Challenges Facing Food Processing MSEs in Tanzania

A Qualitative Case Study of the Sunflower Oil Industry in Babati, Manyara

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Abstract

Food processing micro- and small-scale enterprises (MSEs) play an important role in the national economic development of Tanzania. Though many of them have great growth potential, they face a number of constraints hindering further development, and large amounts of cooking oil are imported each year. The aim of thesis has therefore been to identify and analyse the different factors affecting these MSEs in order to find out which the major growth challenges are. The case study is mainly based on individual semi-structured interviews with sunflower oil processors and farmers in Babati districts, conducted in February and March 2016, and earlier research and studies on the topic of MSE growth make up the theoretical framework used for analysis of the data. The findings show that there are indeed numerous challenges facing these processors, and the major constraint was found to be lack of capital; an issue causing or worsening a majority of the other challenges at hand. Other problems are related to raw material, equipment & electricity for processing, regulations, market accessibility, and competition. These obstacles need to be overcome in order to enable the industry's expansion within and outside of Tanzania, and further research is recommended.

Keywords: *Agribusiness; Micro and small-scale businesses; Firm growth; Food value chain; Agro-processing*

Cover photo: Sunflower farm, Babati © Mikaela Ekblom 2016-02-16

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List of abbreviations

BERAS	Building Ecological Recycling Agriculture and Societies
DC-MSE	Micro and Small-scale Enterprise based in a Developing Country
GDP	Gross Domestic Product
ISO	International Organization for Standardization
MBO	Membership Based Organization
MEDA	Mennonite Economic Development Associates
MFI	Microfinance Institution
MSE	Micro and Small-scale Enterprise
MSME	Micro, Small and Medium Enterprise
NGO	Non-Governmental Organization
RLDC	Rural Livelihood Development Company
SIDA	Swedish International Development Cooperation Agency
SIDO	Small Industries Development Organization
SME	Small and Medium-sized Enterprise
SSA	Sub-Saharan Africa
TBS	Tanzania Bureau of Standards
TAFOPA	Tanzania Food Processors Association
TASISO	Tanzania Small Industries Organization
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TFDA	Tanzania Food and Drugs Authority
UMAMBE	Babati Sunflower Millers Association

Definitions

Agribusiness - *"*agriculture regarded as a business; more specifically, that part of a modern national economy devoted to the production, processing, and distribution of food and fibre products and by-products" (agribusiness, 2016).

Food processing - *"*any of a variety of operations by which raw foodstuffs are made suitable for consumption, cooking, or storage. [...] Food processing generally includes the basic preparation of foods, the alteration of a food product into another form (as in making preserves from fruit), and preservation and packaging techniques" (food processing, 2016).

Import substitution - *"*economic policy adopted in most developing countries from the 1930s to the 1980s to promote industrialization by protecting domestic producers from the competition of imports" (import substitution, 2016).

MSEs, SMEs, or MSMEs? - Enterprises are categorized based on the size of the firm, but to date, there is no universally accepted definition (Ngasongwa, 2002). However, when referring to the enterprises targeted in this thesis, the term MSEs will be used in accordance with Tanzania's Small and Medium enterprise development policy (see Table 1). Because their capital investment in machinery is unknown, the categorization will be entirely based on the number of employees. Other authors base their categorization on other definitions[1], and whatever definition they have chosen will be used when referring to their respective studies.

Table 1: The different sizes of firms in Tanzania (Ngasongwa, 2002, p. 3).

Category	Employees	Capital Investment in Machinery (Tshs.)
Micro enterprise	1 – 4	Up to 5 mil.
Small enterprise	5 – 49	Above 5 mil. to 200 mil.
Medium enterprise	50 – 99	Above 200mil.to 800 mil.
Large enterprise	100 +	Above 800 mil.

1 For example, the European Commission uses another definition: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition/index_en.htm

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1. INTRODUCTION

This thesis touches upon the many constraints faced by MSEs based in developing countries (DC-MSEs). Issues related to globalization, trade liberalization, and other complex processes are having large impacts even on the smallest of businesses, and challenges sprung from these phenomena are becoming increasingly difficult to evade. By addressing some of the inter-acting challenges faced by entrepreneurs in the East African country of Tanzania, I hope to contribute with up-to-date knowledge on a most pressing matter.

1.1 Why study MSEs in a developing country?

> *The growth of jobs and GDP in developing countries is heavily dependent on the growth and health of a country's small business sector.* (Chu *et al*, 2007, p. 295)

The vast majority of firms in developing countries are micro or small-scale enterprises (MSEs) (Nichter & Goldmark, 2009). There is no doubt that these businesses have an important part to play in the developing world, and their contributions to development are generally acknowledged (Okpara & Wynn, 2007). Together, MSEs form a sector that generates substantial employment and economic output in countries all over the world (Nichter & Goldmark, 2009).

Since very little is known about the growth of MSEs (Nichter & Goldmark, 2009), and because enterprise dynamics of developing countries remain largely unaddressed in research on firm growth (Sasidharan & Rajesh Raj, 2014), an in-depth examination of this subject seems warranted. Furthermore, studies limited to firms with up to ten workers have been requested by researchers such as McPherson (1996). For these reasons, challenges to MSE development and growth will be the focus of this thesis.

1.2 Why target food processing businesses in Tanzania?

> *Agro-processing provides an opportunity for increasing incomes and creating jobs along the value chain through expansion of forward and backward linkages in the economy.* (URT, 2013, p. 21)

Processing of agricultural products plays a fundamental role in the creation of income in many developing countries (UNDP, 2012), and with an increasingly productive modern agriculture, the need for food processing enterprises increases (Haggblade *et al*, 2010). At the same time, demand for processed food products is stimulated by population growth and increases in income (Farina, 2002).

The food processing industry in Tanzania is highly interesting for several reasons. Currently, about 15.5 million hectares of land are under cultivation, and the agriculture sector absorbs 75 percent of the country's labour force (URT, 2015). With such a large agriculture sector come great opportunities for expanded agribusiness.

Meanwhile, many traditional retailers are being displaced by large-format modern retail stores in an ongoing transformation that started quite recently in Tanzania[2] (Weatherspoon & Reardon, 2003). Will the country's food processors manage to keep up with these changes? This remains to be seen, but the following study will hopefully provide some clues.

1.3 Why focus on sunflower oil production in Babati?

> *[T]he development of the sunflower oil sector has a great potential for improving livelihoods and the welfare of relatively poorer households.* (Xingfei, 2016)

One of the largest sectors of Tanzania's growing food processing industry is animal and vegetable oils (Mmasa, 2013). Sunflower oil is one example of an industry with great growth potential, and the demand is high in both rural and urban areas of Tanzania (Dietz *et al*, 2000). In their market development strategy from 2008, The Rural Livelihood Development Company (RLDC) pointed out sunflower oil as the most important vegetable oil produced in the country (RLDC, 2008). Sunflowers are increasingly popular in several regions, and are

2 When the article was published, in 2003, the authors claimed that the transformation started "very recently" (Weatherspoon & Reardon, 2003, p. 335).

adaptable over a wide range of environments (Larsen *et al*, 2009).

According to a presentation from the BERAS conference 'Soils and the Food We Eat' in 2015, small-scale production of sunflower oil is the most common processing industry in Babati (Kavishe, 2013). Strolling along the streets of Babati town will prove that to you, as multiple processing plants are found scattered all over town. The sheer number of sunflower oil MSEs in Babati is what makes this setting particularly interesting, and for reasons mentioned above, research in such a place should prove highly valuable.

1.4 Problem statement

So far, so good. At first glance, the sunflower oil industry in Tanzania seems quite sustainable and well-functioning. In many aspects this is true, but when investigating the matter further, some previously unnoticed problems become strikingly clear.

Whether they wish to or not, firms entering the market small often remain small-scale due to several constraints and barriers to growth (Coad & Tamvada, 2012). As a result, large-scale processing enterprises are still outnumbered by MSEs despite the growing demand for processed foods in Tanzania (Ruteri & Xu, 2009).

Many of these small-scale agribusinesses rely on poor, labour intensive technologies and operate in the informal sector (Ruteri & Xu, 2009). Indeed, the sunflower oil processors in Babati are mainly small-scale, and their product is often sold locally because it does not live up to standards of the official market (Kavishe, 2013). At the same time, Tanzania is importing large amounts of cooking oil every year (Nyaki, 2013). Food that could have been produced within the country is instead transported long distances across the Earth, causing pollution and emitting large amounts of greenhouse gases in the process (Norberg-Hodge *et al*, 2002).

After taking a closer look, it seems like the potential of Tanzania’s sunflower oil industry is currently suppressed. Is it mainly competition with imported oil that is stalling growth of domestic production, or are there more interacting factors at work? What exactly is hindering Tanzania’s sunflower oil industry from expanding and satisfying the domestic needs for the highly sought cooking oil?

1.5 Purpose & research questions

In a policy brief from 2015, it was concluded that "Much research needs to be done to understand the likely ability of local processing firms to remain competitive in this rapidly changing market" (Snyder *et al*, 2015, p. 1). Moreover, it has proven near impossible to find any peer reviewed articles on food processing MSEs with a Tanzanian focus, indicating this is a gap in the academic literature needing to be filled.

