as production and consumption linkages. Production linkages can be "backward" or "forward" linkages, also known by the terminology - up-stream and downstream linkages, respectively (Davis et. al 2002). Backward linkages indicate the demand for inputs to start or produce a new activity. TNCs in host countries can outsource some parts, components, indirect materials

and services from suppliers. These linkages may be for short or long-term inter-firm relations, and may be direct or through intermediaries (Tilman 2000: 3-4). The benefit of this type of linkage depends on the quantity and types of inputs supplied, procurement contracts, and willingness of TNCs to long-term transfer of technology.

Forward linkages arise when a new intermediate product for a market is provided. TNCs can develop three types of beneficial linkages: market outlets, linkage with industrial buyers and linkages with secondary processors (Tilman 2000: 4). TNCs which outsource the distribution of brand name products often make considerable investments in the performance of their marketing outlets. Linkages with industrial buyers also occur when TNCs producing machinery, equipment or other inputs offer after sales services. TNCs may also produce goods for secondary processing, mainly commodities, such as metal ores and agricultural raw materials. This type of linkages is considered, in this paper, so as to evaluate forward linkages with domestic processors. The I-O or Leontief model also explains this linkage processes across production sectors in national, regional or village economies. This model states that the larger the chains of elements in the linkages, the larger would be the corporations' potential to stimulate growth through creation of forward and backward linkages (Davis et al. 2002: 1-11).

TNCs also initiate common projects with indigenous/local enterprises like equity or non-equity linkages, joint ventures, licensing agreements and strategic alliances, which is called partnership linkage (Tilman 2000: 4). It can happen in two forms: host countries may influence foreign investors to take on local partners in joint ventures or to license technology to local firms; or voluntarily linkages may arise when both parties realise opportunity being in partnership business. It stimulates a healthy competition throughout the whole industry. This type of inter-firm linkages is a crucial source of transfer of technology – which is one of the Ethiopia's government expectations in hosting TNCs (Esayas, 2009). Demonstration effects and human capital spill-over are also the benefits which emanate from TNCs. Demonstration effect may happen as a spontaneous, even unconscious process or as a planned and systematic benchmarking exercise (Ibid: 7). Local entrepreneurs may imitate their products and management techniques or gain access to non-traditional markets by emulating TNCs. Human capital spill-over arise when corporations train personnel or if their experienced personnel moves to local firms or forms new spin-off companies.

Irrespective-of their potential in building the local economy, TNCs may not always trigger linkages with local actors - firms or farmers. Among other things, profit oriented nature of the business limits TNCs engagement on areas where they can only secure their comparative advantage. Past experiences also show that most TNCs that have been involved in agricultural production had little room for local linkages and transfer of technologies. The same way the opportunities reviewed, it is equally important to reveal risks associated with TNCs in

operating independently in the local economy. This phenomenon described as enclaves development in various literature, is discussed in the next session.

2.2 The response for Enclaves development

TNCs are not risk free. The current phenomenon of transnational land acquisition is criticised for limited local interaction and value to the economy in terms of job creation, foreign currency earning, infrastructure and economic linkages. The Enclaves development model describes absence of developmental benefits of TNCs that existed in history due to limited market and/or economic linkages with the local economy. Enclave development is a form of “development” where an industry is built around extracting and/or exporting unprocessed natural resources and raw materials such as ore or oil, with limited benefits to host countries economy in terms of linkages (Layman, 2006). As significant proportion of agricultural output is destined directly for exports, there was weak forward linkage effect with the local economy: especially, in agriculture and mining. The machinery, equipment, hardware, fuel, chemicals, etc were mostly imported and the output which required only elementary processing was almost entirely exported. Some processing in industries is performed; however, the value added to the agricultural products (milling of wheat, rice, coffee, etc) is small in relative to the value of the products itself. Since the production process in these industries involved only elementary or primary processing, and owing to the resultant semi-finished product nature of exports from this region, its increase by itself could not be taken as an index of industrial progress (Gallagher and Zarsky, 2000). Moreover, very little inter-dependence between these agro-processing industries existed. Owing to their low technological basis, there was very little scope for the development of local engineering or metal industries.

Similarly, mining corporations in the past reflect the situation of enclave development. In these corporations manufacturing and other activities that produce inputs for exploration of the resources were imported from abroad (Otto et al., 2006 in UNCTAD, 2007: 140). Linkages in the metal mining process require various processing and developing manufacturing activities. However, only little processing and manufacturing have occurred due to lack of institutional capacity of host countries. Particularly, developing countries do not have the capacity to enter into the smelting and refining stages of the value chain, which are capital-intensive and tend to have larger economies of scale (Mintek, 2007 in UNCTAD, 2007: 140). Knowledge intensive and high value adding service linkages with the local market was weak; only supplies of services for construction like transportation, catering and cleaning were only sourced to local market. Most of the technologies developed by these industries were beyond the development status of the host countries that it was difficult to harmonise and adopt technologies into local contexts.

In enclave economies, the main export sector is controlled by foreigners (Conning and Robinson, 2009). This type of venture has proven particularly attractive to foreign capital and many of the branch plants owned by foreign corporations specialised in this kind of operation. The benefits of foreign investment were confined to an international sector not connected to the wider local economy (Gallagher and Zarsky, 2007). This phenomenon shares similar features with the current wave transnational land acquisition in Ethiopia where TNCs export a significant proportion of their produce for exports market with limited processing that hampers opportunity for linkage. Moreover, skilled labour, machinery, equipment, hardware, fuel, chemicals, etc are mostly imported and the output with only elementary processing is for export market without further processing locally. Minimal linkage emanates due to limited local capacity or less involvement of local economic actors in the production process. This hypothetically ‘enclave formation’ is occurring via investment attraction in the agricultural sector (currently large scale land acquisition) with a particular objective of promoting development through Foreign Direct Investment (FDI). Government policy enhancing export market (e.g. through export processing zones), employment creation and FDI indirectly stimulate enclave formation. Various incentives provided for export market (including on import duties, exports commodities) make investment law lenient to this formation thus making local procurement unattractive (also in Ayelech and Helmsing, 2010: 41).

Green revolution, on the other hand, justifies a series of research, development and technology transfer initiatives that increased industrialised agricultural production has limited applicability to local contexts. The initiatives involved the development of high-yielding varieties (HYVs) of cereal grains (wheat, maize and rice), expansion of irrigation infrastructure, and distribution of hybrid seeds, synthetic fertilizers, and pesticides to farmers. The diffusion of these technologies in many parts of the world has brought significant change in the growth of agricultural production. However, there was a different level of adopting the technologies at different units of society and benefits registered also various in terms of farm size (Kuhnen, 1982: 73-77). Large farms were utilising the new opportunities and were more advantageous than small farmers. The problem with the inexperienced farmers was the inability to access the new technology (Pray, 1981). The experience from the revolution reveals the notion that only a certain strata would benefit from the introduction of new technologies. Hence, weak adaptability to the local contexts has brought less impact in developing countries.

The plantation economies or green revolution movement evidenced a missing link between large scale foreign farms, the local economy and small holder farmers. Economic linkage and technology transfer were not viable as small-holder farmers were missed from the picture. Similarly, small-holder farmers are assumed to be inefficient and hence are alienated from the export

market. Due to the enclosed nature of the current large-scale farms, credible economic opportunities are yet unrealised and the Ethiopian government expectations are unattained so far. Whether weak linkages result from weak local capacity or inability to absorb local opportunities will feature in Section 3 of this paper. Yet minimising the risk of enclosed formation/weak linkage demands a strong bond that aligns small-holder farmers with large-scale farms for a reasonably mutual benefit. Increasingly, Contract Farming [CF] is viewed as an alternative tool to link small-holder farmers with TNCs (Section 2.3). This paper also contends that, CF usually regarded as backward linkage can make local farmers active participant in the production process, if managed properly; either through sourcing out and/or supplying inputs for TNCs. CF is yet open for conflicting views; this paper reviews if there is local potentials for CF to fit in with large scale foreign farms. The following section discusses CF - its relevance, contemporary ideological debates and models of CF.

2.3 Contract Farming (CF) and transnational land acquisition (TNLA) - ideological debates

2.3.1 Contract farming

Contract farming or out growers scheme are broadly defined as binding arrangements through which a firm ensures its supply of agricultural products by individuals or groups of farmers. A central processing and exporting unit purchases the harvests of individual farmers, and the terms of the purchase are arranged through varied contracts (Glover and Kusterer 1990; Felgenhauer and Wolter 2008). Proweise (2012) puts a very straightforward definition - 'a firm lending inputs' — such as seed, fertilizer, credit or extension — to a farmer in exchange for exclusive purchasing rights over the specified crop'. We get a comprehensive definition from Little and Watts (1994) - 'forms of vertical coordination between growers and buyers-processors that directly shape production decisions through contractually specifying market obligations [by volume, value, quality, and, at times, advanced price determination]; provide specific inputs; and exercise some control at the point of production [i.e. a division of management functions between contractor and contractee]' (in Oya, 2012). This definition focuses on the coordinated trade relations between producers, processors and traders leading to a vertical integration of agricultural value chain. It is comprehensive by virtue and shows binding arrangements between two parties; this paper borrows this definition to signify CF throughout the paper. With financial support and technical advice provided by the sponsor, the contracting forms and terms may vary with contracts, and they usually contain the amount of supply to the contractor, the respective prices and quality standards attached to them (Section 2.3.3). Contracting shares the risk between the producer and contractor; while the farmer takes the risk of production, the contractor takes the risk of marketing. A variety of

arrangements exist which differ in each partner's input and system of management (refer Felgenhauer and Wolter, 2008).

2.3.2 CF and transnational land acquisition

CF has become a more absorbing issue and has gained major political support from developing countries especially as an alternative strategy to align with expansion of TNCs as a global phenomenon (Oya, 2012). The literature on TNLA is conquered by two ruling paradigms: those who have focused on the exploitive nature of land investments and see immense danger on the global rush and those who favour the liberal and pragmatic opinion (Desalegn, 2011), that see incredible opportunity for market outlet and commercialisation through CF. The proceeding session elucidates ideological contrast as a major framework for the debate based on remarkable review of Oya (2012).

The most evident ideological contrast lies on considering CF as a 'win-win' arrangement for contracting parties and a 'win-lose' arrangement against small farmers/producers who deem it as a means for global agribusiness to exploit peasants and their labour. Proponents of the win-win arrangement consider CF as an efficient mechanism for market failure and reaping mutual benefits. This approach essentially focuses on the gains that both parties reap: companies avoid direct involvement in production and labour supervision, while outgrowers access reliable markets, credit and technology that would be otherwise out of their reach. We find different schools of thoughts and international organisations under this category. Mainstream economists see CF in a contract theory framework as a simple economic bargaining which is favourable for both parties. New Institutional Economists (NIE), similarly, concentrate on a functionalist approach emphasising the role that institution plays for both parties, contractors and contractees, in a rather a historical fashion. There is no political drivers, power and class consideration as organising principles to understand CF's origin, development and outcomes for the contracting bodies (Grosh, 1994, in Oya, 2012). The interest here is in analysing the emergence, incentives and efficiency implications of CF as an institutional arrangement that seeks to resolve market failures. International institutions (FAO, World Bank etc.) also analyse the specific arrangements in CF and the relative bargaining power of growers and buyers mostly within a neoclassical NIE framework and frequently commits to 'win-win' interpretations of the CF relations. They argue that 'institutional innovations such as CF can reduce the transaction costs and risks of smallholders' (World Bank 2007, 237). Especially, during the period of structural adjustment, CF has gained international donor support which put it at the centre of mainstream policy agendas (e.g. DFID 2005; World Bank 2007, in Oya).

