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Agribusiness Ethics,

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Uganda's Value Chains

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RESEARCH PAPER SERIES

Research paper No. 12-2017:

Value addition in agricultural value chains at the first stage producer level in a developing country context: The case of Uganda

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AGRI-QUEST Research Paper Series provide state-of-the-art background evidence-based knowledge about topics related to ethics, quality standards, sustainability, and Corporate Social Responsibility (CSR) in agriculture in the context of Uganda. They are part of the broader AGRI-QUEST research project funded by The Netherlands Organisation for Scientific Research (NWO-WOTRO).

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A project mainly financed by: NWO Netherlands Organisation for Scientific Research WOTRO Science for Global Development

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Executive Summary

Scholars on value chains in the developing country context commonly agree on value chain upgrading, specifically through value addition, as a means for sustained income generation. Research considers sustainable sources of income as a strategy for combatting poverty. However, most studies examine the multiple facets of value chain upgrading in the context of corporatios and, at a smaller level, for small and medium sized enterprises. Only a few exemplary studies refer to the first stage of the value chains, the smallholder producer. As for most of the developing countries, these are the actors most affected and dependent on income implications through upgrading attempts. Thus, this study considers the influence factors for and against upgrading from the perspective of the first stage of the value chain. The findings of this research suggest that few value chain actors at the first stage are aware of the implications of and the opportunities provided by value chain upgrading. Furthermore, among those this knowledge is anchored, means for upgrading are missing. Among those, the most prevalent factors hindering value addition are described as access to equipment and financial means to improve the required quality for product or process upgrading purposes. Also often a lack of the required knowledge on how to participate in value chain upgrading was reported.

Keywords: value chain, value addition, value chain upgrading, sustainability, poverty reduction

Introduction

Literature on value chain theory has emerged over the recent decades by paying increasing attention to value chain upgrading (Kaplinsky & Morris, 2001; Challies 2008; Seuring & Müller, 2008). Especially due to globalisation, business and management literature has developed a vast body of research regarding new perspectives on competiveness. In the history of this research the focus has shifted from the basic pillars of value chain analysis to a rise in focus on value addition as part of value chain upgrading (Gereffi, 1999: Lee et al., 2011). In accordance with the acknowledged view of management scholars regarding the importance of capability building and mixing to improve a firm's competiveness, both fields relate to improvements in firm performance to sustain profit streams (Barney, 1991; Giuliani et al., 2005).

The aim of this research is to explore which factors complicate value addition at the first stage producer level in the developing country context. This is of theoretical relevance since literature on value chain theory considers value addition as part of value chain upgrading to play an important role in generating a sustainable source of income (Kaplinsky, 2000; Wood, 2001; Challies, 2008). Accordingly, sustainable growth resides in achieving and preserving competitiveness (Man et al., 2002). In the developing country context competitiveness is often achieved in the attempt of wage and profit margin exhaustion (Fridell, 2008; Jaffee, 2014). The widely accepted resource based view considers firm capabilities enabling effective and efficient use of its resources as a key element of sustained competitiveness (Barney, 1991). According to Giuliani et al. (2005), one

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opportunity to achieve competitiveness is determined through a firm's capability to upgrade (Giuliani et al., 2005). The value chain perspective summarizes that all activities linked to a product's life cycle, ranging from product development to end consumption, build a value chain (Kaplinsky & Morris, 2001). Within this definition, the concept of upgrading refers to improvements within the value chain (Humphrey & Schmitz, 2000). Scholars suggest different approaches to improvements through upgrading. In the scope of this research the focus lies on the three most acknowledged upgrading schemes for value addition. These are process upgrading through increasing efficiency, product upgrading through product innovation and functional upgrading through improved relations within the value chain (Gereffi, 1999; Kaplinsky & Morris, 2001; Giuliani et al., 2005). Similarly, scholars on the value chain perspective describe innovation as an element of upgrading (Giuliani et al., 2005). In regards to upgrading this paper examines factors hindering or promoting farmers' ability to engage in value chain upgrading in the agricultural sector in Uganda.

Initially, literature focused on explanations with a historic and economic reasoning to the problem based on post-colonial structures (Fridell, 2008; Jaffee, 2014). Later, the discussions had been refuelled by the young and growing sustainability movement driven by a shift in Western consumer behaviour increasingly demanding fairly traded and more sustainable products. These concepts define problems in capturing value along the different stages of value chains. It is widely acknowledged that sustained value capture at the first stage producer level in developing countries is problematic (Fromm, 2007; Jaffee, 2014). A considerable amount of literature on value chain analysis from a managerial perspective on the topic of value creation primarily aims at management and business audience (Kaplinsky & Morris, 2001). However less attention has been paid to the root causes from the perspective of the parties most concerned, the first stage producer level including farmers and processors.

The agricultural sector in Uganda, as in many developing countries, is a key source of household income. With over 80% of the population employed in agriculture, less than 1/4 of the economic power are achieved through agricultural business with one reason being the meaning of agriculture for subsistence purposes. In contrast, less than 5% of the population is employed in the industrial sector which accounts for over 20% of the country's GDP[1]. (CIA, 2017; Worldbank, 2017). Research on agricultural business in developing countries draws particular attention on value chain upgrading and value addition as an opportunity to escape the financial instability and economic insecurity of smallholder farming (Fromm, 2007). Therefore, this research extracts the agricultural sectors of rice and cassav[2] production[3] in Uganda to examine value chain upgrading in the developing country context.

[1] GDP-composition by sector of origin (%) agriculture: 24.5% industry: 21% services: 54.4% (2016 est.) (CIA, 2017).

[2] Cassava is a crop which is nationally grown, processed and consumed in Uganda. The tuber vegetable is a common dish in Uganda. It is known for a wide range of uses due to its different characteristics when processed, for instance for beer when fermented or for dry cleaning when processed into starch.

[3] Many farming activities in the respective regions contribute to cassava and rice production and thus constitute one of the main income sources.

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This paper is structured in three main sections in order to investigate the cause and effect relation of value addition and profit distribution along agricultural value chains in Uganda. First, it illustrates existing general theories and concepts of value addition and value chain upgrading as well as its (academic) application in literature in the developing country context. Second, it illuminates hindrances and facilitators of value addition approaches as perceived by first stage producers in Uganda. This leads to an illustration of failure factors and problematic mechanisms in the coverage of value creation for Ugandan rice and cassava farmers. Third, it provides a comparison of the results found in the scope of this research and the existing literature. It then concludes with a summary of these findings and future research suggestions.

Literature Review

This chapter describes the theoretical relevance of research on value addition engagements in value chains in the developing country context. First, it introduces acknowledged theoretical concepts on value chain research. Second, it illustrates particularities of research regarding developing countries. Third, it describes the relevance of this research as a contribution to existing literature on the issue of value chain upgrading.

The fact that inequality exists in wealth and prosperity distribution around the world and especially between developing and developed countries is unquestioned and research attempts to explain the root causes from various perspectives (Kaplinsky, 2000; Challies, 2008). In accordance with the analytical levels of social sciences this problem is typically approached from three different angles, the micro, meso and macro level. The latter examines the causes referring to historic and economic explanations. Fridell (2008) embraces an explanation for the exploitation and repression of developing countries as a derivative of slavery and colonialism which persists and effects contemporary economies (Fridell, 2008). On the meso level, research suggests that organisations make use of the aforementioned to their advantage (Barney, 1991) by contributing to exploitation which includes but is not limited to poor working conditions and low wages. This is contrasted by initiatives which contribute to sustained value creation distribution in first stage producer countries in the developing world (Agri-Quest, 2017 [4] ; Fairtrade Labelling Organizations International e.V., 2011). Focusing on the micro level this study adds on to existing research by examining factors which complicate the value addition attempts, as described by Ugandan farmers. Especially, this study sheds light on the problems associated with value addition by investigating the perception of those mostly affected, the first stage producers. This is of importance because it also contributes to insights on fairer trade, poverty reduction strategies, development aid as well as higher and more sustainable income flows in producer countries.