The purpose of this thesis is therefore to identify and analyse the factors affecting the MSEs of this industry, focusing on the sunflower oil sub-sector in Babati. I want to find out how these factors harm or help the industry, and what the major growth challenges are perceived to be. By doing this, I aim at answering my research questions using the framework presented in chapter 3.

Based on the problem formulation and purpose of this study, the following research questions have been formulated:

- *Which are the main factors affecting the sunflower oil processors in Babati, and how are these harming or helping the MSEs?*

- *Which factor is the biggest growth challenge facing these entrepreneurs?*

1.6 Outline

The rest of this thesis is organized as follows. Chapter 2 contains background information necessary to understand the conditions under which Tanzania's food-processing MSEs operate. In chapter 3, the theoretical framework of this thesis is presented and discussed. Chapter 4 contains discussions of used methods for data collection and analysis of the empirical findings. In chapter 5, the findings of this thesis are presented and analysed thoroughly. Chapter 6 and 7 contain an extended discussion and the conclusions of this study respectively.

2. BACKGROUND

2.1 Study area

Tanzania is a country in East Africa bordered by countries Uganda, Kenya, Rwanda, Burundi, Congo-Kinshasa, Zambia, Malawi and Mozambique, with the Indian Ocean to the east (Höglund, 2015a).

Illustration 1: *The United Republic of Tanzania, with Manyara region outlined in red* (Google Maps, 2016).

In 2014, the Tanzanian population was estimated to be slightly larger than 50 million[3], with 69,1% residing in rural areas (Höglund, 2015b). Agriculture is an important source of livelihood for a large part of the population, and nearly 46% of Tanzania's land surface was cultivated in 2012[4]. Important crops include corn, cassava, sweet potato, banana, rice,

3 As this is an estimate, it may deviate from the real number and has to be interpreted with caution.
4 This number includes cultivated land, land used for grazing and land lying fallow.

sorghum and millet. Traditionally, large amounts of coffee and cotton have been farmed and exported out of Tanzania. Due to changes in climate, however, many have found it necessary to switch to other crops such as vegetables and sunflower (Höglund, 2015b).

Manyara region

Tanzania is divided into 30 regions, with Manyara region located in the north central part of the country. The region is in turn divided into a number of districts, and it is the Babati town council and Babati rural district that were selected for this study.

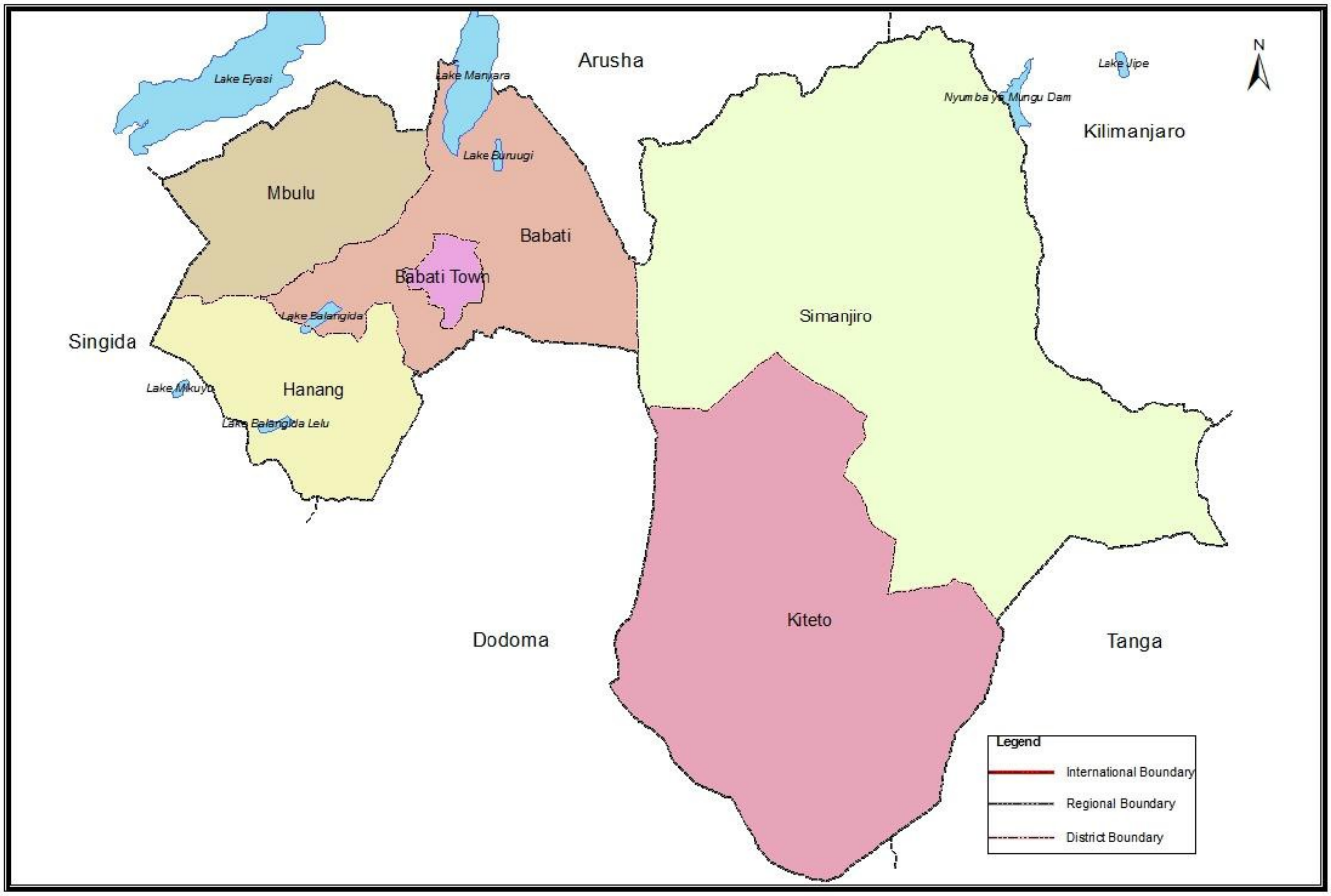

Illustration 2*: The districts of Manyara region, Tanzania* (NBS, 2016).

Babati districts

In the year 2012, Babati district had a population of 312 392, whereas Babati town council had 93 108 citizens (NBS, 2016). At the time of the 2012 census, 28,4% of the Manyara population resided in either of the two districts. Considering the population growth between the most recent censuses[5], carried out in 2002 and 2012 respectively (NBS, 2016), it is likely that the population has grown further in size.

5 Put together, Babati town council and district had 302 253 citizens in 2002 as compared to 405 500 in the year 2012 (NBS, 2016).

2.2 The industry sector in Tanzania

Following the country's independence, the industry sector of Tanzania has undergone dramatic changes. Strategies of import substitution have been followed by nationalization and heavy subsidization, and later liberalization and privatization of the national industry[6] (Gray, 2013). A reform course to reach macroeconomic stability was commenced in the mid-1990s, and brought with it an overall improved economic performance (Kinda & Loening, 2010).

The government withdrawal of state control brought with it numerous possibilities, but also great challenges to the industry sector (Ruteri & Xu, 2009). In the current economic environment, where globalization and trade liberalization have removed many of the 'barriers' previously protecting small-scale firms, many MSEs now succumb to competition in both international and domestic markets (Haggblade *et al*, 2010; Ruteri & Xu, 2009).

2.2.1 Development vision and policies

In the Tanzania Development Vision it is envisaged that by the year 2025, Tanzania should have created an economy which can effectively cope with challenges of development (URT, 2000). Competitiveness is pointed out as a driving force for the realization of this vision, and is to be achieved through different measures such as effective utilization of domestic resources and a strengthened capacity to respond to external changes (URT, 2000).

Here, Small and Medium Enterprises (SMEs) play a key role as they account for a large share of the enterprises in the country[7] (Ngasongwa, 2002). Tanzania has taken a number of measures to promote the growth of SMEs, and several policies aimed at increasing job opportunities through creation of new enterprises and improvements of existing ones have been formulated (Mungaya *et al*, 2012).

In Tanzania's policy on SME development, the importance of these businesses is emphasized repeatedly (Ngasongwa, 2002). The policy provides that "In fact Small and Medium Enterprises are the emerging private sector and do form the base for private sector-led growth" (Ngasongwa, 2002, p. 1). Several other policies aimed at facilitating growth of

6 For a more thorough review of the changes to industrial policy since independence, the paper by Gray (2013) is recommended.

7 In Tanzania's Small and Medium enterprise development policy, the SME nomenclature is used refer to micro, small and medium enterprises (MSMEs) (Ngasongwa, 2002).

Tanzania's economy exist, all with a bearing on the development of the SME sector (Ngasongwa, 2002).