The opponents have ideological grounds that centre on the power relations between the two parties. A political economy and economic sociology groups (Little and Watts, 1994; Daviro and Gibbon, 2002, in Oya 2012) are schools contrasting mainstream economists view on CF. Oya's (2012) review on CF literature also shows pervasive focus on the relative bargaining power of the two contracting parties. Political economists look at CF more systemically and from a historical perspective, turning the issue of 'bargaining' into a question of unequal power relations and conflict. Also Neo-populist commonly, especially the 'Food First' school (Dinham and Hines, 1984) refers CF arrangement as a 'win-lose' interpretation considering the vulnerability and powerlessness of smallholders in the relation (Oya, 2012). These writers contest agribusiness penetration with cash crop specialisation at the expense of food security. This is boldly reflected in the recently emerging anti-'land grab' literature, while other recent researches, seems to suggest CF to make 'land acquisition' deals more 'pro-poor' (Cotula et al. 2009; World Bank 2010). The neo-classical neo-populist approach regards smallholders as poor rural agricultural producers, which if they are given the privilege as large-scale farmers (like access to inputs and credit facilities), they can perform with greater production efficiency. This speculation is based on the grounds of diseconomies of scale - inverse relationship between size and productivity. With respect to decision-making, research criticise CF since it displaces decision-making authority from the farmer to the downstream processor or distributor turning farmers into quasi-employees. Glover (1990), Glover and Kusterer (1990), Grosh (1994), Little (1994) researches shows that the bargaining power of smallholders depends much on the availability of alternative sources of livelihood that may provide a safety net against monopsony power of firms, in case the CF relation fail (in Oya, 2012). The policy manifestation of this debate lies in the drive to actively promote the expansion of CF schemes or not, and in the preferred 'forms' it should take in order to benefit smallholders. The focus then is on the sort of institutional arrangements that would smooth the CF relation and avoid some of the problems identified (such as side-selling, exit, bargaining power over grading and prices, loss of control over production process, access to finance, access to inputs etc.).

Rahmeto (2011) identifies a third line of argument that builds on the 'win-lose' paradigm. This view looks at the structural changes that large-scale land transfers bring in host countries, especially in the agricultural sector and the direction these changes will take in terms of class divisions and social polarization. Under the same paradigm, Borrás and Franco (2010) contend that 'global land grab' brings changes on land property relations favouring the (re)concentration of wealth and power in the hands of the dominant classes, especially landed groups, capitalists, corporate entities, state bureaucrats and village chiefs leading to dispossession and displacement of smallholders, indigenous peoples and the poor in general. This process called 'South Africanization' by Ruth Hall (2010) shows a structure

dominated by large, settler-type estates existing side by side with a host of impoverished small farms struggling to survive in the shadow of these estates (in Desalegn 2010).

Regardless of the above argument, in the CF literature more positive changes are observed in the assessment of CF. Recent studies widely asserted that CF schemes provide employment, good earnings, income stability, access to credit and spending linkages (Smalley, 2013). Moreover, recent econometric works, including Birtal *et al.* (2008), Bolwig *et al.* (2009), Miyata *et al.* (2009), Minten *et al.* (2009), Ramaswami *et al.* (2005), and Setboonsarng *et al.* (2008) show significantly higher incomes for contract growers than those not engaged in contracting (in Prowse, 2012: 25). Despite how risky contracting might appear, it has a potential to develop safe markets for both parties. Moreover, contracting with careful management has the potential to reap benefits to local farmers either through transfer of skills, management support, resource provision and secured market. Transnational Land Acquisition (TNLA), on one hand, is blooming in Ethiopia operating under long term deals (25-99 years). It is beyond the scope of this paper to appraise the logic of promoting TNLA, but their potential and possibility for linkage at the fore front of their existence. The Ethiopian government wishes to offer 3 million hectares of agricultural land (mostly in rural areas) for foreign investors which can be regarded as an opportunity to commercialise smallholder agriculture through CF scheme. CF has also gained a major political support to commercialise subsistence agriculture (FDRE Mol. 2001). However, both local potentials for linkage and CF scheme to stimulate commercial agriculture with the currently flourishing large scale farms are undervalued. Plus, there is no clear cut strategy or mechanism on the ground to link smallholder farming with TNCs. There are various CF schemes or models in the literature; yet not all are equally important or conducive to local conditions. The next major issue is what practical and alternative models are existent and apt to local conditions.

2.3.3 Contract farming models and contract arrangements

CF can be structured in a variety of ways depending on the crop, the objectives and resources of the sponsor and the experience of the farmers. Any crop or livestock product can theoretically be contracted out using any of the models; however, certain products favour specific approaches (Eaton and Shepherd 2001). Ermias and Akalu (2010:128-129), Melese (2010:12-13), Da Silva (2005) and Bijman (2008) provide five contractual farming models (also in Prowse 2012:10-22). These are the centralised model, the nucleus estate model, the multipartite model, the informal model and the intermediary model. Interestingly, Prowse (2012) reviewed 24 CF 'successful' cases and attempted to supplement the practise [the political environments and suitable crop nature] with a typology of contract-farming models, as incorporated below in the paragraphs. This evidence is used in

accordance with the applicable models in subsequent paragraphs.

The **centralised model** involves centralised processor and/or packer buying from a large number of small farmers. It is used for crops; both annual and perennial, poultry, dairy and other products that may require high degree of processing. It involves stringent quality requirement and quota allocation under vertical coordination of the agribusiness firm. The degree of involvement of the firm may range between minimal input provisions to control of most production aspects. This model is preferred when quality requirement of the agribusiness firm is too high and the market demand of ultimate consumers necessitates frequent change to the farm technology. In addition, the central estate is used as research and technology demonstration site. This model is usually used with resettlement schemes and involves provision of material inputs and management support. The difficulty with this model is the possibility of acquiring land because of various reasons. Centralised model can be used successfully in different countries context, including conflict-affected countries and fragile states. Hence, it does not require quality legal enforcement, regulatory and legal settings to perform well (Prowse 2012).

The **nucleus estate model** is a modification of the centralised model where the firm possesses its own central estate to secure its processing plant against irregular supplies. Nucleus-estate models tend to stick to crops with large variations in quality, a high-degree of perishability, technically difficult production, and a high value bulk ratio. Such arrangements do not appear suited to fair-trade or organic certification, and are often the preferred model for resettlement or transmigration programmes (Prowse 2012). Nucleus-estate initiatives can also be run successfully in many different country contexts, including conflict-affected countries and fragile states. The agribusiness owns the plantation besides contracting with independent farmers (Tiruwuha 2010). This appears like an appealing arrangement to the Ethiopian government to reap benefits like transfer of knowledge and skill from large scale agricultural firms. However, the literature is less descriptive on the applicability of this model on less value bulk ratio crops like corn, rice, palm oil, wheat and others. Section 6 reviewed this model in detail.

Under **multipartite model** (also called tri-patriate model), parties other than the farmer and the agribusiness firm are involved in realising the contractual farming. Usually these parties are public or private institutions

Table 1: Characteristic of CF Structures (summary)

STRUCTURE-MODEL	SPONSORS	GENERAL CHARACTERISTICS
Centralised	Private corporate sector State development agencies	Directed contract farming. Popular in many developing countries for high-value crops. Commitment to provide material and management inputs to farmers.
Nucleus estate	State development agencies Private/public plantations Private corporate sector	Directed contract farming. Recommended for tree crops, e.g. oil palm, where technical transfer through demonstration is required. Popular for resettlement schemes. Commitment to provide material and management inputs to farms.
Multipartite	Sponsorship by various organisations, e.g. <ul style="list-style-type: none"> • State development agencies • State marketing authorities • Private corporate sector • Landowners • Farmer cooperatives 	Common joint-venture approach. Unless excellent coordination between sponsors, internal management difficulties likely. Usually, contract commitment to provide material and management inputs to farmers.
Informal developer	Entrepreneurs Small companies Farmer cooperatives	Not usually directed farming. Common for short-term crops; i.e. fresh vegetables to wholesalers or supermarkets. Normally minimal processing and few inputs to farmers. Contracts on an informal registration or verbal basis. Transitory in nature.
Intermediary (tripartite)	Private corporate sector State development agencies	Sponsors are usually from the private sector. Sponsor control of material and technical inputs varies widely. At times sponsors are unaware of the practice when illegally carried out by large-scale farmers. Can have negative consequences.

Source: Eaton and Shepherd 2001

and they may assist in extension service provision, provision of credit, input supply etc. Mostly it involves dealing with farmers' organisations like cooperatives and joint ventures between government and private sector (Melese 2010). It requires government research and extension service. Tripartite models take the form of a public-private partnership and tend to focus on crops with a national significance. This model focuses on products with lower variations in quality, perishability and value-bulk ratios than the previous models (Prowse 2012). See Section 6 for detailed analysis.

The **informal model** applies to small-scale firms which make informal contract with farmers on seasonal basis without involvement of other parties. Informal contracts have a great risk of extra-contractual marketing. As the operational structure of projects changes over time, the distinctions between the centralised model and the informal model are sometimes blurred (Eaton and Shepherd 2001). Successful individual informal developers may expand their operations into activities that eventually evolve into the centralised category. Compared to the above models, the informal model has limited resources for strong vertical coordination and hence its success usually depends on the support provided by the government or other service providers (Melese 2010). Material and technical input provision is commonly limited to seeds and basic fertilizers, grading and quality control. It may also include trader-farmer arrangements whereby the trader buys up (part of) the farmers' harvest before the actual harvest has taken place. This arrangement comes down to the trader providing credit to the farmer with the farmer repaying the credit in crops harvested. The interest rate of this credit is included in the price that is agreed on. This price is therefore usually substantially lower than the market price (Ibid). Practically, this model appears to be best-suited to fruit and vegetable crops that require minimal processing, or which are processed on the farm, have limited variations in quality and rely on standard production techniques (Prowse 2012).

Under the **intermediary model** the firm sub contracts with intermediate agents who collect and deliver the desired agricultural products to it. These agents could be farmers' cooperatives or other private operators. This model is suited to staple food crops, and can be run successfully in many different contexts like others. It may be particularly suitable for challenging contract-enforcement contexts. Outsourcing the interaction with farmers allows smaller firms to use this approach. A limited range of inputs are provided, and this model appears popular for production requiring fair-trade and organic certification (Ibid). In this model, because of the absence of strong linkages with farmers, buyers run the risk of losing control over quality, quantity and price. For similar reasons, farmers within this intermediary model hardly avoid market uncertainties. The structure of the models along with their peculiar characteristics is summarised in table 1.

The above models can work under the three contractual arrangements (Abwino and Reiks, 2006)

mentioned previously: market specifying contracts, resources providing contracts and management and income guaranteeing contracts (Rehber 1998). The market provision arrangement is when the farmer and the firm agree on terms and conditions for the future sale and purchase of the produce. Market specifying contracts denote pre-harvest agreement that binds the parties on timing, quality and volume requirements and price and payment arrangements. In resource provision contracts, in addition to the marketing arrangement, the buyer/contractor agrees to supply selected inputs, including on occasions of land preparation and technical advice. Usually the resources are the variety to be produced, fertilizer, agrochemicals, handling materials, credit etc. Under management and income guaranteeing contracts the contracts agree to produce the desired agricultural produce precisely following particular technical and managerial prescription given to them by the integrator. As such, the grower agrees to follow recommended production methods, input regimes, and cultivation and harvesting specifications. It usually includes specification of market specifying contract and may not include resource providing contracts. The firm guarantees advance payments required to undertake the prescription it gives. On the other hand, market and price risks are transferred from farmers to the agribusiness firm (Ibid). The intensity of the contractual arrangements varies according to the depth and complexity of the provisions.

Selection of the above models and the respective contractual agreements depends on several factors including the feature of the commodity to be produced and the firm's capacity, farmers' production experience and negotiation capacity, land availability, institutional structures and legal framework. The nucleus estates model is preferable (Ermias and Akalu 2010, Melese 2010) since it can serve as a hub of excellence and technological innovation if effective local institutions are established to acclimatise the diffusion of technologies to the local context. Combining nucleus and multipartite models with management and income guarantying contracts also provide a situation where the support from government and other stakeholders facilitates further developmental linkages which in turn lead to transfer of managerial and technical knowledge for improved production. Based on the evidences of local potentials and/or capacities, and also taking into account the political environment for CF in Ethiopia, Section 6.2 recommends the effectiveness of combining Nucleus and Multipartite models for harmony and mutual benefits.

3 TNLAs, Contract Farming, and Local potentials

3.1 The state of TNLAs in Gambella region

In Gambella region, there are eight Indian companies that begun operations among which Karuturi, BHO Agro Plc, Ruchi Group and Saber Plc have started large scale

operation (MoA 2012). Ministry of Agriculture (MoA) has provided 27,000 hectares of land to BHO Agro Plc to grow edible oil crops. Ruchi Group, the second Indian firm has started cultivating soya bean on its allotted 25,000 hectares of land. In 2008, Karuturi became the first Indian company to lease 300,000³ hectares of land (to be provided after full cultivation), for the production of palm, cereals, rice and sugar cane. Several companies and governments have so far made land deals with the central government which is not stated in the official land provision documents. Saudi Star Plc, a Saudi based corporation owned by Al-Amoudi has been given 10,000 hectares of land in Akobo area which is expected to expand to 129,000 ha⁴ of land after few years. Another Al-Amoudi company, Horizon Ethiopia, was vying for 100,000 hectares where it wants to cultivate oil palms (Indian Ocean Newsletter 2010). The region has an estimated area of 2,580,201 hectares, and population density of 9.57 people per square kilometre (CSA 2007).

