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Addressing Institutional Voids Through Bricolage Strategies: The Commercial Smallholder Farmers in the Conflict-Affected Business Environment in South Sudan

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Working Title

Deploying Entrepreneurial Bricolage to Address Institutional Voids: The Commercial Small-holder Farmers in the Conflict-Affected Business Environment in South Sudan

Abstract

Agricultural production has been severely affected by a civil war in South Sudan. The most affected category in this case is commercial small-holder farmers who face multiple institutional voids in their business environment. Despite these institutional voids, the study found that some smallholder farmers continue producing for market purposes.

The main objective of this study was to understand the coping strategies deployed by commercial small-holder farmers to overcome such institutional voids facing them. In doing so, 16 interviews were conducted with the small-holder farmers using focus group discussion and semi-structured questionnaires, and two interviews with the South Sudan Ministry of Agriculture and Food Security which supports farmers through development partners. Published reports indicated that FAO is an implementing partner that implements the donated funds by IFAD, while WFP provides food aid.

The study identified among others, the price instability/the effects of inflation, and a lack of finances as the major institutional voids that smallholders mentioned in the interviews. The study found that small-holder farmers deployed entrepreneurial bricolage strategies to address such institutional voids. Food aid, the help given by the village chiefs and clan elders in the form of cows, as well as social connections with the resource-abundant people within communities were entrepreneurial bricolage strategies deployed by small-holder farmers. It was concluded that although the conflict affected agriculture in a negative way, it was crucial to learn some strategies deployed by smallholders to overcome institutional voids and continue participating in market-linked agriculture.

Keywords

Conflict and its impacts on agriculture, Commercial Smallholder Farmers, Entrepreneurial Bricolage, Institutional voids, Coping Strategies, South Sudan

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Acronyms

SHF	Small-holder farm
SPLM	Sudan People's Liberation Movement
IFAD	International Fund for Agricultural Development
FAO	Food and Agriculture Organization
WFP	World Food Programme
FGD	Focus Group Discussion
NGO	Non-Governmental Organization
SSP	South Sudan Pound
\$	Means the symbol of the United States Dollar

Dedication

Dedicated to the Dutch Ministry of Foreign Affairs of the Royal Kingdom of the Netherlands, which funded my master's degree studies through the Orange Knowledge Program Scholarships.

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Chapter One: Introduction

1.0. What is this research about?

War and conflict are the major causes of resource scarcity, destruction of economic activities and livelihoods, and creation of poverty on a larger scale (Kwong, et al., 2018). South Sudan experienced a series of conflicts starting from the British colonial period (1899-1955), followed by the subsequent wars between the north and the south from 1955-1972, 1983-2005, and finally, the civil war in South Sudan that broke out in 2013 and ended in 2018 with a peace agreement (Institute for Peace and Security Studies, Conflict Analysis, 2018; Beswick, 1991). Literature indicates a direct link between people being economically poor because of low economic growth and development due to adverse impacts of conflicts on agricultural practices and commercial smallholder farmers operating in fragile, conflict-affected, and insecure areas (Sassi, 2021). Because of the impact of this conflict, smallholder farmers in commercial farming find it difficult to participate in commercial sorghum crop production in South Sudan. Consequences resulting from conflict include a lack of reliable and functioning financial institutions in South Sudan to avail financial loans and credits to commercial smallholder farmers, as well as a lack of reliable middlemen to facilitate the market transactions between the South Sudanese commercial small farmers and buyers (World Bank, 2020), which in most cases refers to as the underdevelopment of the market infrastructure, where a gap in connecting and coordinating buyers and sellers in such areas is wide (Goltz, et al., 2020).

Agriculture is greatly affected as reflected in the destruction of agriculture-related livelihoods for over 1.4 million South Sudanese, loss of lives for 60,000, and an internal displacement of 1.6 million people, as well as 770,000 South Sudanese, including farmers who fled the country for refuge outside South Sudan (UNDP Report, 2020), all constituting an unfavorable environment for businesses. Conflict lowers agricultural production through the destruction of agricultural infrastructure such as lowering access to markets and extension services which commercial small-holder farmers require as vital support functions for their business (Blankespoor, et al., 2020). The literature demonstrates that gaining value addition is challenging as markets are not functioning properly because of conflict which has created a lot of insecurity on the roads linking markets to communities (Goltz, et al., 2020). The same source adds that such an insecure environment makes it dangerous for traders, aggregators, and farmers alike to move with products, and this makes Juba City a concentration point for most farming businesses because it is a city and more secure than remote villages. Pests are also another major challenge for sorghum small-holder producers as pests such as midge, fall armyworms, caterpillars, and soil insects, as well as qualla birds affect their crops and reduce yields (UNDP report, 2020). These pests feed on sorghum and at some point, 50% of losses of crops were registered (World Bank, 2019). Finally, the literature indicates that checkpoints and roadblocks created by local authorities along highways pose significant costs to traders (Goltz, et al., 2020). Continuing from the same source, it is reported that only three out of ten traders (about 31%)