2.2.2 Assistance to the sector

Several institutions and programmes have been established in support of Tanzania's SME sector (Ngasongwa, 2002). One organization particularly important in this context is the Small Industries Development Organization (SIDO) established in 1973. Assistance received from SIDO includes planning, coordinating, and promoting of small industries as well as other forms of services. Other stakeholders such as Tanzania Small Industries Organization (TASISO) and Tanzania Food Processors Association (TAFOPA) collaborate with SIDO in order to further empower the private sector (Ngasongwa, 2002).

Several other organizations and associations assist the private sector in different ways. One example is the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) established in 1988 with assistance from the Swedish International Development Cooperation Agency (SIDA) (TCCIA, 2016). Services provided by the Chamber include business information, training, advocacy and promotion activities, and lobbying is taking place on various levels (TCCIA, 2016).

2.3 The food processing sub-sector

The food-processing industry in Tanzania is dominated by SMEs, and is among the largest branches of industries in the country (Kimambo, 2005; Ruteri & Xu, 2009). Food processors ranging from micro to large scale operate under very different conditions, but are all subjected to an increasing level of competition as was mentioned above (Ruteri & Xu, 2009). Much of the responsibility for the processing functions have been absorbed by the private sector, but the government is still involved in the sense that it facilitates regulatory and public support functions (Mmasa, 2013).

2.3.1 Regulations governing the food-processing sector

Tanzania's food-processing sector is governed by multiple regulations; both those that govern manufacturing firms in general and those aimed at food-processing enterprises in particular (Anderson *et al*, 2014). In terms of establishment, there are more than ten laws regulating the industry. Some of the regulations targeting food-processing firms cut across various sectors, whereas others are specifically aimed at businesses processing particular kinds of food (Anderson *et al*, 2014).

In accordance with The Business Licensing Act, those carrying out businesses for profit are obliged to be licensed, and a Certificate of Registration is issued to the firm once a registration fee has been paid (Anderson *et al*, 2014). Several additional acts govern the food-processing industries in Tanzania. These include, but are not limited to, the Business Activities Registration Act, the Public Health Act, the Environment Management Act and the Tanzania Food, Drugs and Cosmetics Act (Anderson *et al*, 2014).

Tanzania Food and Drugs Authority

Once up and running, the businesses are subject to inspection made by regulatory authorities (Anderson *et al*, 2014). This is done in order to ensure that the firms comply with the national regulations and legal requirements (Anderson *et al*, 2014). One such authority is the Tanzania Food and Drugs Authority (TFDA), and their Directorate of Drugs and Cosmetics provides that "The objective of the evaluation and registration requirement is to ensure that only safe, quality and efficacious products are approved for use in the country" (TFDA, 2014).

In order to become registered with the TFDA, there are certain procedures and requirements that need to be fulfilled. In order to become eligible for registration, the applicant is required to complete the necessary application forms and submit samples of the product or products (TFDA, 2014). The product or products are then assessed by TFDA based on parameters that normally include product particulars, composition of the product, manufacturing processes, quality control, stability reports, type of containers, label claims, and exclusion of prohibited ingredients. If it is in the interest of the public or if it is revealed that false information has been submitted to the Authority, the registration is revoked or suspended (TFDA, 2014).

Tanzania Bureau of Standards and sunflower oil standards

Tanzania Bureau of Standards (TBS) is a parastatal organization under the Ministry of Industry and Trade serving as the national standards body of Tanzania (TBS, 2016). TBS is a member of the International Organization for Standardization (ISO), and "its broad mandate is to promote standardization and quality assurance in industry and commerce sectors" (TBS, 2016).

The TBS-certification is a third-party attestation that a product or service meets with specified requirements (TBS, 2016). Certification is earned by firms whose products and practices prove conformity to relevant standards, and application is made to the Director General. Like the TFDA, TBS carries out inspections to ensure that the products adhere to the standards of the Bureau, and the certificate has to be renewed annually. Furthermore, the TBS-certification services are free to SMEs in the country (TBS, 2016).

In a specification from 2010, the requirements and methods of sampling for refined sunflower oil are prescribed (TBS, 2010). In order to obtain certification, the oil needs to be clear and free from any foreign matter, and the level of contaminants need to be under certain levels. The product also has to meet with requirements regarding packaging, marketing and labelling. The refined oil has to be packaged in clean, dry, new, non-absorbent and air-tight containers. Furthermore, the sampling procedures are also specified (TBS, 2010).

2.4 Processing techniques

Processing seeds into oil is done in multiple steps, and several different kinds of techniques exist depending on the type of oil and scale of production (Fellows & Axtell, 2012). At early stages, the raw material is cleaned and shelled, whereafter winnowing, grinding, heating, and extraction is carried out. Traditionally, hot water extraction has been used to extract the oil from sunflower seeds. However, screw presses, hydraulic presses, and expellers are most common for extraction at small- and medium-scale production nowadays. This is then followed by filtering, drying, and optional de-odourising. The final product is then stored in tanks or bottles (Fellows & Axtell, 2012).

Illustration 3: Sunflower oil expeller (front) and filtering equipment (back) at a processing plant in Gallapo, 2016-02-25.

3. THEORETICAL FRAMEWORK

The theoretical framework for this thesis is based on several prior studies, all of which have been published in peer-reviewed, academic journals. These are based on research on Tanzanian enterprises and firms in other African countries, as well as in countries of other continents. The reason for not limiting this framework to articles with a Tanzanian focus is because it has been considered that valuable lessons can be learned in the context of other developing countries as well.

In the literature found on DC-MSE growth and adjacent topics, several factors affecting these firms have been identified. The six sets of factors most relevant to this case study have been hand picked and will be presented below. These will then be used as a framework for analysis of the empirical findings of this study.

3.1 Financial resources

Limited access to finance and lack of capital have been identified as constraints in most papers investigating obstacles to growth of small enterprises in Africa and elsewhere (Nichter & Goldmark, 2009; Sasidharan & Rajesh Raj, 2014; Chu *et al,* 2007; Mukantwali *et al*, 2012; Okpara & Wynn, 2007; Kinda & Loening, 2010; Bigsten & Söderbom, 2006; Ruteri & Xu, 2009). MSEs tend to face greater financial constraints than do firms of larger scale (Nichter & Goldmark, 2009), therefore issues related to capital will be discussed closely.

In their paper on growth barriers of informal sector enterprises in India, Sasidharan & Rajesh Raj (2014) found that the declining rate of firms increased when credit availability was absent. Meanwhile, increased availability of credit was proven to enhance growth prospects of firms in expansion (Sasidharan & Rajesh Raj, 2014). This leads to the conclusion that low availability of credit limits these growth prospects.

Limited finance has also been pointed out as a major obstacle in articles from various African countries. For instance, Okpara & Wynn (2007) describe lack of financial support as a major problem in sustaining a small-scale enterprise in Nigeria. Receiving bank loans is pointed out as a challenge, and loans provided by micro-finance institutions are small with high interest rates (Okpara & Wynn, 2007). Moreover, limited access to credit has been pointed out as a key constraint for SMEs in Rwanda, Ghana and Kenya as well (Mukantwali

et al, 2012; Chu *et al,* 2007).

In their article surveying research on the African business environment, Bigsten & Söderbom (2006) found that the major constraint cited by enterprise managers in Africa was indeed financing. When using data from various countries and regions in Africa, it was found that the relationship between financial constraints and growth was significantly negative. After discussing the adverse effect that limited financial resources have on business growth, the authors go on to discuss reverse causality, meaning that bad performance and slow growth of firms can result in difficulties in receiving financial support (Bigsten & Söderbom, 2006). This means that if can be hard to tell when lack of capital causes slow growth, or when the opposite is happening.

Although the number of articles investigating obstacles to small business growth in Tanzania is small, a few were found. One such paper was written by Ruteri & Xu (2009) who, after analysing their findings based on questionnaires filled out by 23 food processors, concluded that those business were having a hard time receiving loans from banks. This was in turn pointed out as an obstacle to development of those enterprises, as their growth possibilities were limited by lack of financial resources (Ruteri & Xu, 2009). Furthermore, in an article on small enterprise growth in rural Tanzania, 61 percent of the entrepreneurs rated financing as a severe constraint to business operations (Kinda & Loening, 2010).

3.2 Raw material

Another set of factors, in some ways particularly important to food processing businesses, are related to the supply and quality of raw material. Because the food processing MSEs are highly dependent on the input of raw material, farm-level constraints can have a large impact the non-farm sector. Erratic weather conditions and droughts severely affect agricultural output while also implying significant income risk to those engaging in agriculture (Kinda & Loening, 2010).

Furthermore, seasonality crises create uncertainties for the enterprises relying on agricultural products (Tersoo, 2013). During periods of low production it might be necessary to source raw material from other districts or nearby regions, as was the case for the Nigerian pineapple processing enterprises investigated by Mukantwali *et al* (2012). However, they also found that small firms faced less problems in obtaining the amount of raw material they needed than did larger enterprises, simply because it is easier to acquire smaller quantities

(Mukantwali *et al*, 2012).

As pointed out by Ruteri & Xu (2009), food processors in Tanzania have been facing challenges and difficulties in securing raw material of high quality. Because it is difficult to find raw material of good quality all year round, inconsistency is a problem that has proven hard to overcome (Ruteri & Xu, 2009).