In recent decades the body of literature researching economic growth in developing countries has increased and

[4] This research profits from insights provided through the team of researchers and sources of the Agri-Quest research project in Uganda for sustainable value creation in the agriculture business in Uganda. Agri-Quest aims to strengthen agribusiness ethics, quality standards and ICT usage in Uganda's value chains (Agri-Quest, 2017).

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scholarly discussions on effective solutions for economies in developing countries remain of contemporary interest (Sandberg & Alvesson, 2011). Additionally, scholars on value chain theory depict value chain analysis primarily in the context of established business environments. A combined approach, embedding value chain theory in the context of developing countries' value addition undertakings is hard to find. There are countless beneficiaries to an appropriate clarification of the issue of value chain upgrading in developing countries. Those are the first stage producers themselves, economies of developing countries, organisations and initiatives in development aid and sustainability in general, researchers in the field and governments (Van de Ven, 207). In the context of this paper the focus lies on the perception of agricultural workers at the first stage producer level regarding main hindrances and facilitators of value addition. Even though several initiatives and movements such as fair trade exist, these attempts are still criticized for being only partially and with certain constraints successful (Reynolds, 2002; Bacon, 2005). Existing research on this topic addresses these problems in hindsight but often neglects the first stage producers' point of view on the root causes. Keeping this in mind, this particular field of study is enriched by taking the farmers' perspective into account (Flick, 2007; Sandberg & Alvesson, 2011).

For this matter, an inductive approach based on qualitative data collection allows for deeper insights. As a result the investigations of this study examine the actors' perception on the cause and effect relation of value addition and its implications on profit distribution along the value chain.

Despite the growing importance of sustainability, there exists little conclusive research with applicable solutions to the deficiencies in value creation at the level of first stage producers. This is particularly surprising since the change in customers' demand for fairer products which are sustainably produced throughout the value chain and the urge to tackle the problem of increasing inequality in welfare distribution are on the rise (Renard, 2005). Therefore this study is of particular interest for a variety of stakeholders (Flick, 2007; Van de Ven, 2007). On the one hand, the results offer useful and practical insights specifically for Agri-Quest[5] and their work on improvements of the value creation in agriculture in Uganda. Likewise, these findings deliver implications for similar initiatives in comparable surroundings. This encompasses assumptions for governmental and non- governmental institutions, development aid and fair trade organizations. On the other hand, this study provides insights for companies on the root causes of diminishing value creation at the initial stage of the value chain. By knowing the root of the issue, enterprises improve the credibility and reputation of the end product as perceived by the customer, thus becoming more competitive. Finally, the study delivers insights of great value for larger corporations intending to address the demand of customers for sustainably produced goods.

Existing theoretical frameworks on

[5] Agri-Quest is a research project in Uganda for sustainable value creation in the agriculture business in Uganda. It aims to strengthen agribusiness ethics, quality standards and ICT usage in Uganda's value chains. Agri-Quest collaborates with partners and informants within Africa. Especially for research purposes a close partnership exists with AFRICA 2000 (Agri-Quest, 2017).

Value chains, Value addition and Value chain upgrading

This chapter introduces acknowledged concepts which serve as a basis for the underlying research. The value chain theory constitutes the base. Within that frame, the concept of value chain upgrading through the aspiration of value addition is explored. The third theoretical pillar consists of the idea of competitiveness based on superior firm performance. The following table summarizes the main concepts subject to this study and the corresponding authors.

Value chain perspective

The value chain theory encompasses all steps from production to end consumption. More narrowly defined, these stages consist of product development at the initial stage, the production process as the next stage, product and sales afterwards, up until the ultimate stage of end consumption, as shown in figure 1 (see appendix). This research uses the definitions of the value chain concept as constructed by Kaplinsky and Morris (2001):

"The value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. [...] Production per se is only one of a number of value added links" (Kaplinsky & Morris, 2001: 4).

Considering agriculture, the stages are split as shown in the following graph (figure 1). It provides a simplified value chain model adopted from Kaplinsky & Morris (2001) and applied to the agricultural context.

The first stage refers to farmers buying their input materials from an input dealer. Land cultivation and harvesting belong to activities primarily covered by the small scale farmer. The next step refers to post-harvest activities. This process consists of product handling and processing. This includes, as a minimum requirement, drying of the harvest. Afterwards the first value addition activities take place. At this stage activities are split among various value chain actors. In some cases, farmers are still engaged in further processing. In other cases, the product is sold at this point and further processing takes place by the next actor, for instance an intermediary, trader or miller. Within the rice value chain, rice threshing takes place at this stage. Within the cassava value chain, cassava peeling takes place. Afterwards the price of the product increases significantly and it is being put forward to the next stage of sales and marketing. At the point of sales, prices further depend on the respective market demand, the quality and quantity provided as well as the level of value added (processing).

Value Addition

The definitions and concepts on value chain theory describe value addition as a result of increasing a product's value through an upward movement along the value chain. It thus refers to activities which result in an increase of returns of investment. (Kaplinsky, 2000; Wood, 2001; Challies, 2008). Theory describes value addition approaches as being influenced by the participants' relation of the different value chain stages. This dependency has direct implications on

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progressing value addition. As such, two main forces are distinguished. First, the buyer driven relationship, where the producer depends on the buyer who dominates the relationship and dictates the relational conditions. Second, the producer driven commodity chain is determined by the producers (Humphrey & Schmitz, 2000). *Upgrading*

In value chain theory different focuses and definitions of upgrading exist. In the scope of this study with a focus on smallholder producers the examination of upgrading attempts is based on the following three upgrading schemes as defined by Kaplinsky and Morris (2001): "Process upgrading: increasing the efficiency of internal processes such that these are significantly better than those of rivals, both within individual links in the chain (for example, increased inventory turns, lower scrap), and between the links in the chain (for example, more frequent, smaller and on- time deliveries)

Product upgrading: introducing new products or improving old products faster than rivals. This involves changing new product development processes both within individual links in the value chain and in the relationship between different chain links Functional upgrading: increasing value added by changing the mix of activities conducted within the firm (for example, taking responsibility for, or outsourcing accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (for example from manufacturing to design)" (Kaplinsky & Morris, 2001: 38).

Similar to the resource-based view on the right assessment and combination of core competencies, these definitions state that upgrading attempts need to be applicable to the actors based on their competencies and resources and should aim at an improvement to differentiate themselves from competition.

Similarly, Giuliani et al. (2005) describe upgrading as a firm's innovation capacity (Giuliani et al., 2005). According to that explanation, improvements, be it of incremental or drastic nature, contribute to upgrading. Improvements may refer to changes on the product, the processes and within the relationships of the different actors of the value chain.

Superior Firm Performance

In management literature firm performance is described as a result of a combination of several firm specific variables of distinct characteristics such as "resources", "competencies" and "capabilities" (Barney, 1991; Hitt & Ireland, 2017). Here resources are considered to be the "capital attributes" of a firm and "capabilities are those attributes of a firm that enable it to exploit its resources" Freeman et al., 2008: 139). Giuliani et al. (2005) summarize the concept of competitive advantage in the context of value chains by taking into consideration three steps of the comparative advantage theory for upgrading purposes: from incremental innovation, to upgrading, to the acquisition of firm-level competitiveness.

Accordingly, this research focuses on value addition attempts at the first stage producer level with regards to value chain upgrading. It refers to attempts of product or production improvement (innovation) or new links of value chain actors which have implications towards a better competitive positioning and more sustained returns on investments (revenue streams).

Prior Studies

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The field of value chain theory is well established and the topic of value chain upgrading has received growing attention in recent years. However, value chain upgrading as a means to overcome the weak positioning at the first stage of the value chain still remains under-researched. Especially in regards to the context of developing countries studies focusing on the perspective of actors at the initial stage of agricultural value chains, there exists a lack of evident data.

Commodity Chains, Agriculture and rural Development. For instance, Challies (2008) points out that "there is general consensus as to the complexity and unevenness of outcomes in different sectors and localities" (Challies, 2008: 376). This approach is a theoretical examination of agricultural smallholder participation in global commodity chains and its meaning for rural development. The author further suggests that the effectiveness of global commodity chains in agricultural business depends on paying attention to all links of the value chain and thus also on the inclusion of smallholder producers of the initial value chain stage. In accordance with the framework established by Kaplinsky (2000), Challies (2008) stresses the importance of small-scale producers in poor producer countries to generating sustainable income streams (Kaplinsky, 2000; Challies, 2008). The authors suggest that further investigation is required regarding the impact of first stage smallholder producers in global commodity chains on rural development.