Merely taking into account the above figures, close to 30 percent of the total land area are either delivered or identified for agricultural investment purposes. This number is highly significant as most of the investors are situated and interested in producing on already fertile lands. Moreover, around 40% of the community in the region constitute pastoralists and that might inhibit movement especially in areas where agricultural development takes place.

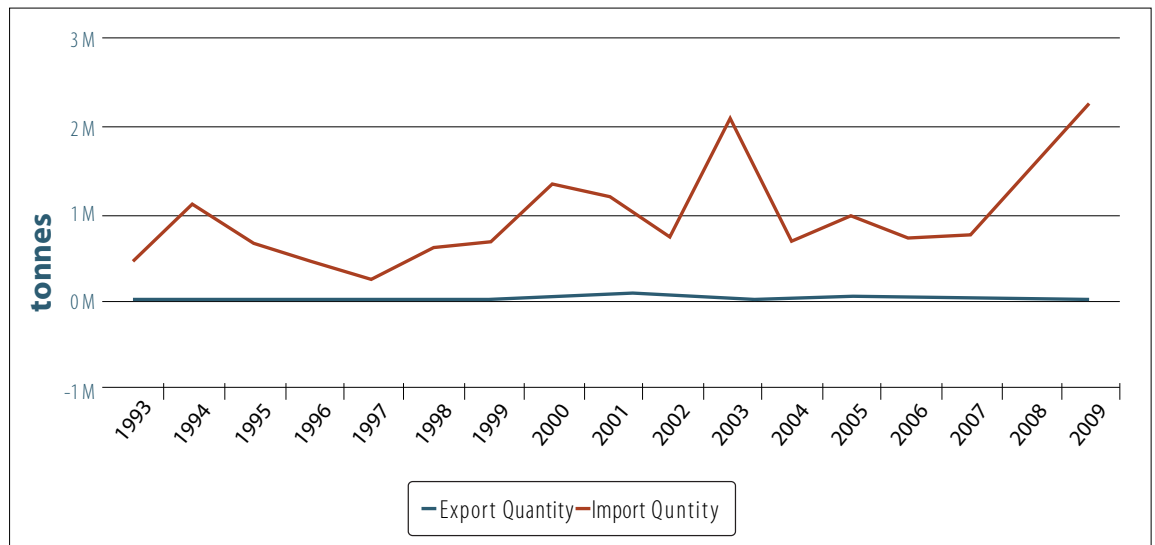
The main interest of large scale firms in Gambella region is to grow high value export commodities (including cash crops) such as rice, soya beans, cotton, sugar and tea (table 2). Palm-oil and other pulses are also attracting a good deal of interest. Some investors are currently growing maize as a second or third crop but this is largely for bio-fuel purposes rather than as food for the local market (Desalegn 2012). Except for two companies, all other investors have a lease period of 50 years, and

Table 2: Official Land Leased to Investors in Gambella Region (MoA, 2012)

Investor Name/ Company Name	Nationality	Region	Investment Type	Land Transfer	Capital registered	Land Rent	Agreement
				Area of Ha	/Mill Birr/	Per Year (Birr)	Signed Date/G.C
Ruchi	Indian	Gambella	Soya bean	25000	1451	2,775,000.00	27-Jul-2009
BHO	Indian	Gambella	Edible Oil Crops	27000	918	2,997,000.00	03-Sep-2009
Sannati	Indian	Gambella	Rice	10000	160	1,580,000.00	24-Jan-2010
Verdanta	Indian	Gambella	Tea	3012	631	334,332.00	13-Aug-2009
Karuturi Agro Products PLC	Indian	Gambella	Palm, Cereals, Rice & Sugar Cane	100000	2110	2,000,000.00	26-Feb-2010
Saudi Star Agricultural Development	Saudi	Gambella	Rice	10000	37640	300,000.00	22-Feb-2010
Toren Agro Industries Plc	Turkey	Gambella	Cotton and Soya bean				
Huana Dafengyuan Agriculture	China	Gambella	Sugar cane Cane	25000	2973	3,950,000.00	05-Nov-2009
Saber Farm PLC	Indian	Gambella	Cotton & Soya bean	25000	436	3,950,000.00	02-Sept-2010
Green Valley Agro Plc	Indian	Gambella	Cotton Farming & Related Activities	5000	171	555000	25-Jan-2012
JVL Overseas Pvt Ltd	Indian	Gambella	Cotton Farming and Related Activity	5000	74	790000	25-June-2012

Source: MoA (2012) <http://www.moa.gov.et/node/150>, Accessed on Feb. 24/2013

Figure 1. Import and export data on cereals (1993 -2009)



Source: FAOSTAT (2012)

almost all have been committed to pay a rental fee of 30 to 35 *Birr* [less than two USD] per hectare per year [depending on the use of irrigation water]. All investment projects, small or large, require securing access to sources of water for irrigation without which many of them will not be sustainable. The government announced that it offers at least 3 million hectares of fertile land and still showing interest to provide more of its most fertile lands to foreign and local investors. MoA emphasises the fertility and abundance of land in Ethiopia stating that from approximately 74 million hectares of fertile land only 15 percent is under cultivation at the moment. TNLA is taking place in parts of the region where agriculture is practiced as a major livelihood which may be the basis for CF to happen.

3.2 TNCs and contract farming: potentials, constraints and enabling environment in Ethiopia

Different writers suggest common grounds for establishing effective market linkages. Abwino and Rieks (2006:6-7) set three principal conditions for initiating linkages in the form of CF: a profitable market, suitable physical and social environments, and concerted government support. The firm and farmers/cooperatives must have an identified sustainable profitable market and potential returns on long term basis. Equally, the physical environment for specific plant genotype including the topography, climate, soil fertility, water availability and location of out-growers are essential elements of production. In addition, sufficient utilities and communications must be available, like feeder roads and for agro-processing water and electricity. Contracted farmers require unrestricted access to the land they farm; there must be available land and secured tenure system. Other key ingredients for success are a long-term business interest and the development of mutual

trust (Felgenhauer and Wolter 2008). Appropriate legal frameworks [legal agreements], government rules and regulations also capture the conditions that play a big role in both parties. These legal agreements should be backed up by appropriate laws and an efficient legal system. Services such as research and extension, and provision of available infrastructure in the out-grower area are also among the primary tasks. In all the circumstances, governments should be aware of the possible unintended consequences of the rules and regulations, and avoid overregulation (Eaton and Shepherd 2001).

These preconditions were contextualised to assess local potentials in the coming session. Domestic demand [as profitable market], farmers' potential and labour supply, local institutions capacity, and government support, physical and social environments were used as a framework to evaluate potentials for linkage. Since data in these areas is very limited, the analysis engaged with major issues relevant to the discussion of each subject.

3.2.1 Domestic demand as a potential and/or opportunity for linkage?

There exists a misconception that local markets are narrow for TNCs produce since there is sufficient production for local markets from local sources; and as a result, large scale agricultural investment creates more national value in acquiring foreign currency through exports. There is, however, a growing local demand for consumption for the main crops. Ethiopia is a perpetually food deficient country and local demands are more often met by imports of large volumes of cereals (See Figure 2). The government spends millions of dollars every year in importing crops such as maize, and wheat and also for crops [like rice, palm oil, sugar] which are being produced by most of the TNCs. Since 2008 the Ethiopian government prohibited export of food crops

due to high food deficit in the country and escalating local price compared to export prices. The controversy lies in the fact that though there exists adequate local demand for TNCs products, the government is spending millions of dollars to import standard quality cereals yet claiming foreign currency as a major concern for the country. Research outputs (including Tom, 2009; Adil, 2010) also assert foreign currency as a major factor for attracting TNCs. This then raises the questions as to why the government is contradicting itself or is the 'blind eye to the situation' functional to some parties.

Figure 1 shows stagnant nature of cereals exports in Ethiopia compared to its imports from 1993 -2009. Ceteris paribus, taking into account crops [Maize, Rice, Palm-oil] being produced by the TNCs and import trends of these crops, it is evident to realise that local demands for these crops is increasing from time to time [Refer the next paragraphs]. Increased imports indicated that there is high national demand. Unusually, imports shoot up since 2007/2008 associated with world economic crisis, booming food prices and associated blooming of TNCs.

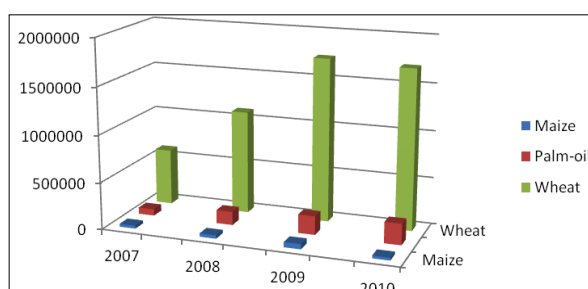
Due to domestic demand rise, imports of maize, rice, palm-oil and wheat have increased considerably since 2007. Maize, one of the staple foods especially in Western and Southern Ethiopia, has remained a major concern. Though export of maize to other countries ceased since 2008, there is a rising annual import that totals 62,681,000 USD. Rice is also among the target commodities that have received due emphasis in agricultural production. Though there is an increased level of production, there is also a considerably high domestic demand for imports. It is a dominant food in Somali, Afar and Harar regions in Ethiopia. Rice import trend shows an increase from 1999 -2009 (MoA 2012). Recently, the use of rice for making *Injera* [mixing it with *Teff*], bread and cookies [mixing it with wheat], *Areke* and *Tela* [local alcoholic drink], and other edible products has risen its local demand. EARI's (2012) report also confirms import of 800 – 900 million quintals of rice every year. Similarly, the annual palm oil consumption has almost doubled every year since 2006 (FAOSTAT 2012). Domestic manufacturers only fulfil 20 percent of the national demand, leaving the balance to be

met by imports (PPESA 2012). In 2011/12, national edible oil consumption reached 285, 210 tonnes, of which 265, 000 tonnes was imported. The government had imported 16,000 tonnes of palm oil per month for a year, which rose to 25,000 tonnes since May 2012. On average the government spends foreign currency amounting to 7.35 million USD, on a yearly basis for palm-oil imports.

On the other hand, cereals like wheat have vast demands (See the Graph and Table above) yet TNCs involvement in crops that have high national demand is negligible so far. TNCs centre on cash crops for either home countries or external market with considerable profit. Except for the Djibouti government's production in Bale Zone (on 4500 ha of land) for own purposes, other TNCs have not started producing wheat. Over two thirds of factories requirement for production of malt and pasta is met by consistent imports (Ermias and Akalu 2010). Moreover, the Ethiopian government frequently issues international bidding for European bidders to buy wheat every year. Within two months 140,000 tonnes of Russian origin wheat was imported from Europe for the country's strategic reserves (Daily Monitor 15 May 2012). Imports can be substituted if TNCs are willing (compelled) to engage and supply for domestic market.

As the second most populous country in Africa, Ethiopia is thus potentially one of the largest domestic markets in the continent (EIG 2012). There is sufficient data to assume adequate domestic demand for TNCs produce. TNCs can supply part of their produce to the local market with relatively less transaction cost than to external markets. The price that local consumers offer might be less attractive to TNCs; yet it is possible to segregate their market and products to meet local demands. However, TNCs' primary target is foreign market; so far they have not shown interest to local market. Saudi Star, for example, produces first grade rice to Saudi market; yet other standard varieties can be affordable if produced for local consumption. On the other hand, if the government is able to bid for crops in international markets, it can possibly be a potential customer for TNCs too. Moreover, high foreign currency expenditure will be reduced if imports can be substituted

Figure 2. Import of Maize, Palm-oil and Wheat from 2007- 2010



Source: Compiled data from FAOSTAT

Year	Item (Tonnes)			Total Value (1000\$)
	Maize	Palm-Oil	Wheat	
2007	31912	69585	600238	272693
2008	36050	142650	1100050	1156766
2009	54466	198421	1735594	276219
2010	29222	224161	1698234	705778

by local transaction with TNCs. The government, however, focused in acquiring more foreign currency to meet its demands than using this as a means to reduce its expenditure. Simultaneously, local demands can be fulfilled, by establishing a system to acquire TNCs products for local markets and also supporting them to engage in produces which have a high local demand.