Furthermore, poor quality of raw material was reported as a constraint by several of the pineapple processors discussed above (Mukantwali *et al*, 2012). However, only a few of these have signed contracts with suppliers of pineapple (Mukantwali *et al*, 2012). The same is the case in Nigeria, where farmers refrain from signing contracts if they have the option of selling their produce to a higher price in fresh markets (Ogori & Joeguluba, 2015). In other cases, MSEs enter into contracts in order to secure the supply of raw material and facilitate business growth (Nichter & Goldmark, 2009).

3.3 Equipment & electricity for processing

The financial resources that remain after obtaining the raw material for processing in turn affect many other factors determining the failure or success of food processing businesses. The ability to acquire appropriate technology for processing and packaging is among these, and it has proven to be a particularly large problem for MSEs in developing countries (Nichter & Goldmark, 2009).

In their article on Tanzanian food processors, the authors write that "In spite of available advanced technologies around the world, most food processors (especially small and medium enterprises) in the country still use poor and labour intensive technologies" (Ruteri & Xu, 2009, p. 76). The explanation is, again, insufficient capital (Ruteri & Xu, 2009).

Access to equipment and packaging materials is a problem for small-scale food processing enterprises in Rwanda as well (Mukantwali *et al*, 2012). These enterprises can hardly afford modern equipment and suitable packaging material, which leads some to use recycled packaging materials (Mukantwali *et al*, 2012).

Many processors do seem to refrain from buying new technology, and one explanation for this is given by Bigsten & Söderbom (2006). Because the second-hand market for used machinery is small, investment in technology is irreversible. In case of uncertainty and a high risk of demand shocks, business owners therefore tend to be somewhat reluctant to invest in new machinery (Bigsten & Söderbom, 2006).

Power supply is another important factor for enterprises relying on electricity for running their machinery. Power failures affect production, and reliable electricity supply has been a long time problem facing Tanzanian processors (Ruteri & Xu, 2009). Shortage of power supply has been pointed out as a major growth barrier to enterprises operating in India's informal sector by Sasidharan & Rajesh Raj (2014), and is a challenge to businesses in both urban and rural areas (Sasidharan & Rajesh Raj, 2014; Coad & Tamvada, 2012). However, it seems like small firms are more vulnerable to problems of power shortages than are larger firms (Coad & Tamvada, 2012).

Furthermore, electricity fees can be a challenge to many businesses, such as the small-scale pineapple processing enterprises studied by Mukantwali *et al* (2012). In their paper, it was revealed that 81,5% of the 27 enterprises have encountered problems related to the high cost of electricity and water (Mukantwali *et al*, 2012).

3.4 Regulations

Financial resources also affect the possibility to meet the regulations of both national and international standards, since doing so requires "significant investments in terms of upgrading facilities, purchases of new monitoring systems and ongoing expenses associated with new technical staff" (Mather, 2005, p. 609). Instead of investing in expensive laboratory tools to assess the quality of the product, many small enterprises have come to rely on sensory evaluation (Mukantwali *et al*, 2012).

As pointed out by Weatherspoon & Reardon (2003), export standards and domestic retail-product standards converge most of the time. This means that a majority of those who cannot meet with export standards are excluded from the domestic formal retail-chains as well (Weatherspoon & Reardon, 2003). This is a particularly large problem for small-scale processors with limited capital to make the investments required (Mather, 2005). Furthermore, a majority of the small- and medium-scale processors interviewed by Mukantwali *et al* (2012) found that regulations of the national bureau of standards were too restrictive.

Strict regulations affect the growth of many MSEs, which in turn can limit profit and available capital. The regulatory environment was pointed out by Nichter & Goldmark (2009) as hampering small enterprise growth in developing countries, and indeed, a negative and statistically significant relationship has been found between regulations and growth in sales (Bigsten & Söderbom, 2006).

Being registered with an authority, however, can grant legitimacy to the business owners in terms of obtaining bank loans (Sasidharan & Rajesh Raj, 2014). Sasidharan & Rajesh Raj (2014) argue that signalling legitimacy reduce growth barriers further, and Kinda & Loening (2010) found that registration with a government office is significantly related to employment growth. On the other hand, registration fees are perceived as too high by entrepreneurs in rural Tanzania, and thus many refrain from registering (Kinda & Loening, 2010).

3.5 Market accessibility

Registering and meeting with national and international standards can give MSEs access to previously unreachable markets, while failing to do so limits such an expansion. Exporting has been observed to have a positive effect on firm growth, and has been pointed out as a promising route to development in Africa (Coad & Tamvada, 2012; Bigsten & Söderbom, 2006). Because many small-scale enterprises struggle in meeting with international standards, however, the growth potential that comes with exporting is stifled (Anderson, 2011). For example, using indigenous technology often results in a low-quality product that does not meet with standards of the international market (Anderson, 2011).

Physical access to markets is another problem faced by some, and challenges related to poor infrastructure have been investigated by researchers such as Kinda & Loening (2010) and Bigsten & Söderbom (2006). As the authors put it, "The poor infrastructure in Africa is likely to be a particularly severe constraint to manufacturing growth" (Bigsten & Söderbom, 2006, p. 249). They point out that poorly developed transport infrastructure create pockets of demand that tend to generate localized producers of small scale (Bigsten & Söderbom, 2006).

More authors have discussed the consequences that poor infrastructure has on small-scale enterprises. For instance, Okpara & Wynn (2007) point out that inaccessible roads both limit distribution and lead to an increase of transportation costs, and poor infrastructure was listed as a major problem by 96 percent of the small-scale businesses questioned (Okpara & Wynn, 2007). Furthermore, problems related to poorly-maintained roads become an even bigger challenge during the rainy seasons in countries such as Tanzania (Ruteri & Xu, 2009).

3.6 Competition & demand

Which markets can be accessed by food processing enterprises in turn affects the level of

competition faced. As Mather (2005) argues in his study on South African SMEs; to be competitive, food processors need to invest in modern processing equipment in order to meet the standard requirements of the market (Mather, 2005). Here, the issue of capital makes itself felt yet again.

The Ghanaian and Kenyan entrepreneurs questioned by Chu *et al* (2007) listed high competition as one of their most serious problems. Furthermore, Ruteri & Xu (2009) argue that the small scale of production itself makes food processing enterprises less competitive than their larger counterparts. As suggested by the authors, firms need to provide products and services that customers perceive as valuable in order to overcome this challenge (Ruteri & Xu, 2009).

Competition is not only occurring between domestic enterprises, and Ogori & Joeguluba (2015) describe the challenge of competing with the low prices of imported products: "Nigeria's agriculture sector appears to be losing out to imported processed food products, and is unable to compete because of low productivity of her processing units" (Ogori & Joeguluba, 2015, p. 1). Because the price of imported processed foods limits the amount processors can pay their raw material supplier, the possibility to compete with imported products is slim (Ogori & Joeguluba, 2015).

Related to the issue of competition is the level of demand for the product, and low demand can cause inertia in development of these small businesses (Okpara & Wynn, 2007). Here, seasonality can be important since demand sometimes varies over the course of one year. For example, in Rwanda, processed pineapple products are in high demand during the dry season, and low during the rainy months (Mukantwali *et al*, 2012).

3.7 A summary of the identified factors

As is made clear by previous research, several factors determine the success or failure of MSEs. Six important sets of factors that can potentially constrain the food processors have been identified. They are the following:

- Financial resources
- Raw material
- Processing & packaging
- Regulations

- Market accessibility
- Competition & demand

The order in which the identified factors appear is not random, and an explanation seems warranted. The reason for putting financial resources first is because these determine the amount and quality of raw material that can be acquired. The remaining capital then determines what kind of technology for processing and packaging is afforded, which in turn determines whether the firm is eligible for registration and certification or not. If a firm is registered and certified market accessibility increases, whereas the opposite happens when the business fails to meet with these regulations. Which markets are accessible determines the level of competition and demand faced by the firm, which in turn determines the amount of profit made. Thus, the "circle" is closed and we are back at the stage of capital.

However, it is important to emphasize that these factors affect one another in a more complex manner than what is depicted here. Furthermore, internal and external factors besides those that have been mentioned are at work. These insights are important to bear in mind, since ignoring them might result in misinterpretation and oversimplification of the current situation. However, for reasons discussed in section 4.2.2, only these six sets of factors will be investigated.

4. METHOD

Research can be conducted in numerous different ways, and after careful consideration of different possible approaches, a qualitative method was chosen for this study. A main objective of this kind of research is to investigate the attitudes and perceptions of human beings (Yin, 2013), which corresponds to the purpose of this thesis. Furthermore, qualitative methods are often preferred when the goal is to understand and explain a certain phenomena (Repstad, 1999). Since the purpose has been to identify and understand major challenges in the eyes of the selected entrepreneurs, a qualitative approach was considered most suitable.

4.1 Data collection

In this section, the process of data collection is described step by step This is done in order to achieve transparency and hence increase the reliability of the study.