operating within towns can transport their products from remote areas to the town markets but pass numerous roadblocks/checkpoints where they find it a mandatory requirement to pay a fee to the tax authorities (Goltz, et al., 2020). It costs 5,000 South Sudanese pounds (about 5 USD) to be able to pass the checkpoint/roadblock, but the fee varies from one farmer, with some saying they pay 2,000 South Sudanese pounds (about 2 USD) and others paying even 20,000 South Sudanese pounds (about 20 USD). These challenges make it difficult for smallholders to participate in commercial agricultural livelihood activities, and because of that, this research approaches such challenges as institutional voids preventing the progress of commercial agriculture in South Sudan. Institutional voids, mean that the formal institutions in charge of offering support functions for the market are failing to support the functioning of those markets (Liedong, et al., 2022). It is when the product market becomes ineffective and eventually incapacitates the participants in business (Khanna & Palepu, 2015). Some of the key basic institutional voids have already been mentioned above in this paragraph and it is still unknown what other institutional constraints commercial small-holder farmers face in their business.

Taken beyond the practical experiences of sorghum small-holder farmers in South Sudan's conflict setting, literature shows that there is a close relationship between war and development (Gates, et al., 2012). Development and war are related in the sense that when war happens, development is dismantled, leading to the loss of human lives and the destruction of development in general (Ibid., 2012). When economic, political, and social institutions indelibly get harmed by the impact of conflict, there is a development gap created between the countries that have experienced the war and countries that have not experienced it. With an increasingly volatile security situation in many developing countries in Sub-Saharan Africa, this research topic becomes very important to study. Previous studies have indicated that such increasing volatility and insecurity in low-income countries makes it difficult for extreme poverty and hunger to be eradicated, which makes people living in such low-income and conflict-affected countries fall below the international poverty line (RoseGrant, et al., 2006) because investing in agriculture has been subsequently prevented.

Despite the challenges faced by commercial sorghum small-holder farmers because of the impact of the conflict, there are still some of these commercial small-holder farmers who manage to produce for market purposes in South Sudan. To learn about how commercial sorghum small-holder farmers cope with such a conflict-affected environment while conducting their business, this research study takes the entrepreneurial bricolage concept as useful. Bricolage means making do with whatever resources are available or creating something new from what little is available at hand, by combining various resources in limitation (Gbadegeshin, 2018). Although no literature shows the use of bricolage in South Sudan's setting, other literature sources show that the concept of bricolage has been used in

other settings for studying and understanding suitable strategies designed to ensure the greatest degree of resource use, beneficial collective action, and building social capital (Ibid., 2018). Entrepreneurial bricolage has also been used in solving financial problems, as well as in innovation research studies, and value creation (Ibid., 2018). By using the lens of entrepreneurial bricolage, the focus of this research study is to understand the coping strategies that some of the commercial sorghum small-holder farmers deploy to address the institutional limitations they face in their business environment and continue maintaining their commercial farming in South Sudan.

Regardless of these effects of conflict, agriculture is still practiced in South Sudan, as evidence shows that some small-holder farmers continue to produce sorghum crops for market purposes, which is an indication that commercial farming holds importance among South Sudanese. Some commercial small-holder farmers participate in market-linked activities by producing sorghum crops and selling them to retailers, wholesalers, and individual consumers within the local communities (Goltz, et al., 2020). These commercial smallholders produce and sell their surplus, as well as provide jobs for people whose farms closed due to the impact of the conflict (Ibid., 2020). In South Sudan, agriculture still serves as a primary source of income for every nine in ten rural households, and one in two urban households (Goltz, et al., 2020; (Mohamed, 2010) regardless of the negative impact of the conflict. Literature shows that these commercial small-holder farmers participate in sorghum crop production which is a reason this research chooses it in addition to being a widely grown staple crop, which makes it relevant for its applicability of results to the majority of South Sudanese and makes it both a representative food and cash crop for most South Sudanese. Also, 75% of the population cultivates it (UNFPA, 2023; African Development Bank Group, n.d.), with South Sudan leading with 76% sorghum production among Uganda, Kenya, and Ethiopia (Fews Net Regional Sorghum Supply and Market Outlook, 2021).