Upgrading in agricultural Value Chains. Additionally, Fromm (2007) adds on to the existing body of literature on value chains by studying the ability of local producers in Honduras to participate in value chain upgrading, specifically focussing on product, process and functional upgrading. Despite also applying value chain analysis, Fromm (2007) investigates and surveys upgrading – in contrast to Challies (2008) – directly through in-field research in the local context. Findings by Fromm (2007) state that among local producers in Honduras, upgrading generally improved sales opportunities. Moreover, the findings revealed that the awareness of upgrading implications commonly existed among the participants. Specifically, product and process upgrading was applied and only a few of the actors achieved functional upgrading. This investigation points at factors such as knowledge acquisition and networking as main drivers of upgrading. In that regard, improving cultivation methods was one improvement in terms of productivity which was commonly reported as a facilitator for increasing profits. On the opposite, main obstacles hindering upgrading were seen in the lack of financial investments. As a result, incremental performance improvements were achieved more often than upgrading projects with superior improvements, since these required larger financial investments (Fromm, 2007).

Upgrading in the Coffee Value Chain. A more detailed inspection on small scale producers in agriculture was proceeded by Jaffee (2014) by observing coffee farmers. The longitudal study with over two years of qualitative in-field research on the subject of coffee farming compared the status quo of conventional coffee farmers to those who decided to switch their production to fair trade. Understanding fair trade as a holistic upgrading concept which includes product, process and functional upgrading, it corresponds to the definition of value chain upgrading especially in regards to sustained productivity and income. The study revealed that the concept of fair

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trade delivers valuable improvements for small scale coffee farmers on the long-run. The main influence factors were described as facilitated access to knowledge through trainings and support provided through the fair trade cooperatives. Additionally these networks provided financial means, for example microcredits, for investment purposes which promoted the upgrading ability of the fair trade participants. However, this study provides numerous examples of hindrances due the complexity of the fair trade process. Overall the results suggest that, while upgrading through fair trade is a complex and tedious process, it constitutes a basis for more sustained income streams facilitating gradual improvements of the farmers' living situations (Jaffee, 2014).

In summary, few studies on similar fields or in comparable research settings exist. Their main findings reveal that successful upgrading for small scale producers provides the opportunity for more sustainable income streams. It seems evident that simpler forms of upgrading, mainly referring to creating value added, are more often achieved by smallholder farmers in developing countries. These elements are categorized as product and process upgrading, while the number of actors participating in functional upgrading schemes is limited due to the concept's complexity. Thus, main drivers can be seen equally in facilitated access to equipment and quality improvements while the main obstacle originates in a lack of access to financial investments. This is in accordance with the aforementioned literature review.

Research Methodology

The following chapter introduces the methods used to conduct the study. It starts with a brief overview of the research design and the research setting followed by an introduction of the data collection approach. This chapter concludes with an elucidation of the data analysis.

Research Design

This research first assesses generally acknowledged theory of the value chain perspective and its concept of value addition as well as the current state of existing literature and assumptions on the cause and effect relations of the lack of a fair share of value addition and its implications on the profits of first stage producers. These findings are complemented by insights provided through the team of researchers and sources of the Agri-Quest initiative for sustainable value creation in the agriculture business in Uganda (Agri-Quest, 2017).

In order to understand the factors that complicate the value creation distribution, the farmers' perception is inspected in-depth using qualitative research through investigative interviews among agricultural farmers in Uganda. The acquisition of knowledge on an underexplored topic by qualitative research of this kind is widely acknowledged to be most beneficial when seeking for in-depth- knowledge on the point in question (Eisenhardt, 2007). The focus is on explorative interviews among different farmer groups, including one successful Ugandan farmer who serves as a rare best practice example in contrast to the average Ugandan farmer. This study further includes insights from input dealers and suppliers of seeds and raw materials for farmers as well as of buyers and traders. In order to gain a more holistic understanding of the topic from multiple perspectives and to support the validity of

the arguments collected, interviews with representatives of various governmental positions, complement the research.

Based on this, semi-structured interviews and observations among agriculture farmers around the capital Kampala, Uganda in the year 2017 explore the farmers' perception and reasoning on the point in question. The research team consisted of Agri-Quest researchers from the Makerere Business School in Kampala and students from the Vrije Universiteit Amsterdam who conducted the research in collaboration. The Agri-Quest research team of the Makerere University Business School Nakawa is led by David Katamba and collaborates with the Vrije Universiteit Amsterdam. The team was complimented by translators from the AFRICA 2000 network [6] who translated the local languages into English. The data collection was split in two field trips. The first trip focused on in-field knowledge of farmers specialized in rice production in the district of Bugiri. And the second field trip took place in Oyam examining cassava production. The field trips were planned and organised by the Agri-Quest team.

Research Context

Research on value creation along the value chain itself and at the first stage producer level has been discussed controversially over decades as well as in recent literature. Especially with consumers becoming more aware of their contribution to and impact on profit distribution through their purchasing behaviour, debates on the topic are refuelled by the rather young and growing sustainability movement (Bacon, 2005; Fridell, 2008; Jaffee, 2014). However, available literature lacks of satisfying and consistent explanations of the root causes of diminishing value retention at the first stage producer level in developing countries. Therefore, this research first examines the current state of existing literature and assumptions on the cause and effect relation of the lack of a fairer share of value creation and profits remaining at the first stage producers. Second, this research profits from insights provided through the team of researchers of the Agri-Quest research project in Uganda for sustainable value creation in the agriculture business in Uganda (Agri-Quest, 2017). Its aim is to strengthen agribusiness ethics, quality standards and information and communication usage in Uganda's value chains (Agri-Quest, 2017). Third, this study adds on to the existing knowledge on value addition by observing and exploring the farmers' perception and reasoning as well as that of governmental institutions. This results in a discussion of the causes for unequal value creation distribution and potential improvement suggestions along the value chain.

The reason for conducting research in the specific location resides in the meaning of the respective products for those regions and their value to the Agri-Quest research with a focus on ethical standards, food security and information and communication usage in the agricultural value chains of Uganda. Additionally, combined insights on both value chains allow for an understanding of the research topic regarding cassava, one product of growing local importance and its value mainly for home consumption and with a focus on the national market while rice production illuminates insights regarding a product of global concern with a potential

[6] AFRICA 2000 is a development initiative aiming at sustainable development and poverty eradication in Africa. (AFRICA 2000, 2017).

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for international trade. Insights on rice farming were collected in Eastern Uganda in the district of Bugiri where rice is one of the main income sources. Information on the cassava value chain were derived from interviews in the district of Oyam in Northern Uganda since many farming activities contribute to cassava production.

Uganda with its war-torn history is a country particularly interesting in regards to studying value chain upgrading. Since its independence from the United Kingdom in the 60s, the country struggles to achieve stability. It shows a history of political and civil unrest as well as of economic decline. With over 80% of the population employed in agriculture, which is said to provide poor working conditions and near starvation wages (CIA, 2017), upgrading schemes with the underlying assumption of poverty reduction through income streams, are particularly interesting to be studied in this context.

Data Collection

In order to gain an insight on the topic in question, data is collected in three steps using triangulation. Therefore, information is first assessed through desk research examining existing scholarly discussions on value chain upgrading in the developing country context. The assessment of literature took place in two stages. First, 54 sources were assessed, including academic journals, newspaper articles, books and websites. For this matter search terms were used such as value addition, value chain upgrading, upgrading in developing countries. Based on this, the publications were clustered in acknowledged theories and recent studies. It was found that a low number of qualitative research in this niche exists and provided another reason to contribute to the topic. After the field research these sources were revisited and examined against their applicability to the research topic. As a result, half of the collection was withdrawn while more applicable literature on agriculture and development was added. These contents were then compared against the value chain perspective in general and the acknowledged theoretical concept of value chain upgrading with a focus on value addition in particular. This was complemented by literature on the concept of competitiveness based on the well-established resource based view.