Hitherto, however, there is neither restriction/obligation, nor incentive is provided for TNCs to supply for domestic market. Where there is rewarding incentive for investment and export market, no incentive is provided for investors who may be willing to engage in market linkage. Moreover, the contracts signed never state provisions for local linkage or consumption. In this respect, the government's negotiation power is swallowed by the 'friendly investment climate' it wants to establish to attract investment.

3.2.2 *Farmers potential for CF and labour supply in the region*

Reflections from research institutions (EARI 2012) and farmers' extension officers (in MoA) depict there is adaptable potential and resources for linkages with TNCs in the Gambella region. The region has previous exposure in producing rice, sorghum, maize, and peanut in a traditional way (EARI 2012). Yet from the discussion with MoA authorities, there is an overriding assumption that farmers' capacity is a prerequisite for linkage especially for CF. And hence, farmers' traditional production behaviour does not align with TNCs quality requirement in the region. Similarly, the Gambella Investment Office's impression is that farmers are "*willing and have the potential to do so, yet they need support and updated knowledge on increasing productivity*". In terms of production capacity and experience, there is a general consensus that there is local knowledge though it needs to be shaped with the demands of TNCs. However, the fact that MoA responds to farmers' potential as a prerequisite for linkage has made it less proactive to facilitate CF in the region. An interesting discourse that goes with this theme is if farmers' capacity should be a pre-requisite for market linkage/CF or an outcome of it. Farmers' capacity can be a precondition or an outcome and this highly depends on the contractual arrangement between the parties. As mentioned earlier, some firms provide market and/or resource without technical assistance (Section 2.3.3). Some firms in return provide technical assistance as part of the agreement; in this case, farmers' capacity will be an asset than merely a requirement.

Labour supply is another fundamental concern to evaluate local potentials for availability and employability in TNCs. The government has made a huge investment in establishing agricultural colleges and institutions and has trained tens of thousands middle and high level agricultural professionals to help develop the skill/practices of farmers and uptake of better and proven productive technologies. Although those agricultural institutions have made contribution to the agricultural labour force, the number of graduates from higher

agricultural institutions is still minimal compared with the country's demand for qualified professionals on the field (ILRI 2009) and current demands of TNCs. Especially, with the newly introduced crops there is a huge gap in local expertise (MoA 2012). Interview results with Saudi Star Official shows the company recruited experts from abroad since there is shortage of local expertise in the field. This is the perception that also prevails in most of the investors in other regions.

Unskilled/daily labourer, on the other hand, is potentially existent in the country, yet it is seasonal [See Figure 3]. Responses from firms in all regions indicate that casual labour availability is a constraint particularly at weeding and harvest time (Robinson et al. 2012). There is relative difference in labour availability among regions. Investors in Oromia, Amhara and Tigray regions showed moderately less difficulties for daily labourers than in other regions. While companies acknowledge labour [wage] and land as very cheap, a huge proportion of them in Gambella region mentioned labour are very difficult almost at all levels of production [especially in harvesting and weeding seasons]. Some companies in the region are forced to look for immigrant labour from Jimma and Wolaita Soddo areas due to limited participation or unavailability of local labour. Local communities respond that there is an exclusionary employment benefit that deliberately targets people from other parts of the country. Robinson et al. (2012) claims this might be associated with security issues disturbing labour recruitment in the region. Local restrictions in Benishangule-Gumuz are presently influencing labour mobility, yet this kind of interventions prioritises local community's benefit in the investment projects. Unidentified group of the communities in Gambella region continuously manifest their dissatisfaction on TNCs in several ways. There were security challenges and unrest in the region threatening operation of TNCs. These coupled with sparsely populated nature of the community and the work culture of the local people may hamper labour participation of the locals.

It needs strong evidence to culminate the issue of farmers' potential and labour supply in the country, as data shortage is the major hindrance of the study. As a result of weak farmer's potential and companies' business interest, CF has only limited experience in the region so far and it is also practised on few crops elsewhere in Ethiopia. Traditional farming practise, being the major drawback for linkage, can be moulded to meet the expectations of TNCs through short-term trainings and demonstration events. Local farmers and/or institutions can learn from a system that draws together, customises and disseminates new knowledge and skills gained from TNCs. On the other hand, TNCs can maximise the local communities' involvement in the production process through establishing a demonstration site in the farm and providing practical trainings. Moreover, involving communities' in the land appropriation and production process, enabling TNCs to fulfil their promises to the community, providing updated trainings and adequate/standard wage will build their initiation and employability of the locals.

3.2.3 Capacity of local institutions

Local institutions capacity is regarded as the capacity of any domestic private or government organisation to provide inputs and infrastructure for production (electricity, telephone, water, manpower, machineries, agricultural instruments, fertiliser, seeds, pesticides, chemicals, and irrigation waters) and/or to engage in any kind of partnership/linkage arrangement with TNCs. Measuring the capacity of local institutions in the input provision business needs a meticulous and country wide survey. Hence, this paper indirectly reviewed infrastructural and input provision capacities of local government institutions through service delivery problems TNCs face in the production process. While this may not be directly related with the capacity of the institutions, it still hints on shortcomings on service conditions in the region.

The major provider of inputs and technical support for the agricultural sector is a public system in Ethiopia. Moreover, agricultural input markets, agricultural extension, research and technology have been the mandate of the government (EEA 2011). However, due to limited capacity of supplying inputs and agricultural extension services, research and agricultural extension programs have been given on specific crops. Similarly, less attention is given to the improvement and distribution of non-cereal crops. There is also considerable inefficiency in the production and distribution of improved seeds; the local demand for improved seeds is met by only 20percent. The state owned Agricultural Input Supply Enterprise (AISE) and the two TPLF owned companies, Ambassel and Wondo hold 80percent of the market (Robinson et al. 2006 cited in Ephrem Bechere 2012). While the national demand for fertilizer has been increasing, the cost of fertilizer import has also been rising. Despite some ongoing effort to construct fertilizer factories in the coming five years, Ethiopia totally depends on imports to meet its annual fertilizer demand which has considerably challenged public finance. Non-state actors have a very limited experience, especially in extension and research services. Attempts have been made to engage the private sector traders in fertilizer procurement and distribution especially during 1990's and 2000's, but they could not operate very well until recently; as a result, the private

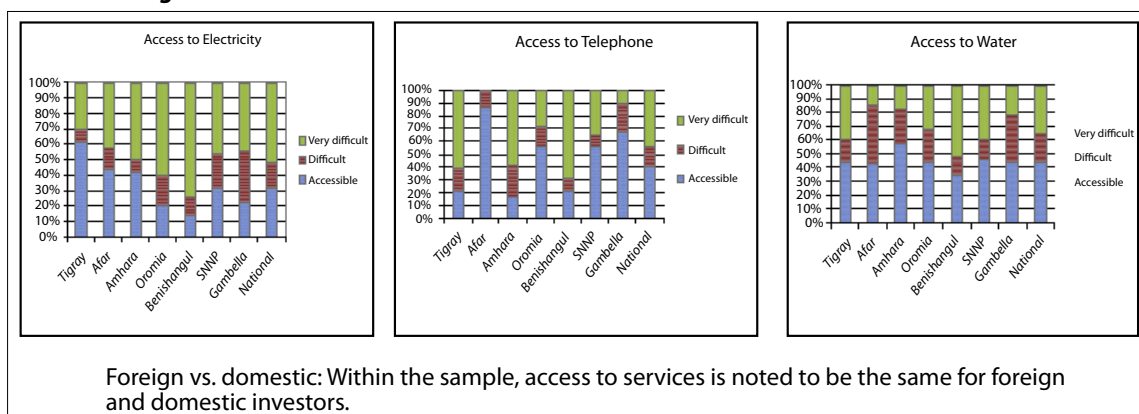
sector is withdrawing slowly from the fertilizer market (EEA 2011). Likewise, the private sector's engagement in the production and distribution of improved seeds is very limited. Results of interview with TNCs representative indicated difficulty to acquire the seed variety they use for production; hence, they are forced to import from abroad (Pakistan and India are the major source). The seed varieties are unique, expensive and produced for the taste and quality demands of the market destination.

On the other hand, although there is a huge investment in establishing agricultural colleges and institutions by the government, most of them are not fully capacitated (EEA 2011) especially in terms of human power and modern technologies. The type of education and training these institutions provide links remotely with the specific needs and current demands of the TNCs. Companies report, in this regard, reveals mismatch of skilled human power supply in the local market with their demands, as a current and future challenges of the organisations (ICRA – Investment Information and Credit Rating Agency of India Limited, 2012).

Poor service provision can hamper operation of the TNCs which in return affect linkage. Robinsons' WI, et al. (2012) study 'Factors Affecting Large scale Commercial Farmers in Ethiopia' established that service accessibility is the most dominant problem in the country. Though this problem varies among regions and services, access to electricity is the poorest in Benshangul-Gumuz, Oromiya and Gambella (see figure 3). Around 80% and more than 50% of the investors in Gambella region indicated that access to electricity and water, respectively, is from difficult to very difficult. In the construction sector, irrigation and water channel development projects are developed by foreign organizations [Pakistan, Canada, US, and others] due to lack of local expertise organisations in that area. Though it requires a detailed study, the general impression is that there is a capacity gap in industrial farm development in Ethiopia.

In a nut shell, local institutions capacity in input provision is inadequate, for the most part due to government or its affiliated group domination of the input market. And most of the inputs are used for agricultural extension services, and not for market. The

Figure 3. Access to infrastructure



Source: Robinson WI, et al (2012)

private sector needs a big push from the government so as to be involved at different levels of agricultural input supply system to link with TNCs. Since TNCs have full right to import the quality and quantity of inputs of their demand with duty free rights, the likelihood for alternative options in the local market is limited. Also research institutions should be a source of agricultural excellence for the agricultural firms and vice-versa. Experience from other countries proves big companies support research institutions both financially and with modern technologies so as to serve them with enhanced results. Local example, Assela Barley Factory, usually provide financial assistance for research every year.

3.2.4 *Government support, physical and social environments*

Ethiopia has one of the Foreign Direct Investment (FDI)-friendly policy. With a lenient investment regulation, the government offers significant investment incentives and support. Equally, CF has got political support from the government and it is considered as germane alternative to transform subsistence and traditional agriculture particularly in mid to high altitude areas. It is more accepted than other forms of production and market relation where the share of small-scale producers is extensive in agriculture (Ermias and Akalu 2010). CF with agri-business is one of the tools proposed by the Agricultural Development Led Industrialization (ADLI) strategy to increase smallholders' income, to access improved technologies and acquire new knowledge and skills. The government also offers agricultural research and extension services to farmers which will reduce transaction costs of agribusinesses that might want to engage in CF. This can be mentioned as a positive environment for adoption and expansion of CF.

Although CF has occupied an important place in the strategy, it has put different emphasis to farmers in mid and high altitude areas of the country. The policy gives less attention on CF scheme in low land areas where significant large scale investments occur. Moreover, though CF depends on either legal [sometimes informal] agreement between the contracting parties, it is unfortunate that the strategy does not contain detailed legal frameworks to backup appropriate laws and an efficient legal system.

On the other hand, the physical environment in Ethiopia is suitable for the crops produced by TNCs. Ethiopia is endowed with abundant agricultural resources; in particular, Gambella has exceptionally abundant, fertile farmlands and water reserves. The major rivers with in Gambella region are the Baro, Alwero, Gilo and Akobo which have immense potential for diversified seasons. The region has four relatively fertile soil types, of which vertisols cover 47 percent of the land. Gambella's unique climate has also produced some of the country's best-suited land for large-scale commercial agriculture.

Infrastructural (adequate road, telecommunication and electric supply) and adequate labour supply remain

a huge challenge in the region (FDRE-Mol 2001). Since Gambella became the centre of attention for foreign investment, it has been neglected for many decades under the previous two regimes. The less density of accessible rural feeder roads and all weather main roads as compared to the area coverage are hindering communication amongst the villages. Sufficient utilities and communication should be available, including feeder roads and water and electricity for agro-processing. The government expected infrastructural developments when attracting investment in the region; however, most of the organisations were not able to deliver these as their moral obligation which is neither contained in the contracts. There is suitable physical environment, but infrastructure also with the dispersed villagisation can remain a big challenge.