Also, literature on studies about agriculture in some other African conflict-affected countries indicates that conflict affects agriculture through various channels including market disruptions in which case the most affected are the small-holder farmers who face difficulties in participating in the market-linked agriculture (Bruk, et al., 2016). The same source notes that the decline in agricultural production results in a loss of income for the population dependent on agriculture, unemployment, as well as creates the widest gap in food security leading to severe hunger and starvation of the people. The conflicts in the Ogaden region in Ethiopia affected agricultural production just in the same way it affected Somalia which has been

characterized by state fragility (Ibid., 2016), all of which are similar ways in which conflict has affected agricultural production in South Sudan which also a similar situation in the Democratic Republic of Congo and Zimbabwe which are characterized by fragmented institutional systems and fragilities of state security creating difficulties and costs for agricultural production to occur (Luiz, et al., 2020).

1.1. Relevance of the Research

It's evident that the conflict in South Sudan is real with its adverse impact (Goltz, et al., 2020) and created a dramatic slow in the country's development process, especially agriculture production. Armed conflicts, especially in less developed countries create local and national impacts which combine to affect social, economic, and physical infrastructure. Since armed conflicts generate insecurity and displacement of the productive labor force, the result is food insecurity looming, and civilian populations starve (Committee on World Food Security/FAO, 2005).

Because of the conflict, institutional voids emerge which prevent the effective market participation of commercial small-holder farmers. Voids such as the unavailability of financial institutions create a lack of funds amongst farmers. Therefore, focusing on understanding the coping strategies that small-holder farmers innovate to cope with the institutional voids is a topic of much relevance. Focusing on this topic of study is placed on the need to gather the information that will be useful to the government of South Sudan and development partners to understand the institutional limitations that prevent the effective functioning of agricultural commercial activities.

Also, the findings of the research will be relevant for the South Sudan government and development partners concerned with agriculture-related policies and activities. For example, agriculture does contribute to the Millennium Development Goal (MDG 1): Eradicate extreme poverty and hunger, and this is achieved through agriculture-led economic growth, as well as through improved nutrition. The research is relevant in terms of essential and inclusive agricultural development for all commercial small-holder farmers through improved policies which are essential for them since they are faced with institutional constraints in their operating business environment in South Sudan.

In low-income countries, including South Sudan, poor people only get access to increased employment and a rise in their wages/salaries and satisfy their basic needs through economic growth (RoseGrant, et al., 2006), as well as concerned with both economic growth and distributive justice as noted by Andrew Sayer (2009).

Furthermore, what makes this study relevant in the context of development is that when compared with the rest of the low-income countries of the world, Sub-Saharan Africa finds it difficult to achieve the MDG 1: Eradicate extreme poverty and hunger, as reflected in 47% people who fall below the international poverty line. To bridge this gap, or address this food security issue, agriculture proves as the only primary means to tackle this challenge (Ibid., 2006). In South Sudan, 80% of the population depends on agriculture for their income and necessities, as reflected in every nine in ten rural households obtaining their income through agriculture and one in two urban households employed

through agriculture (Goltz, et al., 2020). Through agriculture, 65 percent of the population acquires their livelihoods, and this means that for a third-world country to achieve its Millennium Development Goal (MDG1), it depends on understanding specific environmental constraints that affect those participants in agriculture and how those participants find opportunities to address such constraints prevailing in the specific business environments (RoseGrant, et al., 2006).

The findings of this study will be of relevance to the students and researchers in the related field. But before moving to chapter two on the theoretical underpinning of the research study, the section provides an updated version of the research schedule starting from after the presentation of the draft in September to the deadline in November.

1.1. Objective (s) of the Study

Using the concept of the institutional void to identify the constraints facing commercial sorghum small-holder farmers in South Sudan, the objective of this study is to understand the coping strategies using the entrepreneurial bricolage.

Therefore, the objectives are twofold as follows:

1. To identify the institutional voids facing commercial sorghum small-holder farmers.
2. To understand how commercial sorghum small-holder farmers deploy entrepreneurial bricolage as a coping strategy for maintaining their commercial farming.

1.2. Research questions

Main research question: how do commercial small-holder farmers deploy bricolage strategies to cope with the institutional voids and maintain their commercial farming in South Sudan?