4.1.1 The case study approach

The research of this thesis has been carried out as a case study, meaning that it is an investigation of a specific area; a particular case (Yin, 2013; Repstad, 1999). In this case, the sunflower oil industry in Babati has been targeted, and the empirical material for this study was collected during a field trip to Babati rural district and Babati town council in Manyara region, Tanzania. The duration of the visit was 21 days; from the 15th of February to the 6th of March in 2016. Out of this time, two weeks were set aside for the collection of empirical data. The fieldwork underlying this thesis was carried out in three different towns and villages in the districts: Babati town, Gallapo trading centre and Mamire village. By conducting interviews in these different places, a more nuanced analysis has been made possible.

4.1.2 Selection of respondents and key informants

The primary data used in this thesis was gathered through key informants as well as respondents. The difference between these is that informants serve as a kind of extra observer,

while respondents provide more direct information on attitudes and opinions (Repstad, 1999). The key informants interviewed were Mrs Hussein; executive officer at TCCIA, and Mr Ndili; field coordinator of Mennonite Economic Development Associates (MEDA). A majority of the respondents were sunflower oil processors, though some farmers were interviewed as well.

The field assistant assigned to me served as a key informant for this study. All remaining respondents were found using snowball sampling, meaning that an informant identifies suitable respondents (Repstad, 1999). Because my field assistant is working with many of the sunflower oil processors in Babati, she was able to recruit a number of suitable respondents for this study. The key informants were interviewed because of their knowledge on the subject, whereas the interviews with processors were conducted to reveal challenges perceived by them as respondents. The farmers were interviewed to gain understanding of the challenges appearing at farm-level, since these also have an impact on the processors.

When selecting which respondents to recruit, a purposive sampling method was used. This technique involves the conscious choice of dissimilar subjects providing different, sometimes even contradictory, data (Yin, 2013). The selected sample fulfils this criteria since it includes both male and female respondents of different ages, owning companies in different locations. The respondents hence face different challenges and have developed unique attitudes towards these. The purpose of using such a sample is to reveal a diverse set of perceptions and information (Yin, 2013). However, this way of collecting data does not result in a representative sample, and conclusions of the study cannot be used to make generalizations of any kind (Yin, 2013).

4.1.3 Semi-structured interviews

All interviews of this study were of semi-structured character. This means that the interviews were only partially structured, because neither a fully structured nor entirely unstructured approach were considered suitable. These two are presented as extremes by Teorell & Svensson (2007), who describe structured interviews as allowing no room for changes to the questionnaire, whereas unstructured interviews are conducted completely without steering on behalf of the interviewer. A semi-structured approach was chosen because there were certain questions I needed answered. At the same time, it was considered important to leave room for follow-up questions from both interviewer and respondent.

A total of 13 interviews were carried out, each with a duration of around 40 minutes. This

was deemed to be an appropriate length, since it allowed for me to dig deeper into each theme without tiring the respondent. Most interviews were conducted at the processing plants of the entrepreneurs, although some were carried out away from the location of the business. The key informants were interviewed in their respective offices, and one of these interviews was recorded in order to avoid losing any information.

The first interview was conducted as a pilot. The purpose of this was to determine the appropriateness of the prepared questionnaire. During the first interview, mental notes were taken on which questions that needed to be rewritten, which ones to exclude and what was missing altogether. After this pilot interview I sat down with my field assistant and went through the questions one by one. The reason for this was that I needed her to point out flaws that could only be identified by her as an interpreter. For the interviews with the remaining processors, this new structure was used consistently with exception of some follow-up questions.

4.1.4 Collection of secondary data

When using qualitative methods, it is common to combine the empirical data collected through interviews and observations with information from secondary sources (Yin, 2013). This process, commonly known as triangulation, is done in order to strengthen the credibility of the conclusions reached (Yin, 2013). Prior to the two weeks of fieldwork, articles and reports on the subject were read not only to collect secondary data for triangulation, but also in order to obtain knowledge on the research field. These preparations are an important part of qualitative research, and neglect of this step is strongly dissuaded by Yin (2013). A majority of the articles published in scientific journals were found by searching online databases such as SöderScholar and Google Scholar, and in order to find relevant material, combinations of keywords and phrases such as “small business growth”, “food processing”, “growth challenges” and “agribusiness” were used. These articles were in turn cited by other authors conducting research on similar topics; some of them useful for this thesis. Furthermore, reference lists were checked for further articles of relevance.

4.2 Critical reflections

Because a qualitative approach was chosen for this thesis, it will not be possible to generalize and draw conclusions regarding the entire industry (Repstad, 1999). Quantitative research is preferable when the aim is to draw conclusions regarding the targeted population as a whole (Repstad, 1999), but would require the use of a representative sample and execution of statistical tests. However, two weeks was considered a much too short period to collect enough empirical data to accomplish this. Also, considering the nature of the research question and thesis as a whole, a qualitative method was deemed to be enough.

4.2.1 Challenges during the fieldwork

A few challenges arose during the two weeks of fieldwork. One problem regarded the accessibility of suitable respondents. For instance, I couldn't get in contact with the board of Babati Sunflower Millers Association (UMAMBE) due to the fact that the organization has been facing managerial problems. Furthermore, the people owning sunflower oil enterprises turned out to be very busy and sometimes unable to set aside time for an interview. This resulted in several postponed or cancelled interviews, which in turn reduced the total amount of analysable material. However, it was concluded that the amount of data collected was enough for this thesis.

Another challenge was related to the communication between me as an interviewer and the respondents. Nearly all of my interviews required an interpreter for translation of both questions and answers, from English to Swahili and vice versa. Some information was undoubtedly lost due to inevitable rephrasing and summarizing made by the interpreter. Even though some details were left out in the process of translation it is not thought that any data of great importance was lost, and in cases of uncertainty, the interpreter was consulted.

4.2.2 Delimitations

As has been mentioned, this is a case study investigating only a few of the most important factors affecting sunflower oil processors operating in Babati in February-March 2016. Micro- and small-scale businesses of up to ten employees have been targeted, but the sample is diverse in the sense that it contains respondents of different gender, age, and level of

education. Because the interviews were conducted at a time of low production, when many of the smallest processors close down temporarily, these were not found and included in the sample. Therefore, the sample is unintentionally limited to some of the most successful firms in Babati.

Furthermore, only the subjective perceptions of the respondents are to be analysed, but like what was found in the study of Kinda & Loening (2010), the felt challenges are thought to be largely consistent with actual constraints. In other words, I believe that the findings of this study coincide with those that would be reached when studying business failure or success in a more objective manner using official statistics.

Due to practical limitations, some challenges identified in the literature were not targeted in the collection of primary data. Therefore, they cannot be analysed within the scope of this thesis and have been left out of the framework. For instance, it was decided that no analysis was to be made of the sample's characteristics in relation to growth. This would have moved the analysis away from the aim of this thesis; something that I wanted to avoid. The excluded factors may be affecting the targeted processors, but were not mentioned in any of the interviews and have therefore been left out.

4.3 Method of analysis

After the two weeks of fieldwork, analysis of the findings was commenced. Yin (2013) describes qualitative data analysis as conducted in five stages or steps:

1. Compilation of data,
2. Disassembling of data,
3. Reassembling of data,
4. Interpretation of data,
5. Drawing of conclusions (Yin, 2013).

The first step of analysis involves compilation of the collected data into a comprehensive dataset (Yin, 2013). This was done soon after returning from Tanzania in order to detect any deficiencies with the interviews still fresh in mind.

The second step, disassembling of data, is done in order to identify patterns in the dataset

(Yin, 2013). The compiled interviews were read repeatedly in order to detect such patterns, and the responses were highlighted in different colours depending on the theme of the quote. The data was then reassembled into new groups based on the colour and corresponding theme of the quote, as a part of Yin's (2013) third stage of analysis. The different themes that appeared at this stage are the same as those presented and analysed in the next chapter.

The fourth stage of analysis involves interpretation of the reassembled data (Yin, 2013). This is where the findings are deciphered and explained; a step of great importance to the quality of the study. At this stage, the empirical data were compared to findings of prior research. This was done in order to identify where my own results and those of others converge or deviate.

Fifth, conclusions were drawn based on the findings and analysis of the study, pointed out as the final stage of analysis by Yin (2013).

5. FINDINGS & ANALYSIS

To make reading of this chapter easier, the identified factors are categorized like in chapter 3, but despite being presented individually these are not to be seen as detached from one another. As was mentioned earlier, these are interrelated and many of them appear at multiple stages of the value-chain.

5.1 Financial resources

Lack of capital was pointed out as a major challenge both by the key informants and respondents of this study[8], and as was made clear in the framework of this thesis, this is frequently mentioned as a growth obstacle in the literature as well. Insufficient financial resources was mentioned as a constraint at all stages, starting as a barrier to entry into the sunflower oil business. When asked if they ever considered starting a sunflower oil processing enterprise of their own, two out of three farmers answered that they had. The reason for not taking this step was, again, lack of capital. The money earned from the farm was needed to pay for school fees, reparations of the house and to feed the family. After these expenses had been paid, none was left to build up capital and invest in a processing business.