Land availability and tenure is another physical precondition for market linkage. As mentioned previously, a successful contract farming scheme requires unrestricted access for the contracted farmers to the land they farm. Land in the region is on the hands of the government. There is no sufficient land tenure system that guarantees farmers ownership titles and accessibility. The resettlement program has big stakes at different levels. It may establish a good ground to organise farmers through cluster farming since they are resettled in villages; however, with lack of infrastructure it is not viable. Moreover, since the villages are situated sparsely and they are not connected to each other, it may have location impact on market linkage. On the other hand, newly established villages bring a vivid concern as it causes complexity in land allocation system in new areas.

Input availability which is fairly discussed in the previous section is also an issue here. For secured long term relationship in contract farming there should be reliable sources for inputs of production. As local capacity remains a challenge for input provision, there should be alternative ways in which the government should facilitate provision of inputs either through building local capacity or imports. When farms can access inputs of their demand easily, then they can avail it to the farmers engaged in the contract.

To wrap up, the importance of CF is vividly shown in the ADLI strategy; however, it still lacks major support at the ground especially in low land areas where the current investments can be considered as promising opportunity for market linkage. Government should be the ice-breaker in facilitating major pre-conditions [See Section 3.2] for linkages in the study areas. In addition to the tax holidays and different incentives, TNCs are given absolute freedom in the utilisation of local resources such as water and other natural resources on the farmlands and/or in the vicinity of their projects. There are no limits on water use, and little in the way of accountability. This might lead to environmental and resource degradation, unless the government devises ways to guide natural resource utilisation. The following section deals with the status of the projects and linkages created.

4 Current Status of the TNCs in Gambella and Market Opportunities Created

4.1 Current status of the projects

Specific data on the current statuses of the investment projects and the linkage created is hard to come by. EEA (2012) evaluated the current status of large scale commercial farmers and found out that less than one-third of the investment projects in the country are on the production stage. The majority [41.7percent] of large scale production are either on the initial stages of development [i.e. pre-implementation and implementation] or their statuses are not known [24percent]. A few others [i.e. about 6percent] are not functional. Only 4percent of the projects in Gambella were reported as operational. There is also a huge discrepancy between the total land requested for production and the total cultivated land. This can be associated with, among others, total or partial project failures, long time lags to start production, small size of the cultivated land as compared to the size of the requested land, and small size of the approved land as compared to the size of the requested land (Ibid).

TNCs that have started operation in the region have not achieved positive multiplier effect (in terms of technology transfer, infrastructure development, and market linkage) in a short period of time. TNCs crop production type and style (as most of them use mechanised agriculture) largely limits the envisaged technology transfer. Minister of Agriculture, Tefera Derbew in an interview with The Hindu (June 1, 2013) said

"I have to be frank, they didn't meet our expectations,..we would like to get the land developed in a short period of time... [but] Karuturi, Saudi Star and the like, their implementation is not to our satisfaction....why they are failing should be analysed"

Until now, the government's expectation's is far from being fulfilled. In particular, expectations on the opportunities of market outlets for smallholders and market linkage with TNCs are not yet down-to-earth. The slow progress of these projects has prompted the Ethiopian government to reassess its policy of leasing vast tracts of land to single investors. The government started reclaiming investment lands from those who have not started operation or performing poorly based on the agreement on the contract. In late 2012, the government terminated CLC's Company's lease claiming it had not fulfilled its contractual obligations. This company is the latest company to withdraw after promising to invest \$100 million in a 25,000 ha cotton farm and spinning plant.

Karuturi reported natural calamities like the flooding in Dima, Seber – in Gambella region and infrastructural problems were the major obstacle in the performance of the farms. Additionally, approval of the Federal Beaurou for

lands initially provided by regional governments hold-up farm operation. MoA (2012) confirmed inappropriate assignments of TNCs on farmers land and the negotiation process and clearing out of conflicting interests has lagged operation. Initially land provision was at rush without adequate study by regional governments; and likewise investors were eager to secure land. Land provision merely focused on attracting investment; there was no clearly set out arrangement that regulates performance of the farms up on delivery of the land. Arguing for weak market linkage in the region, MoA (2012) presents lack of experience on market linkage and less enthusiasm of farmers' as the primary challenge. The second major reason for weak market linkage is reported to be poor performance of the corporations. Some investors have operated only 10 -15percent of the land they acquired.

Pertaining to CF, MoA (2012) deems that '*...to establish contract farming in the regions needs appropriate time. We are not exactly at that time.*' The assumption is that linkage happens only when both parties realise economic advantage in engaging on the transaction. Government has stepped aside and take a 'wait and see' approach rather than facilitating any form of linkages. Regional or Federal Governments should take prime initiative also in providing policy direction and legal systems that support farmers and institutional conditions for market linkage. This role, however, is subjugated by the autonomous nature of the TNCs, which the government has created for the sake of conducive investment climate. As most of the investors did not manage to develop their concessions completely; it important to make continuous evaluation of TNCs performance and the land provision policy of the government. With CF arrangements TNCs can allow farmers to cultivate on part of their concession; they can also invite local investors to work in partnership with them. However, for this kind of arrangement the land deals contracts have been found relatively inflexible. The revised land deal contracts, for example, states that companies cannot transfer their land rights unless they have developed 75percent of the project land. Irrespective of this, Karuturi's financial analysts report shows that, the company has managed to sign agreements with almost 10 farmers from India and allocated them land parcels [Refer Section 5.2 of *Companies Direction* for more details].

4.2 TNCs and actual/potential market opportunities

4.2.1 Saudi Star project

4.2.1.1 Job creation and training

In 2011, Saudi Star project employed on average 250 workers of which 50 - 60 are skilled and permanent employees and the rest were daily labourers from the local population (Desalegn 2011). Presently, the company reported that there are 695 employees and 359 of them are locals from the region. In 2011, from

February to March, training on machine operation was provided for 51 locals in Technical Vocational Education and Training (TVET) colleges. The company reported the trainees were employed in the organisations. Yet, there is still a huge concern that almost all the unskilled manual and seasonal jobs were taken up by local people while many of the skilled operators were people from other parts of the country or from abroad. In addition, there is neither job security nor any program of training or upgrading provided so far (Desalegn 2011). The wage rates are low, ranging from 17 to 25 Birr per day, which is low in daily labourer standards.

Reports from governments offices and research results of different organisations and individuals show that there is a very limited [perhaps only employment] market opportunities created so far particularly in the study area (MoA 2012; Robinson 2012). Saudi Star Chief Executive Officer, Mr. Fikru Desalegn, commented that local communities critics may subside when the 10,000-hectare plot is fully developed in 2014 and 5,000 jobs are created on the farm in about two years (Davison 30 May 2012). This provides additional employment for the local communities and *'definitely teach the public it is very useful for them'* (Fikiru, 2012). Saudi Star had grown rice on 3,000 hectares in January 2013, on part of the land leased in 2008.

4.2.1.2 Other/non-employment linkages/potentials

Saudi Star plans to provide infrastructure such as roads and vocational education which benefits 13,000 residents of the region. The company reported that it is building two factories, one in the region and the other in Debrezeit [42 km east of Addis] for packaging and processing purpose. So far, it has constructed 30.6 km water channel project (the second big project next to Abay) from the Alwero irrigation dam built by the Derg Regime. This is the first lining project in Ethiopia, which is constructed mainly by Ghulam Rasool & Co. - a Pakistan Company and Canada companies. This project is purely for company's use. Communities' perceived that the company has not provided services or invested in any assets of benefit to the community (Rahmeto, 2011). Concerns are strong for water security and associated livelihood challenges such as fishing which could be negatively affected due to excessive utilisation. The community are fearful that they will soon be denied access to their fishing rights and there would be shortage of water in the future (Rahmeto, 2011). After completion of the two factories, 4,000 thousand people will be employed in the project (Mr. Seifu Welde). Saudi Star has distributed 500 quintal cereals for food consumption last year, which is 5 kilo per household, as benefit to the community. Some developments are observed in hotel and other service provisions both in Jikawo and Abobo area (from 2011 – 2013). However, it is not possible to directly link these developments with the introduction of TNCs in the region.

4.2.2 Karuturi Plc

4.2.2.1 Job creation and training

Karuturi has promised about 2,000 and 5,000 jobs for Bako and Gambella's corporations, respectively. The latest update on the company's home page from Mr. Karuturi, CEO, tells that the company has employed over 4000 employees in Ethiopia (Oct 30, 2012 11:10 am). He expects the head count to increase to 25,000 in 3 year's period. Karuturi explained his company became amongst the top 3 private sector employers in the country (30 October 2012). The total 4000 employment in Ethiopia includes employments in the flower farms in Holeta [108 hectares] and Wolliso [372 hectares], and from the farms in Bako [11,700 hectares] and Gambella [100,000 hectares]. The company currently owns and operates on a total of 112,180 hectares of land in Ethiopia which employs an average of 0.035 jobs/hectare [considering maximum employment of 4,000 people] from all the farms operating in Ethiopia and 0.04 jobs/hectare on Gambella region. This figure is even lesser compared to 0.05 jobs/hectare as per employment study made by World Bank (WB) in 2010.

The jobs created compared with its sister company in Kenya are insignificant. Sher Karuturi Ltd, a flower farm which has a core business of planting and exporting roses near Naivasha, Kenya, employs a workforce of 4000 people on approximately 200 hectares. The farm has created 20 job/hectare in about 200 hectares of land. Though the flower sectors absorbs intensive labour, with the current size of operation (exclusive of the uncultivated land) in Ethiopia the jobs created is insignificant. Likewise, the local population proportion of the jobs taken is also immaterial. The largely mechanised nature of the farm is, unlikely to ensure large volumes of jobs. WB reports also echoed a limited employment benefit to the local communities (WB 2010). Karuturi responding for the issue of limited job market emphasised that skilled labour power has been a serious challenge in Ethiopia; *'while there is enough local labour available, it is largely unskilled in modern farming'*. At the managerial level, though the company has been able to find talented people willing to spend time on site in Gambella, there has been criticism that many of its current managers have no experience in industrial farming and this is leading to many incorrect decisions, lost revenues and increased costs (Bose and Mehra April 15, 2012). Karuturi is, hence, hiring consultants with industrial farming experience from countries such as the US and Uruguay.

MoA (2012) has proposed local youth/community training on different fields so as to maximise local community benefits from investments projects in the region. It has planned to provide trainings on road transport, road construction, building construction, metal engineering, business services, tourism, land transport and agriculture for 4618 local youths. The

cost of the trainings will be covered by the government [if approved]. However, low investment operation, inadequate agricultural machineries imported by investors, and lack of strong support from government and private enterprises are cited as the major challenges for the proposed training (MoA, 2012). Training was provided to 51 local youth on tractor operations in Feb 2012, but it was not possible to ensure at what capacity these youth are working currently.

4.2.2.2 Other linkages/non-labour linkages

Karuturi has invested USD 140 million in the agriculture project in Ethiopia so far. The company reported that it has bought equipments worth over USD 50 million and built 120 km of drainage, 120 km of dykes and almost 50 km of canals for its operation. It publicised its plans to develop Gambella as agri-economic zone by establishing sugar factories, oil processing plants, rice mills and other food processing plants with joint ventures with companies that have specialised knowledge and organisational infrastructure (Bose and Mehra April 15, 2012). It also plans to provide schools, hospitals, housing, and bus facilities to its employees, along with its social welfare initiatives. *'Our Ethiopian farm operation ensures food supply to the entire Gambella province in the coming season'* quoted Karuturi on the company's web page. He also said it has provided a borehole in between every 10 Km across the farmland. *'We have already provisioned 25 boreholes as part of our mission "Ban the can" initiative to do away with people having to walk long distance for drinking water as we believe access to clean water leads to better sanitation and better health'* (Ibid). In the Bako farm, however, communities indicated that the boreholes cannot be accessed by the community. As Karuturi faced financial challenge, this may bring funding challenges on agriculture expansion and related linkage plans in Ethiopia (IRCA, Sept. 27, 2012).