Second, additional insights were retrieved through the network of the Agri-Quest team and their experts on agricultural research in Uganda. Third, in collaboration with the Agri-Quest researchers and peer students from the Vrije Universiteit in-field research was conducted including observations on site, meetings with farmers and semi-structured interviews with participants at the first level in Ugandan's value chains of cassava and rice. The following table summarized the main steps of this research.

An approach which employs multiple sources of data strengthens the credibility of the conducted research (Edmondson and McManus, 2007; Gioia et al., 2012). The main findings of this research are based on the qualitative data which was collected during April 2017 in Uganda through 18 open-ended face-to face interviews during two field trips of a length of one week each. The selection and appointments for the interviews were arranged through the Agri- Quest team and the AFRICA 2000 network with a knowledgeable experience and expertise on research and development in agriculture (Agri-Quest, 2017, AFRICA

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2000, 2017). Seven out of the eighteen meetings were held with rural farmers belonging to a cooperative or network of farmers. Those interviews provided detailed narrations on value addition problems at the bottom of the value chain. Three interviews were conducted with intermediaries such as traders, brokers and processors, which represents the next level of the value chain. Four appointments took place at governmental offices, providing a more analytical and holistic picture of the root causes and relational implications on value addition impediments. Two out of the eighteen interviews provided insights on the topic from academics of the Makerere University in Kampala in the field of research and crop development. One meeting was appointed with a famer who initially started as a conventional rural farmer and today is considered a success example and role model as he gradually expanded his business and now owns a profitable farming business including a processing plant which employs and collaborates with rural farmers of the region. Another meeting was originally planned with crop processors. This assembly caught a lot of attention among the citizens, leading to an accumulation of participants with several value chain actors including producers, processors and intermediaries such as traders.

Data Analysis

This research follows an inductive approach to understand the underexplored view from the farmers' perspective on the point in question through qualitative data collection. All interview questions were posed in English by the researchers in alternating sequences to use the limited time most efficiently. Due to the different languages spoken throughout Uganda, each question was translated to the local language by a translator who also translated the respective answer back into English. Additionally notes on observations were taken by all members of the research team and compared afterwards. Each interview was recorded with the consent of the respective interviewees and subsequently transcribed.

With the aim to seek qualitative rigour, the findings are categorized into main factors which either impede or support value addition at the first stage producer level. This is accomplished by applying the Gioia-method of coding, where the findings are structured and given sense to by abstracting the most prevalent issues in value addition attempts by farmers in Uganda (Gioia et al., 2012). The categorisation took place in three stages. In the first round the focus was on the selection of the most prevalent influencing factors of value addition retrieved from the interviews. The data was then organized into tables and sorted by factors. Afterwards the data was revisited and compared to the observational notes, discussed with peers and adjusted where necessary. In the third step, the results were compared to the existing theoretical concepts of the literature review and newly categorized where suitable. Based on this process, the coding scheme shows three stages of abstraction from a detailed pattern description based on narrations of the interviewees (first order concept) to a subcategory of factors observed during the research (second order themes) to an aggregate dimension of impediments and drivers of value addition in agricultural value chains (Gioia et al., 2012). This results in a framework based on the findings, showing the cause and effect relation of factors influencing or

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diminishing value addition at the producer level.

Results

The following chapter discusses the findings of the data collection regarding the main influence factors found during the research on value addition in Uganda's value chains of rice and cassava. First, the results on factors diminishing value addition at the farmers' level are identified and discussed. Second, the main drivers supporting value addition in agriculture from a farm based perspective in rural areas are discussed. Third, the main drivers result in a value chain model that provides a simplified understanding of these factors and its entrance and impact levels focussing on profit losses. It problematizes the perception on the supporting and impeding forces of value addition from the perspective of government officials, academics and researchers and the respective farmers themselves. This chapter concludes with a framework. It gives a condensed overview on the factors observed through the interviews and shows how they influence each other. These relations are indicated with numbers and arrows in the graph. The respective numbers are mentioned throughout the following sections to guide through the model.

Impediments: Factors diminishing Value Addition

This section summarizes the leading impeding forces in the process of value addition in agricultural business of rice and cassava value chains in Uganda. It focuses on the problems that limit the potential of farmers' value addition undertakings. Derived from the interviews and observations, abstracts of the main problems associated with value addition for value chain upgrading purposes are provided in the following paragraphs. These can be characterized as issues concerning quality, stakeholders' mindsets, gender inequality, knowledge and education levels as well as income constrains.

Quality

Achieving and maintaining consistent levels of quality throughout the value chain at all stages of production is considered to be a major problem in cultivating and handling agricultural produce for smallholder farmers. The quality of the end product is affected or diminished by several points. It begins with the inputs (seedlings) at the very first stage of the value chains (Kaplinsky & Morris, 2001).

Planting materials

An input dealer estimates that around 30% of the input materials he receives from suppliers for sales purposes to distribute to local farmers does not meet the required standards (Interview 4; 2017). For instance, planting material turns into poor quality when the cutting was prepared premature. Premature cuttings tend to dry out easily which leads to lower quality products and smaller yields. Another issues is the length of time cuttings are kept in storage before seeding. The longer it is kept in stock before planting out, the higher the danger of infections of the planting material, according to an agricultural officer in Oyam. The latter also points out that seed varieties that were developed, tested and verified by research institutions to be more resistant to pests and diseases and to bring higher yields are being spread through the communities and provided to the farmers to ensure a

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more standardized quality. However the taste of the final product differs compared to the traditional varieties and thus the developed seed varieties are often rejected by the farmers (Interview 10, 2017).

Purity in seed selection, Intercropping

Similarly, the officers describe the purity of the seed selection as a major quality concern. Mixed varieties in input materials automatically bring mixed varieties of harvest, which are considered to be of lower value at the market. Additionally, harvest which contains impurities, consists of various varieties or even contains distinct plants, leads to a lower quality product which achieves lower sales prices (1) on the market (Interview 10, 2017).

Equipment and land preparation (modern means vs traditional cultivation)

District officials and processors equally point at two main concerns regarding the quality factor in the agricultural business of Ugandan's value chains of rice and cassava, namely appropriate handling and storage facilities as well as efficient means of land cultivation. First, through all the stages of the value chains, actors are mentioned to be lacking access to appropriate equipment and facilities to provide quality products. Impurities of the product mainly result from inappropriate post-harvest handling. Most stakeholders consider problematic drying facilities as the main obstacle in producing quality output. The harvest is commonly dried on the bare floor. Drying the crops is the first step directly after harvest and before processing. It is recommended by the government and processors to use specific drying facilities as padding, so called tarpaulins, to avoid any kinds of impurities and to achieve a consistent level of purity standardization instead of drying on the ground (Interview 3; 6; 10; 11; 12; 13; 14;15, 2017). *"It will lead to price exploitation. You produce poor quality grain. Then the reward for poor quality is a low price. A reward for low quality grain is a poor price. Even if the market price is 1,000 you end up selling it for 500*[7]*. Because you have not cleaned it. Because of your behaviour. The attitude is negative"* (Interview 3; 2017).

This description points at two issues. First, the quality of the product is reflected in the sales price. Second, the quality in terms of product purity is influenced by the appropriateness of post-harvest handling at the producer level.

Mindset

The observations of agricultural business in Uganda during the field trips show that most participants of the agricultural value chains have a distinct opinion on the root causes of diminishing value creation and sustained improvement practices in their field of expertise. However, many stakeholders describe that one severe hindrance to improvement in the agricultural sector resides in the reluctance to change of the parties concerned.

Reluctance to change

As one rural farmer points out, the mechanisms to stabilize improvement attempts have not yet led to a sustainable shift in farming practices. For instance, after governmental and non-governmental initiatives provided trainings and materials for production improvements little long-

[7] As of 04/04/2017, the date of the interview, 500 UGX convert to 0.13 EUR and 1,000 UGX convert to 0.26 EUR (Oanda, 2017).

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term success in sustainably improving agricultural businesses on rural farms was recorded.