In accordance with Kinda & Loening (2010), the low start-up rates of businesses in Tanzania does seem to be a result of high investment constraints. As opposed to many other sectors, several investments are needed to start up a sunflower oil business. These range from the purchase of machines and packaging materials to payment of electricity fees, transport, and marketing. Putting that much money into the start-up of a business might therefore be a risk that many are simply unwilling to take. Furthermore, nearly all of the interviewed processors used their own savings to start up their sunflower oil business. They did not manage to get loans until the enterprise was up and running, indicating that it is difficult to get a loan at the start-up phase of a new food processing business in this area. The difficulties in receiving financial support is further discussed at the end of this section, as this is a challenge appearing at all stages from farm-level to start-up, persistence and growth of the firm.

Even though most of the selected enterprises had been operating for many years, most owners claimed they still faced challenges related to limited capital. Unpredicted expenditures

8 For more information on the characteristics of the processors and their firms see Appendix I (p. 45)

such as machine repairs can have disastrous consequences for the MSE owners if they don't have money set aside for such events. Insufficient financial resources was found to be a major problem in sustaining a small-scale business in Nigeria as well (Okpara & Wynn, 2007), indicating this is a problem felt by several DC-MSE owners in Africa and elsewhere.

Furthermore, capital was mentioned as a major obstacle to further growth and development of the enterprises of the current study. As one processor put it:

> *The big issue is capital, if you have money everything will be possible. Advertising, TBS, packaging. It will be possible to achieve a higher level of skills.* (Respondent 4, February 24th)

Such findings coincide with those of Bigsten & Söderbom (2006) and are consistent with the arguing of Mukantwali *et al* (2012). Moreover, other studies have found a significant positive correlation between increased access to finance and enterprise growth (Sasidharan & Rajesh Raj, 2015; Kinda & Loening, 2010). Considering this, it was hardly surprising that the sunflower oil processors identified lack of capital as a major obstacle to growth.

That most respondents had received loans at some point was a somewhat surprising finding, however, considering the financial struggles depicted in the interviews. This indicates that the benefits of these loans have been limited, perhaps due to the high interest rates of local financial institutions described by Ruteri & Xu (2009). Also, it is not clear whether these loans were actual bank loans, or if the money was borrowed from friends, family or other informal sources. Either way, it seems like the respondents had limited possibilities of receiving loans.

5.2 Raw material

The second set of issues are related to the availability and quality of raw material. Crop disease was pointed out as a main challenge by nearly all the farmers; some of these treatable while others were not. Also, insufficient or heavy rainfall adversely affected the farmers and their harvest, resulting in lower yield. Erratic weather conditions was described by Kinda & Loening (2010) as implying a significant income risk for those engaging in agriculture. While this is true, loss of income does not only hit the farmers but the processors are affected as

well. If events such as drought hit an entire village or region, those looking to buy local sunflower seeds could face serious problems in finding raw material at a reasonable price.

When the sunflowers are harvested[9], the price of seeds go down as a result of the increased supply. The opposite happens between harvesting periods, resulting in limited availability of seeds sold at a higher price. All of the processors interviewed experienced challenges due to the price fluctuation of sunflower seeds. When asked if the price fluctuation was a problem to his business, one of the processors answered:

> *Yes, this is a problem because the price is really high in low seasons. The price can be twice as high compared to high season. Now it's around 60 000, in high season it can be as low as 30 000.* (Respondent 3, February 21st)

This means that the processors with limited storage capacity are hit hard by such price fluctuations. Prior research has described seasonality as a challenge in the sense that it causes uncertainty and inconsistent quality (Tersoo, 2013; Ruteri & Xu, 2009), but the issue of price fluctuation has not been discussed to any great extent. Mukantwali *et al* (2012) touched upon the issue, but did not reflect on the resulting challenges.

To overcome the challenge of price fluctuations, the processors had a storage for seeds bought when the supply was abundant. All processors claimed to have some kind of storage where they kept a stock of seeds. These were then used to keep the mill running in between harvests, and oil could be produced all year round. The amount of oil produced was smaller, but enough to keep these businesses afloat even in low season. As was explained by Mrs Hussein, other MSEs in the area are forced to shut down during low season due to shortage.

Another issue is related to the quality of raw material. As explained by Mr Ndili, there are several kinds of sunflower seeds that produce varying amounts of oil depending on their quality. Some processors experienced difficulties in finding these quality seeds, a finding coinciding with those of Ruteri & Xu (2009). This means that many rely on seeds of low oil content, resulting in lower quantities of oil produced. In turn, this limits the profit made from each bag of sunflower seeds purchased.

Yet another challenge is the competition for seeds. All respondents felt like the competition for seeds was high, but most managed to get the amounts they needed even though some had to purchase raw material from outside Babati. As explained by Mukantwali *et al* (2012),

9 The farmers of this study harvest their sunflowers somewhere in between April and July.

small-scale enterprises usually have less of a problem acquiring raw material than do their larger counterparts, simply because they need smaller amounts. This would explain why the respondents manage to get the amount they need despite high levels of competition described.

None of the processors interviewed had any current contracts with farmers to secure their supply of sunflower seeds, however, but the reason for refraining from signing a contract seemed to vary between the different respondents. One of the interviewed processors explained:

> *I have been facing challenges in signing contracts with farmers. Sometimes they help to grow the seeds, but at the end they break the contract. (*Respondent 4, February 24th)

The quoted processor had repeatedly entered into mutual contracts with farmers who failed to deliver what had been promised. One of the other processors claimed that he had not signed any contracts because the farmers could not agree on a fixed price. These responses indicate mistrust on behalf of some processors, which might explain why mutual contracts of this kind are infrequently signed.

Mukantwali *et al* (2012), who also found that contracts are relatively rare, did not reflect on the reasons for this. The explanation given by Ogori & Joeguluba (2015); that farmers have little incentives to honour contracts when these are not enforceable, seems applicable to the findings of the current study however. This is what happened to the respondent quoted above, and refraining from signing contracts seems like a natural response to such events.

5.3 Equipment & electricity for processing

Several challenges were found to be associated with this third set of factors. As was pointed out by Mr Ndili, technology is a major constraint for the sunflower oil processors in Babati. According to Ruteri & Xu (2009), the problem is not that high quality equipment is unavailable in Tanzania, but that the entrepreneurs lack enough capital to acquire it. Because poor technology has been pointed out as a business constraint in other studies as well (Tersoo, 2013; Mukantwali *et al*, 2012), these findings were expected.

Only one of the respondents claimed to be satisfied with the machines used for processing sunflower oil. However, this person was not the business owner but an employee at one of the

processing plants, therefore this opinion may not have corresponded to that of the enterprise proprietor. This business had only been operating for a year at the time of the interview, perhaps using new and modern machines, which might explain this perception. However, another processor who bought his current equipment only two months before the interview already found it inadequate. It seems like he had to settle for mediocre equipment due to inability to obtain machines of higher quality.

Like Bigsten & Söderbom (2006) argue, investments in new technology are more or less irreversible due to a very limited second-hand market for such machines. Therefore, it is not surprising that this financially constrained processor chose to purchase low quality equipment at a cheap price. Considering the relatively large risk of seasonality shocks in agribusiness, it makes sense that one searches for cheaper alternatives when such can be found.

A majority of the processors expressed some dissatisfaction regarding the production performance of their machines. The equipment limits the amount of oil that can be produced per day, and as one processor put it:

> *For the low season it is enough, but not in the high season. Maybe I will buy new equipment later on.* (Respondent 3, February 21st)

The machines of the MSEs could process two, three or in some cases four bags of sunflower seeds per hour. Some respondents considered this to be enough at the moment, but many felt that the limited capacity of their equipment posed an obstacle to further growth.

As was mentioned by Mr Ndili, improper packaging is another issue for some of these processors. Some confirmed that they bottled the sunflower oil in used containers such as plastic water bottles, and most did not have a label for their product. As was pointed out by Ruteri & Xu (2009), food processors in Tanzania face difficulties in securing appropriate packaging material, and quality packaging material is hard to find within the country. Because importing appropriate packaging materials is expensive, it makes sense that those with limited capital stick with recycled containers.

Electricity supply and price was also found to limit these enterprises in different ways. Because they relied on electricity for running their machines, these processors were highly dependent on reliable and affordable power supply. However, electricity was repeatedly pointed out as too expensive, and the power supply was described as unpredictable. These findings coincide with those of multiple other studies (see for example Okpara & Wynn, 2007;

Sasidharan & Rajesh Raj, 2014; Coad & Tamvada, 2012; Mukantwali *et al*, 2012), indicating that insufficient and expensive electricity supply is a widespread problem for DC-MSEs. Consistent with previous research, the electricity challenge is twofold in the sense that power supply is both expensive and unreliable, and like with a majority of challenges identified in this study, money is needed to solve the problem. Using a generator makes it possible to operate during power failures, but results in increased production costs (Ruteri & Xu, 2009). So not only do processors need to invest in a generator; they also need to be able to cope with the consequences of decreased profit.