4.3 Appraisal of backward and forward linkages

From the discussion in section 3.2, it is evident that there is adequate local demand for TNCs produces. Even though there is positive spirit for CF from the government side, farmers in the region did not acquire strong support which will enable them to engage in CF arrangements with TNCs. Likewise, local institutions capacity to provide inputs is limited to the provision of infrastructural services that by itself is insufficient and unsatisfactory. Hence, since the companies took over the land in 2008, there is limited market linkage established. Though MoA (2012) associates this with poor performance of the companies; however, there is no convincing ground to align linkage with good performance of TNCs. This is due to the fact that, market linkage as anticipated benefits of TNCs is not backed by a well organized legal and institutional system. To this point, the most dominant and visible form of linkage happened in the form of employment,

particularly unskilled labour, which is very insignificant compared to other countries experience. The labourers are casual workers who are deprived of various work benefits including maternity leave, annual leave, sick leave and their employment shows seasonal variation. This cannot be regarded as decent work by any standards. The Gambella Investment Bureau is optimistic that *'There are changes compared to two years before. Saudi Star and Karuturi are improving employment opportunities; yet the rest are still using their own personnel'*.

Tax and other incentives the Ethiopian government offers motivates companies to entirely depend on imports from abroad. Production inputs [seed varieties, fertilizer, skilled labour, and machineries] are imported from abroad indicating absence of backward linkage. Karuturi and Saudi Star have spent 40 million and 80 million USD worth machinery, respectively. Moreover, different constructions are being undertaken by foreign companies mainly from Pakistan, India, UK, Japan and Canada. Saudi Star has imported a rice variety called Basmati and hired international consultants on rice seed development and production from Pakistan. In 2010, unofficial accusations were made on Karuturi for evading tax privileges. It was reported that it has leased imported machinery for similar investors like BHO in Gambella, and not for their own production purpose.

As TNCs obtain technical backup, human expertise and technology from abroad, efforts to link up with local institutions is merely limited to data and information provision [Ethiopian Agricultural Research Institution/ EARI⁵, 2012]. EARI indicated it has more potential to provide additional services. It has made agreement with International Institute for Rice Research (IIRR), the Philippines, and is entitled to acquire any variety of rice in the world including Basmati. Moreover, EARI has a germ plasma exchange agreement with IIRR which also qualify it to the pull of disease control mechanisms. TNCs, however, have not shown interest or efforts to exploit this opportunity [EARI, 2013]. TNCs imported seeds that have not fulfilled legal requirement of prevention and suitability of EARI. Saudi Star infringed on EARI's mandate to quarantine the new seed varieties before application in local soil. Until recently, both organisations did not apply fertilizers in the area since the soil happens to be fertile. Karuturi Plc Project Manager in Ethiopia, Karmjeet Sekhon, told Guardian Reporter that they will not use fertilisers or herbicides since the soil has much more organic matter compared to India. The regional agricultural research office also has not authorised application of any kind of fertilizer and/or chemicals unless impact study is undertaken. Application of some chemicals in the future may have unbearable consequences; hence, it needs continuous follow-up.

It is early and difficult to assess forward linkages [supply for local consumption or local processing] as companies are in early stages of production. Saudi-Star has been producing in a very small plot of land so far and will expect to fully develop the land by 2014. An interview result (in 2010) with Senior Marketing and Promotion Officer indicates that the company has made an agreement

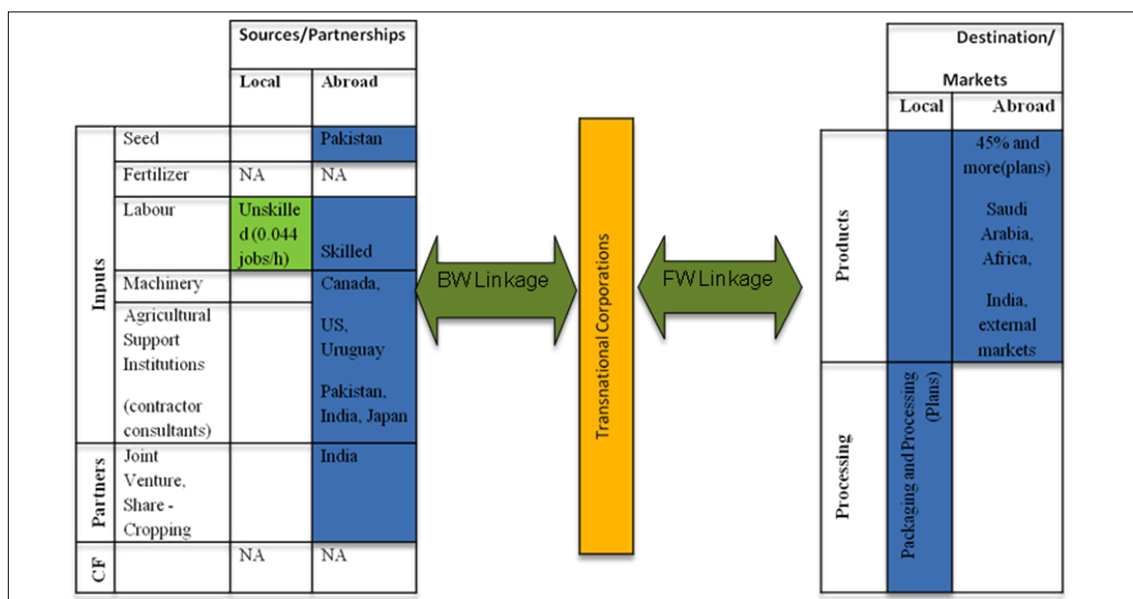
with the Saudi government to supply 30percent of the production and the rest for external market. This is based on the agreement with the 'King Abdullah initiative for Saudi agricultural investment abroad' that the government that provides funding and credit facilities to Saudi investors in agricultural investment abroad. Recent update from Saudi-Star's Cheif Executive Officer, Fikuru Desalegn, reveals as much as 45 per cent will be exported, but the remaining production will be supplied wholly for domestic consumption. Karuturi also explained that cereals will be sold to African countries and Palm oil will be supplied to deficit regions of Africa and India. It has harvested 5,000 tonnes of corn from Bako farm and auctioned locally in 2012; however, the auction was cancelled and the results were not revealed to the participants due to unknown reasons.

Hence, forward linkage is merely anticipation since there is neither a clue for domestic supply in the land deals nor enforcing mechanism put in place by the government. This will make it difficult to assume supply to the domestic market is guaranteed. So far, the primary concern of attracting TNCs is to secure adequate foreign currency to the country (Adil 2010; Lavers 2010); and hence, the government provides a rewarding incentive for production for export market. However, there is no inducement and/or motivation provided for investors to supply to domestic market or to create linkage with the local economy. This might reduces motivation to engage in production for local consumption. To the knowledge of the researcher, neither there exists systems nor institution which adopt new technologies, knowledge and skill; and customise and distribute to local consumption. Technology transfer is assumed to be achieved spontaneously without proper demonstration or practical training/education of the local youth. The land deal documents, for example, do not contain skill transfer as a binding or enforcing duty/expectation

from the farms. Government efforts in influencing or encouraging partnerships with capable local enterprises are also insufficient. Moreover, when the land deal contracts give the right to the lessee to build any kind of infrastructure for farm operation, they are silent about job or other economic opportunities for locals. In that case, it is hard for one to make time bounded analysis the progress as well as concrete benefits within specified time. Technology transfer rather demands effective and dynamic institutions, and embedded rules in contract management. A strong legal framework that enhances sustainable linkages with TNCs is imperative. It remained a mere government's expectation than a priority to take action.

Weak interaction or linkages with the local economy has a high chance of developing enclosed nature of development with limited benefits to the economy. Endogenising TNCs maximises host country benefits in any form of FDI. It creates new factors and forces of production in the host country by adopting exogenous factors brought by TNCs (Poh 2006: 37). As a process it involves a continuous process of learning and simultaneously applying knowledge in order to build local capabilities for technological and organisational innovation, which in the end would lead to the creation of own factors of production, and to industrial upgrading of products and technology (Ibid: 39). Hence, the governments should take primary initiative and assign responsibility to institutions to endogenise benefits to local contexts. CF can be one form of endogenisation. However, it requires principal institute that spearheads overall promotion and support it need to properly plan and allocate the necessary resource. Figure 4 summarises market linkages formed with TNCs. The subsequent session deals with challenges of establishing market linkage and CF in Ethiopia.

Figure 4. Summary of Backward and Forward Linkages



Source: Summary of existing forward and backward linkages (author's formulation)

5 Current Challenges Facing Contract Farming in Gambella

Market linkage or CF is not a problem free arrangement. Like many other topics and practices it has a lot of intermingled and intriguing issues, problems and policy challenges. Most of CF challenges common to many arrangements, are also evident in the Ethiopian context. The following topic assesses the current challenges and constraints of establishing market linkage/CF with transnational organisations in Gambella region and elsewhere in Ethiopia. It embraced the issues under three major categories: challenges at local levels (farmer's and cooperatives), the companies (corporate interest, business strategy, experience) and government policy and initiations.

5.1 Challenges at the local level

These are constraints at the local level to pursue effective and sustainable contractual farming arrangement with the local farmers. These include quality related problems, poor access to modern inputs, location and land related problems being the major ones.

Quality of production – Among many other constraints to engage in CF in Ethiopia, the primary one is low quality of production which results from lack of knowledge and experience, and supply of high quality raw materials. This remains a challenge to compliance to national and international quality standards. Since CF usually involves production of non-traditional commodities needed on international market, there is immature local practise. Farmers in Gambella have experience with production of some of the TNCs products, though they produce using traditional way. In addition, there is no research back stopping to generate technologies that align with the market in the region. With the absence of modern farming facility and research services, quality of production is compromised. Contracting companies in Ethiopia view farmer's ability to produce according to quality standards and/or certificates as very crucial (Nijhoff and Trienekens 2010). Unfortunately, several CF cases have shown that quality of products is usually below standards in the first stage of the contracting business.

Lack of modern inputs – the nature of livelihood in Gambella is based on traditional farming, hunting and gathering. The people have been dependent on the government for the agricultural extension services; as a result, agriculture cannot grow to its expectation. The major constraint for vertical integration in Ethiopia is securing reliable supply of high quality raw materials (Cramer et al. 2004, in Ermias and Akalu, 2010). Availability of modern agricultural inputs at the desired amount, quality and reasonable price is a sever constraint to establish competitive CF scheme. Acquiring selected seeds for production have also remained a challenge for a long time and the formal seed sector in Ethiopia can

only support an insignificant proportion of seed demand. In addition, companies involved in CF in Ethiopia do not consider providing knowledge, guidance, technology and resources to farmers as their task, while farmers do see such extension support as crucial to engage in CF (Nijhoff and Trienekens 2010).

Location of farmers/out-growers – due to the villagisation program ('displacement' by HRW, 2011), large portion of the communities in the surrounding farms have been relocated to distant places. HRW report showed the clearances of the settlements are linked to large-scale land-leasing for commercial agriculture (HRW 2012). The report also depicted that villages were mostly located in dry, arid areas away from any dry season water sources such as a major river. Some farms are also situated far away from community settlements which on one hand trims down conflicts and/or tensions with the surrounding community, but on the other, makes out-growers arrangement knotty. The villagisation can be considered as a good prospect for CF than dispersed population settlement; however, the location of the villages compounded with lack of adequate road infrastructure challenges its viability.

Lack of experience in CF in the region – CF has not been applied in Ethiopia on a large scale yet. Gambella too has no cited CF experience. Though there is experience on production of crops grown in the area, no organisation has shown signs of interest. Lack of experience on CF in the region may not prompt initiative or response both from the farmers' and investors' side.

Lack of initiation and security – Since there was lack of awareness and involvement of the local community during land acquisition process, there was no amicable relationship between the TNCs and the community. The community that has been relocated perceive that villagisation is a tool to expropriate their land for commercial agriculture and resource extraction. A certain group took violent measures to express its dissatisfaction on land provision to foreigners. There was actual threat on the investors and investment projects. Different casualties on the employees of the organisation have affected companies operation and expansion plans negatively. Though there may be willingness to work with the organisation on CF or other arrangements, security issues are major concerns in the region and can possibly jeopardise the business relation.