"They go back to as they were doing it. They know what to do, but it all goes back. They need more continuous sensitisation and demonstration [because] conservativeness is difficult to break" (Interview 6; 2017).

A deputy mayor says that one reason for the inconsistencies in the agricultural business stems from the farmers' mindsets who consider farming as a punishment rather than a valuable source of income. Additionally she explains that smallholder production which originated from cultivation for subsistence purposes shows fairly low levels of standardization (3) and efficiency measures which are required to profitably access sales markets.

Governmental instability

Moreover, the recent country history exemplifies instability and discontinuity whereas the district's priority lies in achieving peace and stability first. Therefore means that focus on long-term strategies to implement and promote sustainable business practices in the agricultural sector have long been kept aside. Furthermore, the distrust in the system is based on this instability and missing legal security to protect land ownership. As a result, incentives to invest in development are missing (Interview 6; 2017).

Additionally, the district officials point out that, it is complicated to promote and sustain the desired business practices when role models (4) are missing to provide examples of success stories that result from ethical business practices. Inconsistencies and unethical practices among public servants play another role in impeding the change attempts along the different stages of the value chains. It is noteworthy, that none of the interviewees used the term corruption. However, after comparing and discussing the observations of the field trips with peer students and researchers from the Agri-Quest team, it was commonly agreed, that in between the lines, higher level government officials pointed at corruption as problem which impedes the reach of structural changes initiated by development initiatives.

Gender

Literature regarding gender inequality in Uganda describes a positive relation of declining gender inequality and declining poverty rates. However, this relation was only observed in non-agricultural sectors (Canagarajah et al., 2001). Furthermore, gender inequality in education and employment in a sample of developing countries was reported for having a decreasing effect on economic developments (Klasen & Lamanna, 2009).

In Uganda, men play the decisive role as the legal representative especially when it comes to any kind of interaction with third parties including networking, product marketing and selling, whereas their participation in the whole handling procedure of harvesting, transporting, drying etc. is marginal. This interrupts information and communication flows between the farm's legal representatives, the men, and the so called 'backbone' of the farming activities, the women. This is considered to be problematic as knowledge sharing (7) regarding the value chain activities is required to support any type of process development (5).

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Monetary issues and uneven knowledge distribution

One respondent claims that, *"when you look at the way people behave: selling is mainly done by the men, and the money is dictated upon by the men. Leaving all the other work the women has been doing, that is also why the women can do it in the way, just because the women is fearing the what? The husband."* (Interview 1, 2017) Therefore, for women reaching out to their husbands to buy respective input materials such as seeds, materials and required equipment as well as herbicides or pesticides for product improvement techniques remains problematic. Women either do not have the means to buy the necessary equipment themselves or lack the latest news on cultivation methods since the required outside contacts which distribute those means and knowledge remain with the men who are less involved in the physical parts of the farming processes. Furthermore, access to financial information on market trends is of advantage for profitable business undertakings (6). A farmer who is organized in a cooperative of rural farmers in Bugiri describes this issue as follows. *"So, they can be able to bargain appropriately. Sometimes buyers make advantage of women who are uninformed of the market prices. E.g. they visit the homes when the men are not around and buy the product under market price. The buyer comes and finds the lady in their home. So, these buyers took advantage of the ladies. And the price is very low."* (Interview 2, 2017) Since generally only men are involved in the marketing and sales of the products, the knowledge on actual and current market prices is obtained by men, while women are often kept uninformed in this regards. Therefore their respective bargaining position is weakened in the instance of negotiations in the absence of a male family member.

Knowledge and education

Most farmers in Sub-Saharan Africa stem from a background with a low level of education with a large number of market participants who cultivate their land primarily for home consumption (CIA, 2017). These are indicators of a limited awareness of market prices, price trends and the respective implications for product trade and product quality (15) at the farmer's level.

Unawareness of market trends

Especially in the secluded rural areas access to information on valuable markets, on market potential and price tendencies as well as on national and international food policies is limited. An input dealer states that *"most are unaware. However they know about unethical behaviour in processing in general. For instance, all know that tarpaulin[8] drying improves the quality of the product, but they also believe that pesticides spoil the crop, spoil the soil. So they don't want to use them. It is better to educate them, so that they can change"* (Interview 4, 2017). This respective input dealers deals a variety of products, including seedlings, pesticides, herbicides and equipment. His view on the value chain is of particular interest since he has a special positioning. He acts as a middleman between the different stages. On the one hand, he is a customer himself when buying input materials directly from the producing companies and sells as a retailer directly to farmers. On the other hand, he acts as a wholesaler himself

[8] A tarpaulin is a padding, similar to a carpet. It is used as a drying facility. In general, it is preferred drying method compared to conventional drying on the bare ground.

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when reselling the products to other surrounding retailers, who equally is his direct competitors. As he holds this delicate position, he gains insightful information from different stakeholders. He elaborates on the problem of limited knowledge as it does not only prevent the uneducated to make progress in terms of quality improvements and yields but also paves the way for exploitative and fraudulent practices.

Constrained knowledge transfer

Distribution of knowledge on market developments and forecasts is considered to be limited. The head of a team of extensional workers in Bugiri exemplary describes the issue of restricted knowledge transfer: *"One sub county has one crop extensional worker. And one sub county [...] has 40.000 farmers. The ratio is one to 40.000. That is why we need to come up with using ICT. We need to look at other modes that can pass over the message"* (Interview 3, 2017).

Yet, another problem to distribute the knowledge is mentioned by a district deputy who addresses the issue of official registration. She sees peer communication as one of the most effective means of training farmers(9), especially through role models who present their success stories and achieve adaptation and imitation among farmers (Interview 6, 2017). Farmers may be exposed to knowledge through a spill over effect where representatives of one group are exposed to knowledge and then distribute it to their peers. However, the obstacle here lies in reaching out (8) to the respective farmers and cooperatives, since only a few of them are registered with the government.

Costs and Prices

Most smallholder farmers consider their income from agricultural business as too low to cover their living expenses. A group of rice farmers in Bugiri points out that the prices per kilogram that they are offered by buyers do not reflect their production efforts.

Income constraints

They describe the undertakings as a spiral, whereas the quality of the products is insufficient to achieve market prices which cover all their living costs and especially for the school fees of their children. However, with insufficient earnings and no means for investment activities for quality improvement purposes, higher sales yields remain unattainable (Interview 2, 2017).

Affordability of input means and quality enhancement products

Since quality product is considered to achieve higher yields and higher market prices, the affordability of input materials play a distinctive role. An input dealer who sells herbicides and pesticides for land cultivation to rural farmers states that *"it depends on the quantities. There are these small ones, small quantities they can afford and medium size. But some are just not affordable for them. At least 40% can afford to buy it, 60% cannot. Mostly here farmers produce in small scale. So they cannot afford to buy fertilisers or herbicides. About at least 77% farm on small scale"* (Interview 4, 2017).

Price trends

The price fluctuations on local crop markets follow the free market paradigm and allow for higher sales when the demand for the respective crop rises. Therefore, the ability to store their product

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and sell it at peak prices when demand rises, constitutes a profitable marketing approach. However most farmers experience an urge to sell their products in order to gain money to cover for their daily living expenses. Therefore, most farmers sell their product *"after harvesting, drying, [they] sell, instead of waiting for future crisis when the price has increased. They just harvest and sell immediately, because they have needs for money."* (Interview 2, 2017).

The income achieved in agriculture currently provides a limited income which is considered to be sufficient to cover for basic needs, but does not leave room for investments in upgrading schemes.

Summary of Factors impeding Value Addition

In summary, the respondents mentioned *quality* as a main issue in achieving value addition. Most interviewees describe a connection between the qualities of the input materials, especially the types of seedling and its purity and the output. This was mostly supported by government officials who stated that the output quality largely decreases the sales price. Additionally, the access to proper cultivation and harvest equipment and machinery equally influences the quality of the produce and the amounts yielded.