5.4 Regulations

As was explained by Mrs Hussein, lack of TBS-certification is a constraint to the sunflower oil processors in Babati. One of the respondents interviewed worked at a company where he claimed that certification had been obtained. The employee working for this firm found this kind of certification important, since it enabled them to do business anywhere; even outside of Tanzania. Despite the competitive advantages that come with TBS-certification however, only one out of the eight selected enterprises produced TBS-certified sunflower oil. All respondents were familiar with the regulations and requirements of this certification, and most seemed to be aware of what they were missing. As one processor put it:

> *No, I don't have TBS. This is because of a lot of standard issues: you need to have good machinery and enough packages for the products. You also need the special machine to seal the product. A lot of qualifications are needed, it's hard for people like me with small capital to qualify for TBS. (*Respondent 4, February 24th)

Insufficient equipment was repeatedly mentioned as a main problem among those who wanted to become certified with TBS. Also, area for storage and being located in residential areas were pointed out as obstacles. This leads us back to previous reflections regarding equipment, again indicating that the different challenges are interrelated in several ways.

Failure to meet the various requirements of TBS was repeatedly mentioned as a major obstacle to growth of the processing enterprises, as is consistent with previous research (Nichter & Goldmark, 2009; Bigsten & Söderbom, 2006). Many expressed a desire to obtain

the certification for the purpose of exporting their product, clearly indicating that they wish for their businesses to grow. Based on the responses of the interviewed processors, it is clear that most wished to become certified but were unable to due to strict qualifications. Mukantwali *et al* (2012) reached the same conclusion for a majority of their sampled enterprises, indicating this is a problem shared by a number of DC-MSEs.

Most firms were registered businesses, however, and having a business license was described as helpful when in need of governmental assistance. As was proven by Sasidharan & Rajesh Raj (2014), registered firms do survive longer. This might be part of the explanation as to why a majority of the sampled sunflower oil firms are relatively old[10].

All but one of the entrepreneurs of this study claimed to have registered their businesses, however, the reason being that this is compulsory. In Kinda's & Loening's (2010) study on small enterprises in Tanzania, however, more than half of the unregistered entrepreneurs claimed that there is no need to register. The awareness is thus higher among the respondents of the current study, where only one respondent did not know registration was mandatory. Furthermore, Kinda & Loening (2010) found that urban firms were registered to a greater extent than their rural counterparts. Even though the sample of sunflower oil processors is too small and skewed to be representable of the entire industry, it is interesting to note that the only unregistered firm operates in Babati rural, reflecting the pattern revealed by Kinda & Loening (2010).

5.5 Market accessibility

Despite a high level of competition between Tanzanian and foreign processors, most of the respondents agreed that they had no problem finding customers for their product[11]. This indicates that they were relatively successful in their current market, but does not necessarily mean that they were content with being limited to this market. For instance, access to other customer segments might increase sales and profit, and could therefore be a goal for many of the entrepreneurs. Several direct and indirect factors determine access to markets, and will be discussed further below.

First, some of the processors in rural parts of Babati expressed having a limited physical access to some markets, due to problems regarding transportation:

10 All but one were around 10 years old at the time of the interviews. For exact ages of the sampled enterprises, see Table 2, Appendix I (p. 45).
11 As is further discussed in section 5.6.

Possibilities to transport to and from the village are insufficient, it's difficult to reach both markets and suppliers. (Respondent 5, February 25th)

This finding corresponds to those of previous studies, where poor road infrastructure has also been pointed out as a constraint (Kinda & Loening, 2010; Bigsten & Söderbom, 2006; Okpara & Wynn, 2007). The processor quoted above described that problems related to transportation worsen during periods of heavy rain, further limiting the possibilities for expansion and development. This is in accordance with Ruteri & Xu (2009), who argued that the challenge of poorly-maintained roads becomes particularly severe during Tanzania's rainy seasons. Road infrastructure was not pointed out as a challenge by any of the processors located in Babati town, however. This finding is probably related to the fact that Babati town is located right at the junction of relatively well-managed, large roads leading to some of the largest cities in the country. Therefore, physical access to markets turned out to be less of a problem for these enterprises than for their rural counterparts.

Second, poor packaging was also perceived to be an obstacle to penetrating new markets. As was described by Mrs Hussein, to have their product sold in formal supermarkets the processors need to properly package and label it, and as was mentioned in several of the interviews, the processors could not sell their product outside of the country without TBS-certification. Therefore, any existing or new markets outside the borders of Tanzania were entirely unreachable by most, even though a majority of the processors expressed a desire to export.

Difficulties in reaching foreign markets is not a problem unique to sunflower oil processors, and the same constraint was identified in Anderson's (2011) study on internationalization challenges for small-scale enterprises of a variety of sectors. However, as mentioned by Anderson (2011), only a few studies have focused on challenges for expanding beyond national borders for SMEs of developing countries. Thus, the amount of research that can be compared to these findings is limited.

5.6 Competition & demand

Another factor that proved challenging was competition for customers, and nearly all respondents felt that competition within the industry was high. This did not come as a

surprise, considering the relatively large number of sunflower oil producers that operated in the case study area. A few processors even found the competition between the local processors to be higher than with imported cooking oil. Also, some discussed the difficulties of competing with large-scale companies within and outside of Manyara region. These findings indicate that competition is indeed a big challenge for food processing MSEs, and the results coincide with those of Mather (2005) and Chu *et al* (2007), in whose studies the selected entrepreneurs also rated competition as a major problem. As is explained by Ruteri & Xu (2009), small-scale producers do face bigger challenges in competing with larger enterprises because they cannot afford equal equipment and assistance in developing supply chain strategies.

It does not seem like this internal competition is the real threat to the sunflower oil processors, however. Instead, a majority of the respondents expressed having a harder time competing with imported oil. Most respondents found the competition with large companies producing oil outside Tanzania to be fierce and difficult to handle. To quote one of the processors in Babati town:

> *Importers create competition in this time. They sell to a cheap price when the price of local oil is high. This is because farmers don't harvest at this time. All in all, there's a large amount of competition with importers.* (Respondent 4, February 24th)

Many processors pointed out that imported oil posed an obstacle to growth of their businesses because it saturated the Tanzanian demand for cheap cooking oil, and these MSEs simply could not afford to sell off the oil at a price equal to that of imported oil. The findings coincide with those of Ogori & Joeguluba (2015), who pointed out competition with imported processed food products as a severe challenge. The authors argue that competition with imported products was made near impossible due to the low productivity of the domestic processing units (Ogori & Joeguluba, 2015). This seems like a reasonable explanation here too, since most respondents also complained about the quality and capacity of their processing equipment.

As was discussed by Ogori & Joeguluba (2015), competition with imported products will remain a challenge unless imports are restricted. A few of the processors of the current study felt as if the situation might be improving because of new restrictive policies supposedly

implemented since the previous election. However, according to Mr Ndili, there are no such mechanisms in place, indicating that any promised import restrictions remain unimplemented. Whether the restrictions of which the respondents spoke will be implemented or not remains to be seen, but if this was to happen, the competition with imported products would be greatly reduced.

When asked about the demand situation, nearly all processors felt there has been an increase in demand of their product in recent years. Similar to the findings of Mukantwali *et al* (2012) seasonality affects the level of demand, but unlike the respondents interviewed by Okpara & Wynn (2007) the processors of this study did not list insufficient demand as a major obstacle. Thus, demand is among the few analysed factors that did not pose a challenge to these processors. If fully utilized, this opportunity could increase chances of growth and success.

5.7 An overall analysis of the six sets of factors

Despite being conducted throughout the chapter, some overall analysis remains. Reflections on the findings need to be pooled into one final analysis in order to reveal the larger patterns of this study, and to make more general comparisons with prior research on the subject. Both similarities and dissimilarities are of interest, since these will either strengthen or question the conclusions of others.

Lack of capital was found to be the largest constraint according to a majority of the respondents, which was expected. As was found in the analysis, insufficient financial resources can cause or worsen other challenges identified, and it makes sense that the processors found this to be the biggest constraint.

Some challenges proved greater or smaller than what was expected, though. For instance, inability to obtain certification proved to be a bigger challenge than expected since it did not receive as much attention as many of the other constraints in the literature. This indicates that these problems may be sector-related, since most articles of the theoretical framework were not limited to food-processing businesses.

Furthermore, as was expected after reading numerous news articles and reports, a majority of the processors felt that competition with imported cooking oil was high. Despite this, they had managed to keep their businesses running for a relatively long time. Based on the interviews, this seems to be due to a high and increasing demand for their product, making demand stand out as one of the few analyzed factors working in favour of these MSEs. This

contradicts previous research, where lack of demand has proven to be a challenge to small-scale firms (see for example Okpara & Wynn, 2007). Because the level of demand is not the same for every product in all developing countries this is no revolutionary finding, but it is interesting to see that sunflower oil seems to be an exception to such a trend.

After going through the findings on all six sets of factors, it becomes clear that the challenges found in this study are largely consistent with those of previous research. This indicates that the theoretical framework developed for this thesis is robust and that the findings of prior research on DC-MSEs in general seem applicable in other contexts as well.

6. DISCUSSION

What do these challenges mean? Reflections on the findings have already been presented and will be concluded in the next chapter, but those that stood out deserve some extra attention. To start with, there is no doubt that insufficient capital was perceived as the major obstacle by most respondents. While microfinance institutions (MFIs) can provide loans needed for investments, a study conducted in the area has shown that these do not always work properly (Ahlén, 2012). If these problems were to be solved, the sunflower-oil MSEs could afford investments necessary to grow, while using the profit made to pay back these loans.

