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Jesca Mhoja Nkwabi, Leodger B. Mboya, Jenifer Mhoja Nkwabi and Joyce Mhoja Nkwabi

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A REVIEW OF THE CHALLENGES AFFECTING THE AGROPROCESSING SECTOR IN TANZANIA

Jesca Mhoja Nkwabi (DBA student, University of the West of Scotland, school of business and creative industries, department of business and Enterprise, London, United Kingdom, SE1 6NP)

Leodger B. Mboya (DBA student, University of the West of Scotland, school of business and creative industries, department of business and Enterprise, London, United Kingdom, SE16NP),

Jenifer Mhoja Nkwabi (DBA student University of Wales, Trinity Saint David department of business and management. London United Kingdom, SW9 6EJ),

Joyce Mhoja Nkwabi (DBA student, Northumbria University, department of business. Newcastle United Kingdom, NE1 8ST)

*Corresponding author E-mail: jesyoncy77@gmail.com

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ABSTRACT

The purpose of this research is to review challenges affecting the growth of agro-processing firms in Tanzania. Although Tanzania has arable land and produces a large amount of agro produce, processing activities are limited and as a result, the growth of agro-processing firms is affected. Such a decline in processing activities can be explained by several challenges that processors encounter. To identify obstacles that inhibit the growth of processing firms in Tanzania, a mixed-method approach was used where content analysis, as well as descriptive statistics, were used to identify the challenges that impact the growth of processing firms. 13 most recent works of literature from Tanzania were used. Impediments were identified and grouped into themes. A total of 9 challenges (financial constraints, bureaucracy, technological difficulties, market accessibility, poor facilities, SCM issues, quality of processed materials, lack of raw materials and increased costs) emerged as themes. The results reveal that the majority of Tanzanian agro-processing firms face challenges such as financial constraints, bureaucracy, technological difficulties, lack of raw materials. To enable agro-processing firms to grow and perform better it is recommended that more support is required from the government and lending institutions to facilitate processing firms to avail finances which will enable agro-processing firms to adopt latest technologies and increase productivity.

1. INTRODUCTION

The Agro sector in Tanzania contributes about 29.1% of Tanzania's GDP and is the main source of raw materials, food and foreign exchange (Export.gov, 2019). Despite having a favourable agricultural climate, Tanzania is still lagging in processing activities and as a result, the country is highly dependent on imported processed goods (Augustino, 2017). Furthermore, the number of processing activities in Tanzania are limited as most agro produces are exported in their raw forms (Oxford

Business Group, 2019). To increase agro-processing activities in Tanzania measures should be taken to ensure that more processing firms are generated which will develop Tanzania's economy further by reducing the balance of payments through increasing exports while reducing imports (AllAfrica.com, 2016). The next section will provide details of the cash crops that are produced in Tanzania along with details on the processing activities of these crops.

1.2 Main crops produced in Tanzania.

The main food and cash crops in Tanzania include corn, rice, wheat, sugar, fruits and vegetables, cashew nuts, cotton, oilseed. These will be discussed in detail below:

- **Corn:** Corn is the main staple food that is produced mostly in the southern and highland zones of Tanzania accounting for 26 and 25 per cent respectively as compared to other zones such as eastern, northern, western, southern and central zones which produce 13,12,10,8, and 6 per cent respectively.
- **Wheat:** Approximately 100,000 hectares of land is devoted for production of wheat in Tanzania. Wheat is mainly produced in large amounts in the northern areas of the country (Arusha, Kilimanjaro, and Manyara regions) while a small amount is produced in southern parts of Tanzania (Iringa, Mbeya regions). Despite producing 100,000 tons of wheat, Tanzania only uses 10% of this produced wheat and imports the rest from countries like Russia, Canada Australia and USA (Oxford Business Group, 2019).
- **Rice** is the second largest crop to be produced in Tanzania and accounts for 2.71 per cent of Gross Domestic Product (GDP). However, the country still imports rice from countries such as Bangladesh, Pakistan, China, India, Indonesia and Vietnam (Pervez et al. 2019).
- **Sugar:** Only 58% of sugar is produced in Tanzania while the remaining 42% is imported from countries such as Brazil and India. Due to unfavourable government policies, the Sugar production industry in Tanzania is less protected from imports with claims from the government that such policies are meant to attract more foreign investments in the country (Export.gov, 2019).
- **Fruits and Vegetables:** The production of fruits and vegetables in Tanzania is 2.75 tons yearly. Surprisingly only 4% of this is processed in the country (Oxford Business Group, 2019).
- **Cashewnut:** Yearly 12000 tons of cashew nuts are produced while only 12% of this is processed in the country and the majority is imported to countries such as India and Japan (Export.gov, 2019).
- **Oilseeds.** In spite of producing oilseeds in the country a lot of oilseeds are still imported from other countries.
- **Cotton:** Although cotton is highly produced in Tanzania only 12 per cent is processed in the country (Export.gov, 2019).
- **Ginger:** Over 10,000 tons of ginger are produced annually, however processing activities are limited which increases export of ginger in its raw form (Augustino, 2017).
- **Livestock:** Tanzania has 33.7% of the livestock population. However, only 10% of this is processed (Oxford Business Group, 2019). From the above data, it is apparent that Tanzania's agro sector is vital and Tanzanian's are unable to fully tap into its potential. Although several researchers (Kipene, Lazaro & Isinika 2015; Ekblom 2016; Isinika & Kipene 2016; Achandi et al. 2018) reported challenges affecting agro-processing firms, addressing these challenges has been difficult given the fact that the resources in Tanzania are limited. To overcome these challenges,