Moreover, problems regarding ethical and effective business undertakings were referred to as a concern of the *mindsets* of the people in the poorer rural areas. These problems relate to deficiencies in long-term oriented planning and governmental discontinuity. Furthermore, the *gender* issue was introduced as a topic if contemporary concern. Women are considered to be the main contributors to agricultural work. However, any legal power resides within men. This means that men are the decision makers in monetary issues, land ownership and product marketing. Men are also those mainly approached for meetings and assemblies that concern knowledge distribution (7). Nevertheless, women are the ones who execute most steps of production. Thus, knowledge distribution between genders is interrupted. Moreover the issue of limited access to *knowledge and education* was introduced to be a significant driver impeding agricultural progress. On the one hand, it was described that the lack of knowledge on product specifics, product quality, cultivation and harvesting methods as well as appropriate post-harvest handling methods lowers the upgrading ability. On the other hand, unawareness of market developments and market prices limits the seller's marketing and bargaining power. Thus, farmers are often forced to rely on the prices offered by the traders (buyers, intermediaries) which may not reflect the actual market price.

As a result, *prices* achieved by farmers through the sales of their products are perceived to be too low to achieve sustainable income streams which allow the coverage of all living expenses including school education fees for all children and for investments needed for the upcoming cultivation season.

Facilitators: Factors promoting Value Addition

This chapter introduces the most prevalent factors in the process of value addition in agricultural business of the rice and cassava value chains in Uganda that are perceived as supporters of value addition in the context on rural smallholder farming. The findings on impediments of value

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chain upgrading are complemented by the main drivers supporting value addition. In the scope of this research, facilitators that promote knowledge dissemination were considered to be of particular importance. Additionally, means to promote gender equality as well knowledge adoption through imitation of role models and networking were identified.

Dissemination of knowledge

The dissemination of knowledge to farmers is constrained due to a generally low level of school education and the difficult access to information in rural areas. An input dealer for cultivation products explains that three main challenges exist for farmers to gain knowledge on improving their agricultural undertakings. First, for farmers to understand the value of good quality input materials (15), they need to be exposed to success examples in the use of supporting cultivation materials in order to understand its utility and to create the desire among farmers to upgrade by using the recommended additives. Second, many farmers with a low level of school education lack the ability to understand the instructions for use of the materials. Third, the manner of agricultural procedures are deeply rooted and passed on from generation to generation and it is difficult to break these deeply rooted cultivation habits and move towards new and improved or even innovative processes.

Exposure and Imitation

A successful input dealer in Bugiri states the following.

"We do explain to them, because there are some who can't really read and don't know the instructions. So you do try to explain it to them, in their language, so that they can understand and use it properly in the right proportion. So we explain and sometimes we write it on the bottle." (Interview 4, 2017).

He further elaborates on the importance of listening to and understanding the farmer's problems in order to offer the right products to support the agricultural undertakings appropriately. This input dealers observed that only famers who were able to experience (4) the improvements and achievements of better yields through the respective use of the right quality products move towards improved and more sustainable production procedures. Additionally, he points out that those experiences push the word to mouth advertisement of improved cultivation methods and thus are one of the most effective ways to push improvements in agriculture which are the basis to allow for value addition at the first stage producer level.

Information and communication technology

Due to infrastructure constrains and low levels of technologization, access to and management of data is limited. District officials claim that insufficient and inefficient automatization and access to databases are a major concern regarding efficient data recording and management. A government representative describes that farmers miss out on knowledge (15) on market trends and the ability to conduct cost-benefit analyses (1) due to limited information transfer and low levels of computerization. He suggests to include the youth to address this issues as follows: *"That is why we are saying we look at the youth. They can serve the smartphones. They can pass over the message"* (Interview 3, 2017).

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The youth is considered to be the pillar of future performance ability. However the youth has often been described as unreceptive regarding farm work and its income opportunity.

Trainings and role models

The importance of demonstration of best practice examples through role models and the learning by doing are perceived to be main drivers for value addition development among rural farmers. The manager of an initiative in Bugiri which provides services to smallholder farmers in Africa says that visual demonstration (4) of cultivation processes that lead to successful long-term product improvement is key to provide useful support to Africa's farmers. Additionally he stresses the importance of the impact of the demand force as a factor that can drive value addition and a better understanding of the market conditions for farmers. He expresses his thoughts as follows:

"Through demonstration and learning by doing, these people learn how the world is going. Like recently rice from china came, a donation. Now, people have never had such a meal. Such quality rice. But when they are looking at this. Where can we get it? So you bring the technology to them. When they see and appreciate, they will demand for it. If buyers come and they reject the poor quality, they will learn. I got poor quality, poor price, they rejected my product because of this. Then they will change." (Interview 3, 2017)

Trainings and Quality Improvements

Quality improvements that show the effectivity of trainings can be directly measured in financial results (1). The manager of the Sasakawa Africa Association in Bugiri states the following regarding trainings on post-harvest processing with a future ability to value chain upgrading resulting in higher profits: *"They [the farmers] were able to get a better price, double the price. They are able to take their rice to Jinga*[9]*, because there is a better processing plant. I think there is a lot of post harvesting loss. A lot. For rice, it is over 40%. For maize, it is 40%. But rice over 40%. When you improve the quality, you get a better price"* (Interview 3, 2017)

Empowerment of women and youth

Heads of cooperatives and associations which support rural farming initiatives in Uganda agree that women account for most steps of value creation in the agricultural value chains and they take care of the children and households. Therefore women are a valuable distributor of knowledge since in farming, children are mainly exposed to female role models (10). The manager of an initiative for farming services says the following:

"You know what they say, if you train women you train a nation. To disseminate the information. So, give the skills to the women and the youth. We need to involve them along the value chain" (Interview 3, 2017). He further explains that the youth is considered to be the pillar of next generation's performance ability. However the youth has often been described as unreceptive regarding farm work and its income opportunity. Exposure to successful role models, is considered to counteract this phenomenon.

Networking and cooperation

Farmers who are organised in farmer groups and manage their activities through

[9] Jinga, district in Uganda

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cooperation describe multiple successors of joint undertakings. One major advantage is described as cooperatives being a facilitator for financial stability. Most cooperatives establish a saving scheme for the farmers involved. As a result many participants are able to stabilize their financial situation (11). Another advantage is seen in the collaborative market power in accessing means of transportation, equipment and material (12) to be jointly used by the members as well as the ability to more efficiently share the farm work.

Investment and Savings schemes

All cooperatives visited in the scope of this research show a clear structure of saving and investment planning which every member is supposed to adhere to. Members of these cooperatives state that the collaboration provided them with more sustained and reliable income streams (15) as well as it facilitates collaborative use of equipment materials which allow them invest for upgrading purposes. *"We pay the money back to each member and each one solves their one problems with it. We also use it for borrowing money to members."* (Interview 7, 2017)

A leader of a cooperative in Bugiri describes the advantages of their collaboration as follows.

"Farmers are now involved starting of groups, then they gone further starting village settings and loan associations. They starting to save, weekly savings, so after six months if a member wants they save. They save and then maybe there will be a member who needs crop finance or money to borrow.

That is the benefit of coming together. Secondly, if there is post-harvest equipment they are sharing they will now start going together planting and harvesting. We need to support, letting him running this equipment." (Interview 7, 2017)

Quality and standard enforcement through informal policy making

Additionally, the collaboration within a cooperative is described by most cooperative members as an upward spiral in terms of continuous improvement (13) and facilitation of the farm work. The community creates an urge to adhere (14) to the commonly achieved standards and the collaboration exposes farmers to best practice examples within their community and more easily allows the dissemination of theses improved practices. The head of one cooperative in Bugiri states:

"We have bylaws, which state that when you are a member you are not supposed to dry your rice on the bare ground. This is a policy. We also have policies regarding discipline and we have leaders. These leaders go for trainings and forward this training in the group. And we have access to potential buyers outside the market who come to buy from the cluster because they know these members are part of a group and produce good quality rice. We also have buyers outside the Bugiri district" (Interview 5, 2017).

Summary of factors promoting Value Addition

In summary, the respondents mentioned access to *knowledge* as one of the main factors supporting value chain upgrading. Knowledge dissemination can be facilitated through numerous ways. Each district provides cultural services via their extensional workers. The importance of seeking an understanding of farmers' most

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urgent needs is described as the foundation of developing governmental supporting schemes for agricultural businesses in rural areas. Many officials emphasized the need for computerized technologies to collect, sort and distribute the relevant data. With that said, the focus lies on the young generation with the ability to operate, apply and substantiate information and communication technology in rural areas.