5.2 Challenges with the firms

It was not possible to prioritise challenges of engaging on CF in Gambella region, since all of them are equally important. Yet one can weigh the major issues that might affect firms' decision on specific perspectives. Important factors to the farmers may not be important for the firms (Nijhoff and Trienekens 2010); a reason for treating challenges separately under this chapter. Generally, research shows that land availability constraints, social and cultural constraints, farmers' discontent, extra-contractual marketing and input diversion are the major

challenges facing sponsors engaged in CF arrangements (Eaton and Shepherd 2001). The following, however, are the major challenges for TNCs to establish CF in the study areas.

Corporate direction – Company brochures and interview results specified TNCs are interested to partner with well established companies. Karuturi specified that the company is willing to work with advanced agricultural firms that have experience producing for the international market. It has the intention of sharing the land and the necessary infrastructure to international farmers who have the expertise in specific crop cultivation and get into a revenue share (65percent:35percent) with them. The company was looking for an investor to extract edible oil from palm, corn and soya, as well as for partners to build and run warehouses and boreholes, Karuturi said. The company has already signed agreements with almost 10 farmers from Chandigarh and Punjab and allocated them land parcels ranging from 500 hectares to 1,000 hectares (IRCA 3 January 2012). The farmers would be taking care of the operating expenses and farming activity in their respective land parcels, while the company would support them in terms of providing machinery, labour and other infrastructure. This shows the companies interest to produce high quality cereals for export market which requires standardised knowledge and mode of production. As local farmers lack modern knowledge, it may not be easy to network in CF arrangements.

Financial problems – CF requires resources to facilitate the transaction. In order to ensure quality standards, TNCs should provide trainings, technical assistances and inputs to the farmers. These may require additional finance and a different project. However, firms like Karuturi have had a consistent fund challenges since 2010. Revenue and profit margin of floriculture operation witnessed a decline on account of re-plantation of 15-20 hectares in Kenya. This highly affected funding for expansion of agricultural work in Ethiopia (IRCA 2012). The company has approached the African Development Bank, the African Export-Import Bank and the Eastern and Southern African Trade and Development Bank to raise another \$100 million for a sugarcane estate (Davison, June 2013, 21:06). As much as CF is an opportunity for the firm to share its risks and reduce investment cost on expansion, it creates additional management challenge which might hold back management's decision to engage before settling its current issues. Hence, engaging in CF may further increase the company's financial challenges, which in-turn would slow-down the company's agriculture expansion plans.

Infrastructure problems – Availability of enabling environment including developed infrastructure, institutional services like research, extension services and input supply are fitting environments for establishing effective market linkage in Ethiopia. Gambella region

lacks sufficient infrastructure, there is no adequate road network, telecommunication and electric supply. As mentioned previously, the newly established villages are not connected to each other, and to the farm gates which hampers the formation of CF/out-growing scheme. Though companies promised to build infrastructure around their plants, this has still remained the responsibility of the government.

Natural catastrophe – One of the key risks associated with the company's operations is adverse climatic changes resulting in lower than expected yield of agricultural and floricultural products. In the beginning of October 2011, Karuturi's farm fields got flooded by the water from the adjacent Baro River. This resulted in the damage of entire maize crop which was due to be harvested in November-December of 2011. The total estimated loss on account of the flood is pegged at Rs 37 crore, 40percent of which pertains to the operating cost incurred for planting and remaining 60percent to repair cost for the damage of infrastructure like dykes, drainage, canals etc. Investors, including Karuturi, blame inaccurate metrological and hydrological data provided by the government. Sudden climatic changes like these set hurdles on decision of the management for CF arrangements. Most CF cases have vague content on risk sharing mechanisms for natural catastrophe like this, rendering the firm incapable of dealing with the effects adverse climate disasters.

Lack of contract farming experience – Both Saudi Star and Karuturi do not have experience in CF in their previous projects. Karuturi faces a clear challenge as it lacks experience in industrial farming. IRCA, a financial analyst institution in India, advised Karuturi to operate on the scale to have a good chance of recovering its initial investments first. Karuturi is currently working on reducing risk in its development plans. When funds are a challenge, arrangements like CF can add up management cost for the firm. Since there is a little practice and limited success documented in the country, TNCs may not build confidence to occupy them in CF.

Availability of adequate land - TNCs do not get involved in CF scheme just for the sake of lack of land. There are conditions where CF arrangements are initiated due to limited land for production; in this case, companies outsource production to the surrounding farmers. Karuturi and Saudi-Star have more than adequate land for production. Moreover, the government has shown interest to provide more chunks of land that they require for additional expansion. Abundant land may not motivate firms to outsource production. Farming is also largely mechanised thus CF arrangements may not be appealing anyway. On the other hand, it is an opportunity for the firm to engage local farmers in either share cropping or CF arrangements with the extra plots of land that are not cultivated so far [this issue will be discussed in detail later].

5.3 Government - rules and regulations

Lack of ground/institutional support - Another dominant factor for positive CF environment is strong government support. CF needs principal institute that spearheads overall promotion and support it needs. This helps to properly plan and allocate the necessary resource it needs. Hence, government should initiate and facilitate market linkage. Though CF is clearly mentioned in the ADLI strategy, no CF initiatives have been taken by the government in the Gambella region so far. The government expects farmers to develop their potential to generate linkage by themselves in advance, without extension support. Similarly, it perceives that firms will tend to form linkage by themselves if they consider comparative advantage in the area. Unless government takes initiative to facilitate linkage through support financial and technical support to farmers at the initial stage, it may not be easy for firms engage at a later stage.

Undefined land tenure system - Farmers must have suitable land to cultivate their contracted crops. In absence of this, when farmers have minimal or no security, the danger is high that sponsors may consider CF less feasible and sustainable. Gambella has not yet passed regional legislation for enabling a formal land tenure system development. Land is managed and administered according to traditional systems. Boundaries in the locality are understood and translated by local customs up to this point. Moreover, land-based conflicts are resolved in traditional forums. The villagisation program occurs in all *Woredas*/district and is intended to move people from smaller, more scattered settlements—irrespective of their livelihood base [riverside agriculture, shifting cultivation, or agro-pastoralism]. Three to four hectares of land is allotted to 500 to 600 households (HRW 2012). Formal system of land tenure is not yet in place in the areas where villagisation takes place. As mentioned in different parts of this paper, CF requires a secured land tenure system and the contracted farmers should acquire unrestricted access to the land they farm. In the presence of complex systems and shortage of land, any kind of market linkage is inconceivable.

Absence of incentive for Market Linkage - Government's real objective in attracting foreign investors is to build liberal market economy (Esayas Kebede - MoA 2012). It has provided several investment benefits for export markets. According to the Ministry of Trade and Industry (MoTI) report since September 2008 export restrictions has been removed for investors to promote the export market. Under the incentive scheme, an investor who exports at least 50 percent of the products; or supplies 75 percent to an exporter shall be eligible for income tax exemption for five years. When all these incentives are proper and relevant to build the export market, there is no incentive for local market or engaging in market linkage with domestic organisations. As mentioned earlier, there is a clear scarcity and massive local demand to be met by imports. Conversely, the government has not induced production of crops that have high demand in the local

market. Incentive for foreign market has indirect impact on creating market outlet for local produces if effective market linkage is established.

Less recognition for low land areas: The ADLI strategy has realised the importance of CF in Ethiopia and has recommended its magnitude for the high land areas. While the strategy gives privilege for TNCs to invest in low land areas, it has failed to align benefits and opportunities akin to market linkage with the local economy. The government argues that farmers in this region are based on traditional farming, hunting and gathering; hence, it does not have the capacity to support the farmers to engage in CF. On the contrary, it massively urges its importance in high land areas where farming is still traditional and TNCs that create this potential are rare. The strategy needs revision as it does not address current issues. To the knowledge of the researcher, there are no specific plans to facilitate CF with TNCs in the Gambella region.

6 Local Context and Alternatives for Linkage

6.1 Alternatives for market linkage- contract farming and share cropping

Market linkage is not a primary attention for the case organisations in the region, and neither does the government assume it is viable at this moment. CF is not a radical idea or an old fashioned one, but it highly depends on the interest and willingness of the TNCs coupled with government's commitment to build the local market. Although there are challenges to establish CF scheme, there are possible solutions for its applicability in the current situation in Gambella region (Alemayaw Gebremariam 2012; Annuak Survival Association 2012). Maintaining at least the psychological, social and economic commitment integrates TNCs with the local community. TNCs can identify comparative advantage or local potentials of the region to operate with the local economy. Maize, for example, has been the livelihood of the region; Karuturi can effectively contract its maize production to the local farmers with minor technical assistance. Maize farmers are familiar with local situations, the weather and climate for production. They have good prediction and understanding of the natural cycles and conditions in Gambella. Linkages can be strengthened more with practical and modern trainings provided local farmers that enhance their 'expertise' to a more productive partnership. This has mutual benefits and firms can also gain knowledge of the local situation. Karuturi has lost its first maize crop production before harvest due to poor weather forecast. In the case of Bako, local knowledge is transferred to Karuturi, than the other way around but it lacks systematic collaboration (Rahmeto, 2012). This calls for well-built and systematic partnership with local farmers in other regions too.

As foreign farmers are brought in as modern share croppers and given partnership interest with the TNCs [especially Karuturi], Gambella's or domestic farmers can also be offered the same opportunities in the region. They have acquired adequate land [even are offered more] which can be applicable for this effect. Hence, by the same indication, they can allot a certain proportion of their land which is yet to be cultivated for sharecropping. Sharecropping paves a way for differently endowed enterprises to pool resources to mutual benefit, overcoming credit restraints and helping to manage risk. Alternately, local farmers can organise themselves into associations or cooperatives and may agree to work on sharecropping arrangements with TNCs. Sharecropping agreements can be made as a form of share farming that has variable contracts. One alternative is farmers can rent plots of land from the TNCs for a certain sum and keep the whole crop. On the other hand, farmers can work on the land and earn a fixed wage from TNCs but keep some of the crop. This contract may not have financial elements, money does not change hands, but the farmers and TNCs can share the crop. With training and education in new agricultural methods and techniques of farming, TNCs can organise share cropping with the local farmers either with the second or third arrangement. Each of these arrangements, however, needs institutional system and technical back-up also with the involvement of the government. The first arrangement tends towards tenant farming, and it keeps both the farmers and the TNCs work independent of each other. The community's agricultural knowledge and livelihood strategies was based on continual shifting, after the villagisation program a sedentary living condition may energise the community for this kind of arrangements.

Another form of boosting market linkage is if TNCs produce crops which have local significance and/or production exposure to use comparative advantage. Seen from Section 3.2.1, products like wheat are highly demanded locally; and hence, TNCs can make supply arrangements for local market. As mentioned earlier, two-third of food processing industries in Ethiopia imports their input from abroad which has a wide profitable market if TNCs engage in the production. Similarly, sugar and food oils products are currently met by imports. TNCs can cultivate these crops in a certain proportion of their lands in order to respond for local demands. They can produce crops with local standards to ensure affordability and maximise their profit.

On the other hand, market for local farmers in the Gambella region has been a major challenge for long. Though maize and sorghum are the most common crops, the peoples' livelihoods are also enhanced through fishing and products, such as roots, leaves, nuts, and fruits. Market has been a major problem for Gambella farmers. The organisations can facilitate market for the farmers either by organising them into co-operatives or individually. Moreover, TNCs can add value and process the farmers' products to supply for local or external market.