this study aims to assess the main critical challenges impacting the growth of agro-processing firms to provide recommendations on how to overcome these challenges.

2. LITERATURE REVIEW

2.1 Definition of Agro-processing

Agro-processing can be defined as the transformation of produces originating from agriculture to final products (Swai, 2017). Such produces include maize, fruits and vegetables, woods, sugarcane, cotton, oilseeds, sunflower seeds, wheat, rice, tea coffee etc. Agro-processing occurs through primary as well as secondary processing (Ampadu-Ameyaw & Omari, 2015; Wanniarachchi, Gopura & Punchihewa, 2016). Primary processing involves the preservation of raw materials that are to be used in the final processing. This type of processing can take a form either through drying, shelling and grading and does not alter the shape and contents of materials significantly. On the other hand, however, secondary processing involves transforming materials completely examples of secondary processing involves extracting juices from fruits and vegetables, processing cotton to get oil, crushing sunflowers seeds to extract oil etc (Ampadu-Ameyaw & Omari, 2015).

2.2 Impediments affecting the growth of agro-processing firms.

Impediments are stumbling blocks that stand in the way of the growth of firms (Nkwabi, 2019). Often these challenges limit the performances of firms and result in a decline of organisations after a certain period. Various researchers have investigated challenges that limit the growth of agro-processing firms. Ampadu-Ameyaw & Omari (2015) study in Ghana reveals that inadequate enforcement of agricultural and industrial policies, poor industrial integration, technological inadequacies, failure to access international markets, poor infrastructures, quality assurance challenges and weak financial capacities stand in the way of the development of the agro-processing sector. Also, Owoo & Quayefio (2018) found that lack of agro-processing facilities and modern equipment impact the growth of agro-processing firms in Ghana. Mirani, Memon, Rahu, Bhatti & Shaikh (2015) reveal that information technology is still a challenge in the agro-industry in Pakistan. Guadu & Abebaw (2016) found that the dairy processing sector in Ethiopia faces challenges such as inadequate animal feed, lack of education, inadequate training services, limited finances and low capabilities inexperience. Fessehaie, Roberts & Greenish (2015) found financial depth, access to skilled labour, and compliance with international standards to affect agro-processing sectors in Mozambique. Hyder & Bhargava (2016) reported the availability of raw materials and poor technologies to hinder the growth of agro-processing firms in India. In Tanzania, various researchers (Kipene, Lazaro & Isinika 2015; Ekblom 2016; Isinika & Kipene 2016; Achandi et al. 2018) identified many constraints affecting agro-processing firms which include lack of capital, inadequate raw materials, poor storage facilities, underutilisation of processing units, technological difficulties and tight regulations. These will further be discussed in the next section below:

2.2 Challenges impacting agro-processing sector in Tanzania

As seen in Table 1 below despite its importance the agro-processing sector still faces challenges which limit agro-processing activities in Tanzania and force the country to rely on imported products.

Table 1 Challenges affecting the growth of the agro-processing sector in Tanzania

Serial number	Researcher	Challenges
1.	Kipene, Lazaro & Isinika (2015)	Labour productivity, inadequate raw-materials and energy cost.
2.	Nijbroek & Andelman (2015)	Climatic conditions, less support from the

		government.
3.	Eklblom (2016)	Lack of capital, raw material, equipment and electricity for processing, regulations, market accessibility, and competition poor quality of processed materials.
4.	Isinika & Kipene (2016)	Experience, processing skills, lack of availability of the high quality of raw materials, poor processed products, Energy cost and Education.
5.	Charles, Jeppesen, Kamau & Kragelund (2016)	Inadequate support from the government.
6.	Jahari, Kilama, Dube and Paremoer (2017)	Poor storage facilities, underutilization of processing capacity, unreliable sources of supply.
7.	Kuzilwa, Fold, Henningsen & Larsen (2017)	Lack of trust among firm and supply chain actors.
8.	Ippmedia.com (2017)	Poor technologies.
9.	Swai (2017)	Bureaucracy, lack of capital, supply of raw material, access to the formal markets and markets, poor technology and lack of certification.
10.	Achandi et al. (2018)	Technological constraints.
11.	Export.gov (2019)	Bureaucracy, high-interest rates, lack of financing, poor technologies, low productivity of farmers.
12.	Njiku (2019)	Financial difficulties.
13.	Scholvin, Black, Revilla & Turok (2019)	Limited finances.