Similarly, *trainings* are considered as a main factor in regards to value addition. One example of effective trainings is described as adoption through role model imitation. As part of knowledge distribution, trainings on enhancement procedures especially regarding land cultivation and post- harvest handling the quality and the yield of the product can be improved significantly. This results in an improved competitive positioning leading to more sustained income streams.

Another multiplier effect is observed in *networking and cooperative* structures. The advantages from collaborations lie in an increased market power. For instance, most cooperatives report successful efforts of informal enforcements of standard and quality policies by declaring the obedience of rules of conduct as a membership requirement. As a result of the merger the product quality enhances, the outputs increases and thus the pooled market and bargaining power cumulates. Additionally, all cooperatives in the scope of this study implemented saving schemes which demands members to collect savings for future investments. This money pool was also used as a fond for members in need for a credit which drives financial stability and independence of the participants.

Framework of factors impeding and promoting Value Addition

Even though, for all influence factors named during the interviews a connection to nearly each of the other factors was mentioned, the quality problem received most of the attention. Further, it was found that gender and networking are perceived to strongly influence most other factors. This in turn has implications on the quality issue.

These findings lead to the framework in figure 2 (see appendix), showing the most prevalent factors within this research and their respective relations to the issue of quality, indicated by the green arrows. Thus, each factor may either impede of support upgrading actions in terms of quality. Nevertheless, most factors are interrelated, which implies that upgrading in the agricultural value chains of rice and cassava in rural Uganda is a complex construct influenced by numerous factors, at least by the impediments and facilitators introduced in this section.

Discussion and Implications

This chapter first discusses the findings in regards to prior scholarly discussions. It then concludes with a description of the limitations and suggestions for future research.

Theoretical Implications

This section discusses where the findings of this research confirm the results of existing studies and where it differs from those. Overall, it was found that the awareness of the value chain upgrading concept and its advantageous implications for increased incomes existed. However, impeding factors such as the *mindset* often interfered with upgrading actions.

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In accordance with the literature, upgrading as part of the value chain perspective broadly considers any kind of innovation or improvements in terms of resources, capabilities or competencies (Gereffi, 1999; Kaplinsky & Morris, 2001). Prior research on upgrading opportunities of agricultural smallholder producers found that most actors of the respective sample were well aware of the advantages of upgrading (Fromm, 2007). These findings slightly differ from the observations of this study. For most farmers interviewed during the field trips the bigger picture on upgrading opportunities was missing. It was found that the farmers' primary concern was to cover for the expenses of their daily lives. Their most prevalent concern was on how to most rapidly sell their products to cover for their basic needs. As a result, most farmers were ambitious to enlarge their yield. Generally, it was understood that larger quantities and, to some extent, better *quality* serve as a better income source. This confirms findings of prior studies that product and process upgrading are the upgrading schemes, which were most commonly found in agriculture in similar settings.

However, it was not commonly taken into account, that this can be part of an upgrading scheme with a long-term focus on the respective value addition for improving profits. It was more seen as a short- term solution for times of scarce financial resources. Once the personal financial situation went missing as a driver, even only marginally, this directly interfered with the newly established improvements and farmers changed back to their previous behaviours and cultivation patterns. The reasoning for this discontinuity most often described within the interviews was summarized as the factor *mindset*. From the farmers' perception, farmers engaged in upgrading undertakings were mainly concerned about *quality* improvements. The interviews revealed that from their perspective missing equipment or the inability to afford the respective means for post-harvest handling and processing diminished value addition in terms of quality improvements.

Several factors were found which equally act either as an impediment or as a driver for upgrading. One factor which was named in all interviews was knowledge. *Knowledge* regarding market prices and the product value were named as the basis for price negotiations to prevent selling under the current market price. Knowledge regarding the right processing procedures was described as the driver for quality improvements with a positive effect on sales prices. However, the results also revealed an interrelation of the factors. For instance, knowledge regarding the right processing and post-harvest handling results in better quality products and this increases the sales prices. Making use of this knowledge requires access to the equipment needed. This effects almost all steps of the upgrading procedure. Access to those means depends on further factors, such as the *affordability* of the respective means. As a result a reciprocal effect of the factors diminishing and driving the value chain upgrading actions of agricultural smallholder farmers in rural Uganda was observed. This result confirms prior studies with a similar focus, in regards to the success factors or impediments found. Further, the existence of an awareness of the implications of upgrading actions were often confirmed (Giuliani etal. 2005; Fromm, 2007; Challies, 2008). At the same time it, differs from existing studies, since the observations revealed that only very few

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agricultural small scale producers engaged in upgrading. Further valuable insights were obtained on the importance of standard compliance its implications on superior firm performance (Barney, 1991; Humphrey & Schmitz, 2000; Giuliani et al., 2005). It was found that networking, specifically within cooperatives, served as a driver of upgrading. The force of the community within a cooperative positively influenced quality, mindset, affordability of equipment and knowledge distribution. In accordance with value chain literature, it was commonly reported that this improved the positioning within the value chain and led to more sustained income streams (Kaplinsky, 2000; Jaffee, 2014). However, the findings regarding networking structures are to be understood in the local context of Uganda. The findings of the examined existing literature refer to value chain upgrading in regards to products aimed at international exports markets. Thus, the driver for the improvement strategy resides with a Western based demand, whereas the findings of this study are to be considered within the local market of Uganda. Therefore it can be confirmed that the agricultural value chain follows the same definition of the buyer-driver commodity chain as described in prior studies (Challies, 2008). However, the demand force of value chains in this research resides within the local context as opposed to the export-driven demand of the examined literature (Challies, 2008; Fridell, 2008; Jaffee, 2014).

Nevertheless, it can be confirmed that upgrading actions among agricultural smallholder farmers generally lead to more monetary stability and independence. This is in accordance with the established perspective on sustained forms of income through superior firm performance (Barney, 1991; Gereffi, 1999; Lee et al., 2011). However, the concept of competitiveness through upgrading in prior studies, was mainly examined at a firm level. This study thus enlarges the body of research by observing income implications through upgrading from a small scale producer level. The major difference between those perspectives seem to reside within a differing understanding on how continuous improvements (e.g. standardisation of production) can have implications for long-term improvements in terms of monetary stability and independence (Humphrey & Schmitz, 2004; Giuliani et al., 2005; Hitt et al., 2017).

Limitations and Future Research

The research conducted provides an in-depth understanding on value creation coverage along the supply chain from a first stage producers' perspective of Ugandan cassava farmers in the district of Oyam and rice farmers in the district of Bugiri selected by a team of researchers from Agri-Quest, Uganda and students from the Vrije Universiteit, Amsterdam. Thus this study is limited by the following four main aspects, generalizability, structural limitations, an outsider perspective as well as by confirmability and bias.

First, the knowledge obtained through observations in these two districts in the fields of rice and cassava production, decreases the generalizability (Colquitt & Zapata-Phelan, 2007; Rowley, 2012). The main insights of this study reside within in the perception of the farmers interviewed, governmental representatives and researchers belonging to the Agri-Quest network. It is further limited by the view of farmers in the developing country context

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in the region of Uganda and a time constraint of two weeks. The in-field research combines data collected in two Ugandan districts and therefore findings and interpretation are valid within in the scope of this research but narrow generalizability regarding developing countries in general.

Therefore, pre-formulated but sufficiently open questions which are loosely framed aimed to allow the respondents to narrate freely in order to gain a greater insight and to refrain from narrowing the information scope. The limited number of interviews allows for extensive examination of the factors complicating value addition while it ensures manageability of in-field research within a time constraint of two weeks. By seeking to openly explore and understand the farmers' perception by, for instance allowing for storytelling, the research lowers a potential bias and strengthens the confirmability (Colquitt & Zapata-Phelan, 2007; Rowley, 2012). Even though, this allows for detailed and exhaustive exploration of the complex factors influencing value addition from the first stage producer point of view (Edmondson and McManus, 2007; Flick 2007; Rowley, 2012), interaction and communication are subjective and as such barely – even though unintended- free from bias. One common obstacle may be that the respondents answer in a way they think they are expected to. Further hindrances regarding a potential bias may occur through (mis-) interpretation or subjectivity (Edmondson and McManus, 2007).