To answer this question, the following sub-questions are developed:

1. What institutional voids do commercial sorghum small-holder farmers face in South Sudan?
2. How do commercial sorghum small-holder farmers deploy bricolage strategies to address institutional challenges they face in their business?

production for the value chains

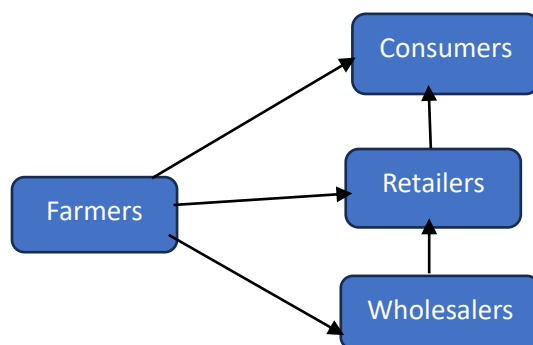
Coined by Michael Porter in 1985, a value chain means moving a product from its early stages by passing through higher value-adding stages till that product reaches the final consumer (Hiller, et al., 2014). The same source adds that a value chain follows the sequence of activities performed by different participants such as farmers, wholesalers, and retailers who focus on a particular commodity.

In South Sudan, 30% of the local commercial production of sorghum is sold to individual consumers, retailers, and wholesalers for commercial purposes. About six years ago, an average price of a bag of unprocessed sorghum grains used to sell at less than 250 SSP, or its equivalent of less than \$2 in remote villages between 2012 and early 2013, before the economic situation escalated following the civil war. Fluctuations have been there because of the high inflation, making the prices of cash crops rise and fall at different times of the year. A bag of unprocessed sorghum grains cost 9,000 South Sudan pounds in January this year, which was much lower than US\$ 500, or the equivalent of 250,000 South Sudanese pounds at which a full tone of unprocessed sorghum grains used to sell in Juba, and US\$ 600, or its equivalent of 300,000 South Sudanese pounds in the border town market of Kadugli in Sudan between 2015 and 2018 (World Bank, 2019). With sorghum production, which is commonly and largely practiced by small-holder farmers, there are varieties of it (sorghum) that farmers use, and they include (called in Dinka language: akuaracot in Jonglei state, nyithin, matueel, and kech, which take a long duration of time to mature and reap (UNDP report, 2020). Whereas one in ten households generate much of their income from commercially based value chains in sorghum production (10%), it is to be noted that only 6% of the value added comes from the processing (Goltz, et al., 2020).

Actors involved in sorghum production in South Sudan

According to the World Bank (2019), sorghum production in South Sudan involves producers as primary actors who sell directly to individual consumers, retailers, and wholesalers. Retailers and wholesalers also sell to individual consumers. Below is a diagram showing the network between producers and buyers of sorghum crops.

Figure 1: A demonstration of a sorghum value chain in South Sudan



Source: author

However, some basic supporting functions are important for sorghum small-holder producers if they are to progress well in their commercial production. Because there is no sufficient information about what sorghum small-holder producers require for their functioning, there are three key support functions outlined below:

Policies, regulations, informal rules, and norms

To operate effectively, sorghum producers need good policies, regulations, informal rules, and norms, because having agricultural policies that consider the value chain which starts at the level of preparing the primary product up to when it reaches the consumption point is important. This process takes into consideration all economic activities such as primary production, and the involvement of secondary actors like manufacturing or processing of goods that provide value addition to the products (Abdhilahi, 2021). The little information available indicates that some of the farmers in South Suan get some guidance in the form of informal rules and norms that establish trust and social relationships binding them in their transactions (UNDP report, 2020).

Good roads, access to input and output markets

Good roads and access to input and output markets are fundamental requirements farmers need for their value chain production. Good roads enable producers to get engaged closely with the markets with functioning channels (World Bank, 2019), enabling retailers, wholesalers, and middlemen to do their role without incurring high costs because they find the environment unfavorable for operating their business (Goltz, et al., 2020).

Access to finance/capital

While literature indicates ecological requirements as crucial for sorghum production in different countries like Uganda, it is not the case for South Sudan where the most pressing requirement farmers need is to access finance. They need to be availed of loans and credits (UNDP report, 2020). Such requirements sorghum small-holder producers need may not be limited to these, but also, they need market information, and extension services (World Bank, 2019).

Figure 2



credit: WFP/Anna Soper.

A primary actor in sorghum value chains displays her harvests in South Sudan.

Even though the above requirements are fundamental for sorghum commercial production, the conflict has made it impossible for small-holder producers because of the constraints they face in their operating environment. These include market disruptions and/or the absence of market-supporting functions, checkpoints created by local tax authorities, and a lack of access to enough land and preparation for sorghum production.