As has been mentioned, lack of TBS-certification was found to be a much bigger challenge than what was expected. On their website, TBS writes that all SMEs in Tanzania receive free certification with the Bureau (TBS, 2016). This lead me to think that obtaining certification would be an easy task, but this was a huge misjudgement on my part. The real challenge, as indicated by the respondents, is living up to the requirements of certification. Without the technology needed, the promise of free certification is of small comfort.

One challenge that was not identified or analysed in this thesis, but that has received attention in previous research (see for example Chu *et al*, 2007; Mukantwali *et al* 2012; Okpara & Wynn, 2007), is that related to skills and knowledge of the entrepreneur. It is important to recognize this challenge, however, since addressing it might help unleash growth potential of these and other DC-MSEs. As was found in the current study, access to capital is needed to facilitate growth. However, if this is not coupled with education on how to best make use of this money, benefits of such interventions might be limited. Furthermore, improved managerial skills might result in a higher production efficiency, which in turn would increase the profit made. To me, this seems like a more sustainable solution than the exclusive measure of offering loans to these business.

Educating entrepreneurs on efficiency is a good start, but perhaps not enough to compete with imported oil. Because policies aiming at import substitution and restrictions are near impossible to implement in this era of market liberalization, other measures are needed to strengthen domestic production. Investments in good machines are necessary to increase efficiency, since the amount of oil produced would be bigger. Furthermore, using seeds of higher quality would further increase the amount of oil extracted.. This proves that much can be done to overcome the productivity challenge, which in turn should make domestic producers more competitive. However, it is not my place to judge how this should be

achieved.

Next, some interesting findings that are not directly related to the purpose and research questions will be discussed. Here, I would like to highlight the positive aspects of the current situation in Babati. For instance, when looking at the average age of the sunflower oil enterprises, one becomes aware of their sustainability and resilience. Despite great changes to the surrounding environment and business climate, these MSEs are still operating after years in business. This indicates that these are in fact well-functioning firms that provide an important source of livelihood and stable income for many. Also, the demand for sunflower oil seems to be increasing, which will make room for growth of the sector.

Furthermore, these enterprises have caught the interest of many NGOs which can be of assistance to further development of the firms. For instance, the project in which Mr Ndili is field coordinator is helping a few selected enterprises reach more customers while providing fortified oil that will hopefully help reducing the vitamin A deficiency of the population[12]. The enterprises also engage in membership based organizations (MBOs) such as TCCIA and business associations such as UMAMBE, further boosting their development potential. At the time of the case study UMAMBE had been facing managerial problems, but once these are resolved the association has great potential of increasing the profit of its' members.

This leads us to the question whether these enterprises really *should* grow, or if they are better off remaining small? Had they been operating in a static environment, the answer to the latter question might have been yes. However, the world is changing and these MSEs are already feeling the consequences of globalization and trade liberalization[13]. These trends do not show signs of ceasing, and firms in developing countries will have to adapt in order to survive. If informal markets were to be replaced by supermarkets as predicted by Weatherspoon & Reardon (2003), products must be upgraded in order to meet with the requirements of formal markets. With time, this might be the only option remaining for these food-processing enterprises in Tanzania and elsewhere.

How are these changes to be made? Put together, the list of recommendations made by researchers is extensive. With new reports being published every year, it continues to grow longer. Governmental authorities, NGOs, MFIs, and the entrepreneurs themselves are encouraged to take action to overcome the different challenges facing DC-MSEs, and the researchers speak of great potential of success (see for example Okpara & Wynn, 2007). I will not make any recommendations myself, but am highly interested to see in which direction the

12 Read more about the project here: https://uwaterloo.ca/news/news/putting-vitamins-cooking-oil-improve-child-health-tanzania

13 E.g. through the high competition with imported cooking oil.

development of MSEs in Babati goes. The entrepreneurs have shown great motivation and dedication, and if these were to be utilized through education, cooperation, and assistance, who knows how far they can go?

6.1 Suggestions for further research

Due to the high development potential of the sector, and because this remains to be an under-investigated area, there is no doubt that further studies on issues affecting food-processing DC-MSEs are needed. Such research could provide valuable information and serve as a basis for the work of development organizations, policy makers, and others.

To get a broader picture of the challenges facing these enterprises, future research could aim at investigating processed foods other than cooking oil. For instance, processors handling highly perishable raw materials surely face different struggles than do those producing sunflower oil. Comparative studies could also prove highly interesting in the context of food-processing challenges. For instance, comparing the constraints faced by rural and urban processors might reveal highly interesting differences in attitudes and actual obstacles. Comparing challenges faced by formal and informal firms could also prove intriguing to those seeking to explain the dominance of informal enterprises.

Conducting a study similar to this one in a few years' time would also be interesting, since the demand of cooking oil is expected to increase. It would be interesting to see whether this results in an expansion of the domestic production of cooking oil, or if the amount of imported oil increases. Furthermore, a large-scale quantitative study such as the one conducted by Sasidharan & Rajesh Raj (2014), but with a Tanzanian focus, could be done in order to further investigate the patterns discovered in this study. Using a larger sample would make it possible to draw conclusions based on findings of statistical significance, which would be useful if one wants to conduct a serious ranking of the challenges at hand.

Lastly, I request a study with the objective of developing a theory regarding challenges to growth of food processing DC-MSEs. This would prove highly useful for systematic analysis of the problem in the future.

7. CONCLUSIONS

Which are the main factors affecting the sunflower oil processors in Babati, and how are these harming or helping the MSEs?

Several factors were found to influence the selected firms in one way or another, but the six sets of factors included in the theoretical framework stood out as most important. First, supply of raw material is of course crucial to any food processing enterprise, but this is associated with a number of constraints. Seasonality results in price fluctuations that many of the processors find challenging, and securing high quality material was found to be difficult.

Second, lack of capital appeared as a challenge at all stages of the value-chain, as it limits any possibilities of investing in upgrading. Many had received loans at some point, but this has not been enough to overcome the challenges related to insufficient financial resources.

Third, equipment and electricity for processing was identified as a set of factor challenging the processors. Most were unsatisfied with their current equipment, and poor packaging was a recurrent issue. Furthermore, electricity supply was found to be unreliable and too expensive.

Fourth, regulations in the form of certification qualifications were found to be a major constraint, since lack of TBS-certification meant that the firms could not export their product. However, a majority of the MSEs were registered businesses, making this one of the few factors that did not pose as a challenge to the firms.

Fifth, market accessibility was perceived as a limiting factor. Processors operating in rural areas found physical access to be challenging due to low-quality roads leading to more densely populated areas. Furthermore, access to more formal markets and markets outside of Tanzania was highly limited due to poor technology and lack of certification.

Sixth, competition was pointed out as a big challenge by the processors, both with cooking oil produced within and outside of Tanzania. The processors were having a hard time competing due to the low prices of larger processors, and the they did not feel as if competition with imported oil was decreasing. However, demand was perceived as high and increasing, and was thus seen as a possibility rather than a constraint.

These findings are largely consistent with those of previous research, where all six sets of factors have been found to be challenging. The finding that most firms were registered, and that the demand for sunflower oil is high, stood out as the two positive exceptions.

Which factor is the biggest growth challenge facing these entrepreneurs?

During the interviews, it became quite clear that the largest problem is lack of capital. This was the most frequent answer to the question of which challenge was perceived to be biggest, and many of the answers to other questions indirectly pointed in the same direction. Because financial resources were considered necessary to solve the other challenges at hand, this finding makes perfect sense. Money is needed to afford high-quality raw material all year round; to pay for high-quality machinery, packaging material and electricity; to upgrade and comply with regulations; to pay for transport to markets; and to sell the final product at a competitive price. In other words; access to finance would be helpful in solving all of these problems. Furthermore, capital is needed to invest in the upgrading measures necessary for further growth.

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APPENDIX I – Sunflower oil processing

Table 2: Profile of the processors and their firms

Respondent	Sex	Age group	Level of education	Location	Estimated age of firm
1	Male	46-55	Unknown*	Babati town	10 years
2	Male	18-35	Secondary	Babati town	10 years
3	Male	36-45	Secondary	Babati town	8 years
4	Female	36-45	Primary	Babati town	10 years
5	Male	46-55	Primary	Gallapo	6 years
6	Male	46-55	Primary	Babati town outskirts**	1 year
7	Male	46-55	University	Gallapo	16 years
8	Male	46-55	Primary	Gallapo	12 years

* No question regarding this respondent's level of education was asked.

** This processing plant is located in Babati town council, but away from residential areas.

The equipment of these enterprises varied in size and capacity, but were relatively similar. The amount of oil produced changed over the year, and during productivity peaks, some of the companies could produce up to 6000 litres of oil per week. The owners of the smaller companies could not estimate the amount of oil produced weekly.

None of the companies employed more than ten workers. Most business owners only employed one or two permanent workers, and hired temporary workers for the high season when there was a sharp increase in workload.