Additionally, the researcher and the interviewees belong to different cultural and linguistic backgrounds which raises further concerns regarding the interpretation. In order to reduce the bias and increase the objectivity the following measures are exerted. First, the interviews are conducted in the farmers' familiar environment and the questions are openly posed to allow the respondents to freely narrate. Second, a local interpreter, familiar with the local customs, culture and languages supports the communication and translates the questions posed. Third, the results of the interviews and observations are compared to results gained through peer researchers investigating the same field of study. Additionally, insights obtained through secondary research provide first steps towards a greater transferability which may be enhanced through future research

Nevertheless, this study capitalizes on theoretical concepts in the nature of academic management literature on the topic of value chain and firm performance theory. In their nature, these are concepts written within academia of the developed world. Thus, assumptions based on these concepts lack an in-depth understanding of implicit differences among those two contrasting economic worlds. As a result, observations and interpretations retrieved from the interviews are evaluated and interpreted with a western perspective and subjective. Even though this research uses existing knowledge on value chain upgrading embedded in the idea of profitability improvement, it is beyond the scope of this research to estimate and test the applicability of western based management and economic concepts, principles and axioms in the developing world.

In order to allow for generalizability of the findings, future research on the topic may be conducted in similar settings to further substantiate the results of this study (Flick, 2007). Therefore, future studies may focus

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on farmers with differing backgrounds. This includes a qualitative assessment of producers of different agricultural products in the same regions or of producers of the same crops but from different developing countries. Results may then allow assumptions on the transferability of the factors observed in the scope of this research. Additionally, future studies may substantiate these assumptions by conducting quantitative research. A quantifiable assessment, for instance, may evaluate the relationship of the factors observed in this research.

Conclusion

Based on the value chain perspective this research focuses on the activities of value addition in agriculture at the first stage producer level in the developing world. Specifically, in regards to the concept of value addition aiming at an upward movement along the value chain, this research illuminates obstacles and facilitators of value addition. It contributes to the understanding of upgrading opportunities through value addition and its implication for improved competiveness by taking the first stage producers' perception of hindrances and supporters of value addition into account (Gereffi, 1999; Fromm, 2007). Moreover, this study examined the concept of firm performance theory and its applicability for first stage producers in agriculture in the context of developing countries (Barney, 1991; Challies, 2008).

The findings of this research suggest that few value chain actors at the first stage are aware of the implications of and the opportunities provided by value chain upgrading. Furthermore, among those this knowledge is anchored, means for upgrading are missing. This problem affects measures for quality improvements which impedes value addition. Overall, the most prevalent factors hindering value chain upgrading was access to equipment and financial means to improve the required quality for product or process upgrading purposes.

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Appendix

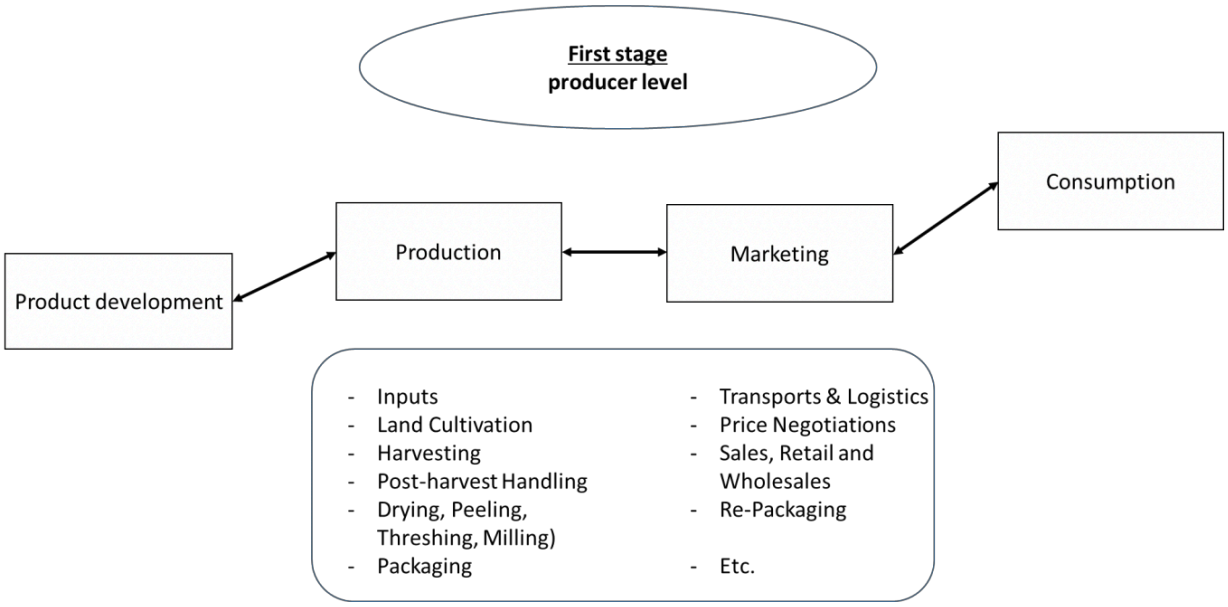

Figure 1: *Abstracted Value Chain Model*

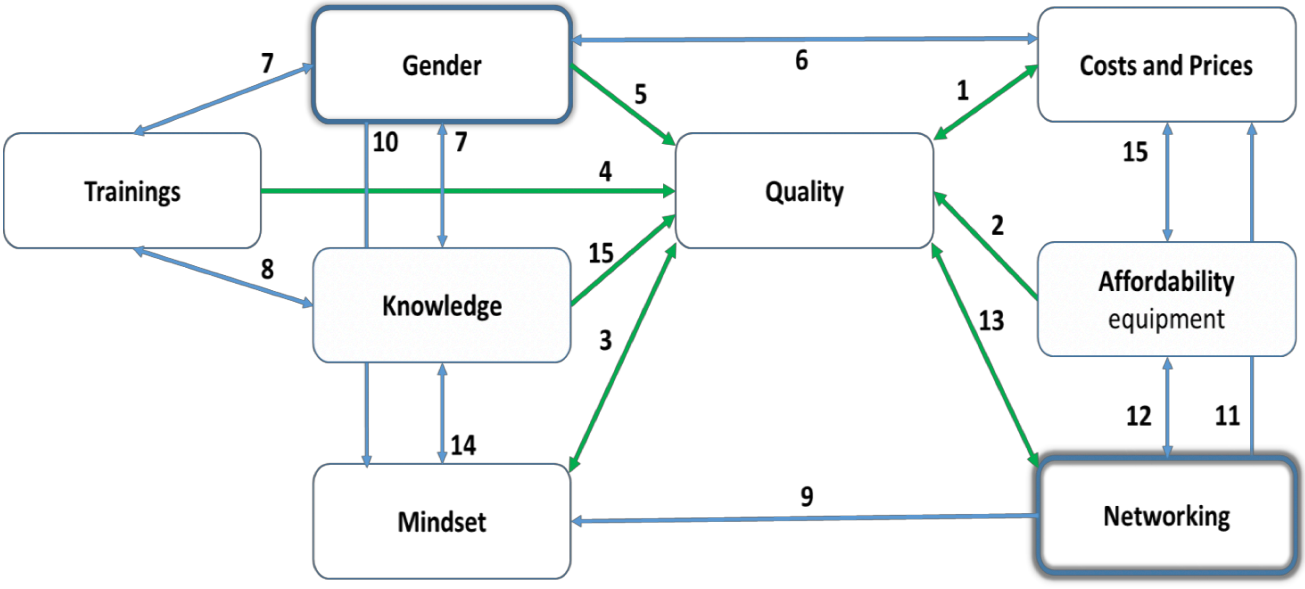

Figure 2: *Interrelationship of impeding and supporting forces of Value Chain Upgrading*

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