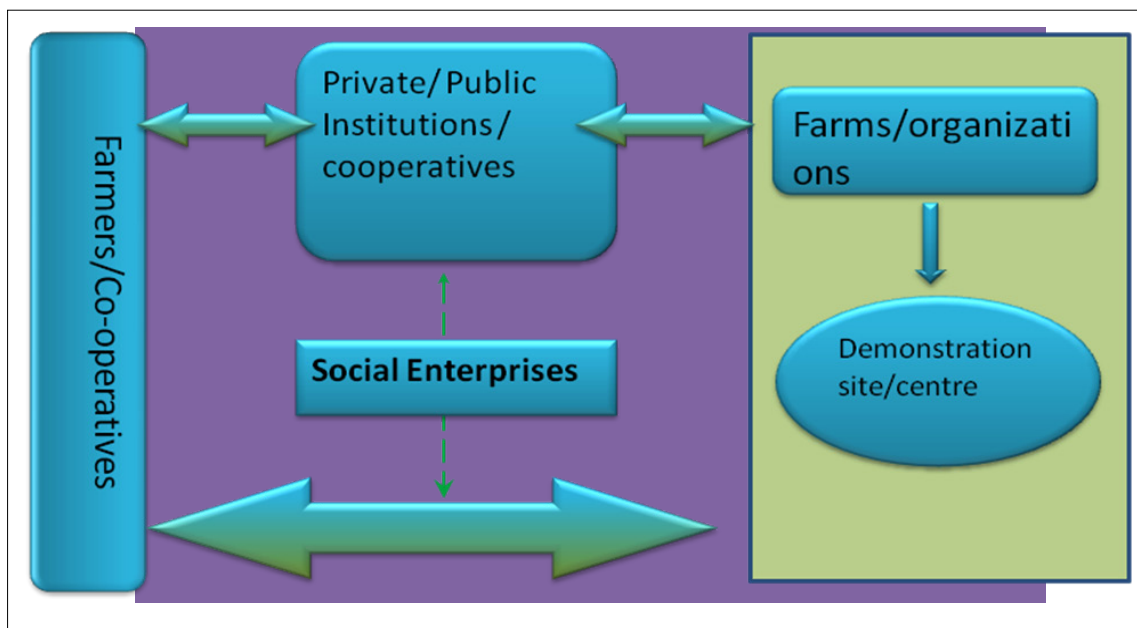
In general, TNCs can boost linkage in many ways. CF and Sharecropping can be feasible arrangement, if managed well and if it gained major government support on the ground. Realising local market potentials for TNCs also help them to engage in locally demanded products and products that have local advantage. CF has different forms or models, but application of one or more models depends on local contexts. The following session suggests Nucleus and Multipartite models as fitting arrangements in the study region.

6.2 Nucleus and multipartite models

From the previous section [section 4], it was evident that existing linkages are limited to labour employment at large. CF can be established with manageable challenges but requires strong interest and commitment of TNCs. Likewise, it requires strong government support and sponsorship to upgrade farmers' knowledge and skills in production. Not all types of CF models, however, have similar impacts on the local economy. A decision on which type of model to follow should depend on the basis of market demand, production and processing requirements, and the economic and social viability of plantation versus smallholder production (Eaton and Shepherd 2001). Where market requirements necessitate frequent changes to the farm technology, with fairly intensive farm-level support from the sponsor, the permanent organisation and maintenance of a production chain under a centralised model is vital. TNCs that require stringent processing standards can rely largely on the centralised model. Where quality control is not the predominant concern, the informal model may suffice. This model is characterised by seasonal, short-term crops with only minimal material support to farmers.

Among other CF models, nucleus and multipartite models are relevant and suit local contexts. Most of the TNCs in Gambella region produce tea, sugar, palm-oil, cotton and soya bean (See Table 2 in Section 3.1). For crops such as tea, sugar and oil palm, with which farmers may have had little or no experience; TNCs are more likely to follow, where possible, the nucleus estate approach (Eaton and Shepherd 2001). If TNCs consider field trial prior to the introduction of a crop to farmers or that a guaranteed minimum throughput is required for the processing facility, a nucleus estate model is often most appropriate. Such crops require a significant long-term investment and, generally, immediate processing after harvest. However, lack of adequate land to estate development may dictate a centralised rather than nucleus estate approach, which is not the case in the region under study. Where capital investment in processing facilities is considerable and the number of contract farmers is high, either the centralised or the nucleus estate structures can be used, accompanied by strong managerial inputs and backed by formal contracts. In some examples, TNCs can use third parties or intermediaries to subcontract production out to farmers.

Figure 5. Demonstration of nucleus and multi-partite model (Author's formulation)



Ethiopian government's intention to acquire new knowledge and skill from TNCs can be attained better through Neucles State model. Crops which are being produced in the Gambella region by TNCs need strong supervision and support if farmers engage in the production process. As farmers have little experience in some of the crops, the nucleus estate approach follows practical demonstration to secure standard quality. Hence, it can serve as a hub of excellence and technological innovation. Both Saudi Star and Karuturi have acquired huge amount of land that is not cultivated completely, which can be applied for demonstration centre if there is keen interest to transfer new knowledge. The model, however, needs effective local institutions to endogenise technologies to local contexts.

The multipartite model in particular is suitable for staple food crops [Maize, an example for the region], and can be run successfully in many different political and economic contexts. When there is no experience of CF in the region, public or private institutions including cooperatives can be established to assist the transaction process and provide extension services like credit and inputs. Hence, merging nucleus and multipartite models with management and income guarantying contracts have dual benefits (see figure 5).

In one hand, since production styles are demonstrated to the farmers in a formal stage, new mode of production can be easily grasped serving the goal of transfer of technology. On the other hand, CF requires government and/or other stakeholders support; hence, they can provide the necessary extension services besides facilitation, both to the farmers and the firms. Involvement of a third party may often help bringing a better balance in the relation between companies and farmers. Co-operatives can be a good starting point since they intermediate farmers to produce and avail the produce

in a desired volume, quality and time in collaboration with other government or NGO's. There is an increasing number of NGOs that are active in Ethiopia's agricultural sector that can support this. Likewise, social enterprises can be important mediator in the models. Organisations like Ethiopian Commodity Exchange (ECX) [<http://www.ecx.com.et/>] and Agricultural Transformation Agency (ATA) [<http://www.ata.gov.et/projects/public-private-partnerships/>] are currently intervening in organising, mediating and protecting business balance with small scale farmers while maintaining their right. Equally, they can facilitate trade relationships between small producers, local firms and cooperatives, and the TNCs or external market. They can also function as a broker connecting buyers to producers and vice versa, and charging fees for this service. This type of social enterprise does not sell or market clients' products; rather it connects clients to markets, provides market information and research services. This information can assist investors and farmers to engage in successful CF arrangements and is available among these actors; on social community aspects, on group dynamics, on reliable farmer groups and their abilities. They are often well linked to small holder farmers.

The following case study on Ethioflora and Mekibatu Union gives an example of a multipartite model that embraces both the private sector and farmers' association in addition to the farmers and the firms.

7 Conclusion

This study evidenced that there is inadequate local potential to engage in market linkage with TNCs. Annual import data of crops depicts potential domestic demand for TNCs products indicating possibility of forward linkage. However, there was no sufficient data to evaluate

Case: Ethioflora and Mekibatu union

The export company Ethioflora that has been producing green beans for several years wanted to expand its supply to satisfy the demand in Europe. However, obtaining proper land in the right location was very difficult. It therefore opted for contract farming and involved the water users' association (whose members consisted mainly of farmers) around Lake Ziway.

After many rounds of discussions and negotiations with the association, Ethioflora reached an agreement. The association itself nominated farmers who would participate in contract farming; the farmers would plant according to the schedule and guidelines of Ethioflora; the company would provide inputs (seed, fertilizer, pesticide, and cash), technical advice on planting, caring for the crop and harvesting the beans. All the cost agreed to be deducted from the farmer's payment after delivery of the crop. After additional negotiation rounds, the two parties agreed on using predetermined prices.

Despite both parties were happy to continue the scheme, the growing number of interested farmers exceeded the capacity of the Ethioflora to provide the necessary inputs and technical supports which led to a halt in the scheme until a solution was found. The company discussed the problem with different stakeholders including the farmers as well as the Ministry of Agriculture.

The creation of Meki Batu cooperatives' union brought a remedy. The union was formed with the support and funds of Self Help Development International (an Irish NGO) and ICCO. The water users' association joined the cooperative, after which the cooperative filled the capacity gap of Ethioflora by taking over some of the services such as providing inputs, training, credit, market information. Currently, the two parties seem to operate and collaborate well. It is worth noting that the role of the NGOs is being continued in the form of capacity building and technical assistance on market access, infrastructure development, dissemination of farming technology, human resource development and finance.

Source: Tiruwuha (2010)

farmers' potential for linkage and over all skilled labour supply in the country. Yet merely based on farmers' production exposure on some crops currently produced by TNCs, with moderate training and education, it is possible to establish CF arrangements. Irrespective of vastness of the agriculture sector and the boom of colleges and universities, companies still contend that there is inadequate skilled labour in the country. Over all capacity of local institutions to either provide inputs for production or process the outputs of TNCs is insufficient; and hence, TNCs prefer to contract with foreign firms.

Agricultural input provision in Ethiopia is highly dominated by government institutions and government affiliated groups. As a result, non-state actors have limited experience. Input provision system is monopolised by the government so as to seek political patronage and create support base. For the private sector to involve itself in the input supply system it needs a big push and autonomy. Besides, government should initiate local firms to work in partnership or joint venture arrangement with TNCs to build their capacity and facilitate transfer of knowledge and skills.

Data on the current status of the investment projects and their market linkage is not complete. However, it is clear that since the companies took over land in 2008, there has been limited market linkage established. Reports from government offices also confirm that a very limited and/or almost inexistent (by some) market opportunities have been created so far in the study area. Equally, TNCs did not deliver expected results (such as foreign currency acquisition, mass employment, local infrastructures, market outlets and transfer of technology

among others): as a result, the government regarded them as failed projects. In addition, government reports show that some TNCs are not able to settle credits borrowed from local development bank; lacked appropriate weather forecast (hence, loss of crops due to flooding), local knowledge and amicable relationship with the communities. The most dominant and visible form of linkage is labour employment, particularly unskilled labour, which is insignificant in terms of volume and lacks locals participation. The government is planning to devise ways to make the local population the primary beneficiaries from the projects. Forward linkage, similarly, cannot be evaluated since most of the TNCs have not fully engaged in production for market. The fact that there is neither an indication of domestic supply in the land deal document nor enforcing mechanism put in place by the government so far, will make it difficult to assume forward linkage is ensured.

This paper contends that CF with effective management is a viable means to break enclave's formation and secure markets and transfer of new skills to the local farmers. However, there are considerable challenges for establishing CF with TNCs in Gambella region. The problems with the farmers are quality of production, lack of modern inputs, lack of experience on CF, location of farmers (distance from large scale farms), undefined land tenure system, and lack of initiation and security problems. The challenges on the TNCs side that might limit engaging in CF or other arrangements are: corporate interest and direction, financial problems, natural catastrophe, infrastructure problems, lack of contract farming and industrial farming experience, and land abundance (as a weak driving force for CF).

Government rules and regulations hindering CF are lack of incentive for linkage, lack of facilitation (due to the wait-and-see approach), and less recognition of CF in low land areas. In spite of the crude challenges, the Gambella region is a promising location for market linkage zones with large scale farms. While CF has got good political support, there are no specific procedures for its applicability and it still lacks major support at the ground. Government has a strong intention to acquire foreign currency through diverse and rewarding export incentives. Conversely, there is no incentive provided for engaging with local market either in the form of supply or other linkage arrangements. Though market is the major determinant, high export incentive might reduce companies' motivation to produce for local market.

Considering local contexts and governments intention of bringing knowledge transfer, merging nucleus and multipartite models with management and income guarantying contracts will bring a significant impact in the local economy. Alternative solutions would be sharecropping. Companies can provide the rest of the land to the farmers to develop and produce for share; if government laws are flexible to allow this. Since most TNCs cannot utilise and cultivate their land efficiently, they can provide for local investors to work in partnership. However, land deal contracts are silent on this situation.

In the end, the effects of TNCs depend on the crops planted, the production mode and the business model they follow. The most positive examples occur in situations where there is a degree of collaboration and synergy between local producers, farmers and the large-scale investors. Inexistence of strong institutions or workable system that mobilises local capacity to either benefit and/or create linkage with TNCs is the major challenge. Government institutions should recognise the demands of the market and redesign their system and education to meet the needs. Besides, the government should be proactive of the impact of the operation of TNCs in the local economy, in general, and on market linkage, in particular, than opting for 'a wait-and- see' approach.

END NOTES

- 1 Many studies use media reports and the Land Coalition Matrix database as source of data. However, it does not differentiate virtual and actual investment.
- 2 Though the phenomenon of leasing large hectares of agricultural land to foreign investors has got media attention as "land grabbing", this paper utilises the neutral term 'Large scale land acquisition'. This is because, domestic investors, joint ventures, Diaspora community are also instrumental in acquiring large tracts of land.
- 3 This was in the first contract signed at district level. The agreement was re-signed in 2010 providing Karuturi only 100, 000ha of land.

- 4 Company officials say they are seeking additional land (around 129,000 hectares) so as to expand and operate in at a bigger scale.
- 5 This reflects the view of two senior researchers in the institute and may not represent the stand of EARI.

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