Source: (Literature Review 2019)

3. RESEARCH METHODOLOGY

The study employed a mixed approach using content analysis as well as descriptive statistics. 13 recent pieces of literature from 2015 to 2019 on agro-processing in Tanzania were reviewed and challenges were identified. 13 kinds of literature were deemed to be sufficient for carrying out the analysis since previous researchers Mashenene & Rumanyika, (2014); Nkwabi (2019) recommended a sample of 12 kinds of literature to be adequate in carrying out the research. Out of the reviewed articles 9 challenges (financial constraints (FC), bureaucracy (B), technological difficulties (TD), lack of market accessibility (LAM), supply chain management (SCM), quality of processed materials (QPM), lack of raw materials (LORM), increased costs (IC) were identified and thereafter themes were generated where these challenges were grouped in accordance with the most suitable theme. Next descriptive statistics in the form of frequencies were computed based on the number of times the challenge appeared in the reviewed literature and thereafter percentages were computed.

4. RESULTS

Based on the above Table 1 the challenges that impact the agro-processing sector can be divided into the following themes.

- Theme 1 Financial constraints: A financial constraint is any factor that limits investment opportunities (Huang, Yang & Tu, 2019). All financial related issues mentioned in the literature such as financial difficulties, limited finances, lack of financing, lack of capital were grouped in this theme.
- Theme 2 Bureaucracy refers to having strict rules and regulations which are complex and often unfavourable (Pepinsky & Pierskalla, 2016). In this theme regulation and lack of support from the government were grouped under a single theme.
- Theme 3 Technological difficulties emerge when businesses are unable to avail of new technologies (Zacarias et al., 2018). Poor technologies and technological constraints were selected in this theme.
- Theme 4 Lack of Market accessibility: lack of market accessibility occurs when businesses are unable to access markets as a result of either high competition or poor infrastructures (Mbuyisa & Leonard, 2016). Factor such as access to markets and competition were considered in this theme.
- Theme 5 Poor facilities: Businesses use storage facilities to store finished products or preserve raw materials (R. S., 2015). poor storage facilities and lack of equipment were grouped under this theme.
- Theme 6: SCM issues: SCM refers to the movement of goods and services from producers to the final consumers (Nkwabi, 2019). Factors such as unreliable sources of supply, lack of trust between partners were incorporated in this theme.
- Theme 7 QPM: Quality processed products are those that meet standards set forth by quality standard measures such as ISO 9001, Tanzania Bureau of Standards (TBS) poor processed products.
- Theme 8 LORM: Raw materials are substances used in the production of products (Jernström, Karvonen, Kassi, Kraslawski & Hallikas, 2017). Issues such as poor raw materials, inadequate raw materials were used in this theme.
- Theme 9 IC: Increased costs are additional expenses that a firm encounters due to reasons such as underproduction, overstocking, use of more manpower and a lack of integration. Costs such as energy costs were included in this theme.

Having grouped the challenges into themes the next step was to determine the frequency of these in the reviewed literature. This is shown in Table 2 below:

Table 2 Challenges impacting the growth of agro-processing firms

S/No	Source	FC	B	TD	LMA	PF	SCM	QPM	LOR M	IC
1.	Kipene, Lazaro & Isinika (2015)								√	√
2.	Nijbroek & Andelman (2015)		√							
3.	Ekblom, (2016)	√	√		√	√		√	√	
4.	Isinika & Kipene (2016)							√	√	√
5.	Charles et al. (2016)		√							
6.	Jahari et al. (2017)					√	√			
7.	Kuzilwa et al. (2017)						√			

8.	Ippmedia.com (2017)			√						
9.	Swai (2017)		√	√	√				√	
10.	Achandi et al. (2018)	√		√						
11.	Export.gov (2019)	√	√	√						
12.	Njiku (2019)	√								
13.	Scholvin et al. (2019)	√								

(Source: Literature Review 2019)

Table 3 below shows the frequency and percentages of challenges affecting growth of agroprocessing firms.

Table 3 Impediments affecting the growth of agro-processing firms in Tanzania

Variable	Frequency	Percentage (Frequency/literature*100)
FC	5	38
B	5	38
TD	4	31
LMA	2	15
PF	2	15
SCM	2	15
QPM	2	15
RM	4	31
IC	2	15

(Source: Literature Review 2019)

The results indicate that agro-processing firms in Tanzania are most negatively affected by bureaucracy and financial constraints 38%, followed by technological difficulties and lack of raw materials at 31%, The results also show that market accessibility, quality of products, increased costs and poor facilities each denoted by 15% moderately affect agro-processing firms in Tanzania.

5. DISCUSSIONS

As discussed above the results revealed that bureaucracy, financial constraints, technological difficulties and lack of raw materials significantly impact the growth of agro-processing firms in Tanzania. These are further discussed below:

- Bureaucracy: Unfavourable government rules and regulations do limit the growth of processing activities in Tanzania and as a result, the country suffers from the reliance of imports from outside. Numerous researchers (Lauwo, Otusanya & Bakre, 2016; Nkwabi & Mboya, 2019) have revealed that businesspeople in Tanzania immensely suffer due to little or no support from the government. For instance, in the agro-processing sector, there has been a huge decline in processing firms due to unfavourable rules and regulations involving high taxation especially in cashew processing, cotton processing and oil processing. Furthermore, foreign investors are reluctant to invest in the Tanzanian agro-processing sector due to complex regulations that exist. The same has been

reported by Charles et al. (2016) who found that in countries like Tanzania, Kenya and Zambia to be unorganised and less supportive of food processing firms. The findings are also in line with those of Swai (2017) who reported restrictive rules and regulations, especially for small scale processors, limit the growth of these firms as they are unable to meet the restrictive rules imposed by the national bureau of standards.

- **Technological difficulties:** Another major constraint affecting agro-processing firms in Tanzania is the failure to adapt to new and cost-efficient technologies which could be linked with the absence of adequate funds by processors. The same has been reported by Achandi et al. (2018) who found that women rice processors are unable to use the latest technologies due to lack of sufficient funds. This finding is also congruent with that of Swai (2017) who found that sunflower processors in Tanzania are negatively impacted by lack of appropriate machinery and low skills of using such equipment's. This finding is also in harmony with that of (Nkwabi & Mboya, 2019) who reported that technological issues impede the growth of firms in Tanzania.
- **Lack of raw materials:** Despite being endowed with an abundance of agricultural produces; Tanzania still imports raw materials as local raw materials are often of a lower standard and thus unfit for processing (Mgeni, Müller & Sieber, 2019). Also due to the poor relationships that exist between actors in the supply chain processors are unable to acquire raw materials on time. Another factor impacting the availability of raw materials is adverse climatic conditions and the use of excessive fertilisers which destroys arable land (Kweka, 2018). The findings are line with those of Ekblom (2016) who reported adverse climatic conditions and droughts to affect the availability of raw materials. Also, the poor quality of raw materials was reported as another major constraint in obtaining quality raw materials by Kweka (2018).
- **Financial constraints:** Most agro-processing firms in Tanzania are unable to grow due to limited finances which are a result of unfavourable borrowing conditions such as higher interests for agro-processing firms (Export.gov, 2019). Also, limited access to finance from commercial banks accelerates financial related problems. The findings are in harmony with those of Mashenene (2015) who found factors such as lack of collateral, the low value of collateral, poor saving habits and high-interest rates to significantly affect the availability of funds from lending institutions. These findings are also in line with those of Nkwabi & Mboya (2019) who found firm growth in Tanzania to be negatively impacted by financial constraints.

6. CONCLUSIONS

Based on the findings it is obvious that the growth of agro-processing firms in Tanzania is limited due to factors like bureaucracy, technological difficulties, availability of raw materials and financial problems. Given that there is so much potential in the Tanzanian agro-processing sector the government should work on levying rules taxes and formulating policies that will favour both local and international processors to promote more processing activities in Tanzania. Lending institutions should lower interest rates for processors to make funds available to them which will help various processors to acquire up to date technologies which will speed production, reduce costs and increase profitability. Also, storage facilities should be improved to enable the preservation of raw materials and processed foods to ensure food security in the country. As mentioned by Adeyeye (2017) the governments of various nations should provide support in terms of credit assistance to processors to enable them to acquire more advanced storage facilities.

This paper has implications for practitioners and academics. For practitioners, this paper will serve as a guide to understand the processing opportunities that are available in Tanzania and to also asses the

significant challenges and how to overcome these. For academics, this study provides background information on challenges impeding the growth of agro-processing firms, it will be interesting for future researchers to conduct a comprehensive study using primary data to identify the factors affecting the growth of agro-processing firms. It will also be useful for academics to investigate the significance of the agro-processing sector in Tanzania given that Tanzania produces more agro produce yearly and there a vast investment opportunity in the sector.

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