Chapter Two: The Conceptual and Theoretical Underpinnings of the Study

2.0. Who is a small-holder farmer?

The Food and Agriculture Organization (FAO) defines a small-holder farmer as someone who runs a farm whose size ranges from 1 to 10 which is different from South Sudan's land size for a smallholder that ranges between 0.4-1.7 hectares, which piece of land is predominantly established on land that is owned by the family (Cano-Rubio et al., 2017) cited by Tindiwensi et al (2020). A small-holder farmer can also be an individual consumer who buys raw products from another producer and takes them to the market to sell to get a profit. Because of their heavy reliance on family labor and management, a small-holder farmer predominantly is described as a family farm in most developing countries (Most of the commercial small-holder farmers in Africa start with as little as less than \$1,000 as capital intended for a specific commodity production (Cousin, n.d.). Even though they produce for the market, (Ibid., n.d.), commercial small-holder farmers have key characteristics that distinguish them from large-scale farmers, and these include cultivating land whose production capacity is determined by available capital, and family labor they use on farms, and most importantly, they are being categorized as part of the rural poor (African Development Bank, 2013. Every small-holder farmer has a commodity in which they participate in a value chain. For example, a sorghum small-holder farmer produces sorghum crops for market purposes and sells directly to individual consumers, retailers, and wholesalers. A commercial sorghum small-holder farmer

uses sorghum grains to make meals such as porridge (locally known in Arabic as 'asseeda'), flatbread (called in Arabic 'kisra'), cakes, and other varieties of foods made from sorghum to support and upgrade the sorghum value chains (UNDP report, 2020).

With the participation of 75% of the population in production, sorghum remains the best choice for small-holder farmers and consumers because it is a widely grown staple crop, as well as a priority product for the government of South Sudan, making it the best crop for support and infrastructure and most representative for the majority population (UNFPA, 2023; African Development Bank, n.d.). Also, South Sudan takes the leading position in East Africa in terms of sorghum crop production (FAO's One Country One Priority Product: https://www.youtube.com/watch?v=ADR1_l4SPuw, 2023), and additionally, small-holder farmers chose sorghum crop because it is a warm weather crop that makes it resilient to South Sudan's harsh and drier conditions, as well as its local seed networks among local people (World Bank, 2019).

2.1. Institutional voids

To be able to answer the main research question of this study, "How do commercial small-holder farmers deploy bricolage strategies to cope with the institutional voids and maintain their commercial farming in South Sudan?", it's crucial to review the past research literature on the concept of the institutional void to get the relevant definitions and understanding of the debate about South Sudan's conflict environment. The first main question here is what is considered to be a 'void' in an institutional context, what has the concept of institutional voids been used for before, and is the setting to which it was applied the same as South Sudan's? it is answering these questions in the first place that leads the way to understanding how commercial small-holder farmers cope with the operating environment to maintain their business in South Sudan. Different authors have different interpretations of the term 'institutional voids.'

Schramme Tine (2013) interprets institutional voids as the underperformance of the public sector, including the agriculture and mining industry in the Democratic Republic of Congo, and the extreme insecurity related to land tenure in Zimbabwe. These institutional voids resulted from the civil war and the conflict related to a power struggle in both the Democratic Republic of Congo and Zimbabwe, two African countries that experienced political unrest and state fragilities in most of their histories which affected their financial services (Ibid., 2013).

Meanwhile, Luiz et al. (2021) and Luo Chung (2013) defines institutional voids as when efficient market-supporting institutions are missing just in the same ways Adeniyi (2021) understands institutional voids as the underdevelopment of formal institutions that support business activities in an operating environment and Adomako et al. (n.d.) interpret institutional voids as the absence of formal institutions to support markets.

Khanna and Palepu (2015) define institutional voids as when buyers and sellers are not able to raise capital/finances for their business and have the available marketplaces to sell their final goods and services, as well as a lack of physical availability of public facilities including the resources and how those resources are distributed.

Whereas Adomako et al. (n.d.) interpret institutional voids as the absence of good laws and policies and a proper form of government to implement and monitor those laws and policies to support the functioning of the markets, Schramme Tine (2013) also similarly defines institutional voids as a lack of institutional facilities required for an economy to function well, Adomako et al. (n.d.) also understand institutional voids as the absence of formal laws and policies to guide and protect both buyers and sellers from market failures. Similarly, Luiz et al. (2021) define institutional voids as the absence of strong institutions with regulations and laws to facilitate the business environment just in the way Adomako et al. (n.d.) stated it.

World Bank (2019) understands institutional voids as market underdevelopment reflected in terms of disruption of local production just as Luiz et al (2021) argue that countries find it hard to conduct market interactions and that they face increased transaction costs and economic inefficiency because the regulatory systems are ineffective, and infrastructure is poor.

Axele Giroud (2018) views institutional voids in terms of politically unstable environments characterized by high-level insecurity that prevents business operations just like how Adeniyi (2021) understands institutional voids as political instability, violence, and war characterizing the business environment. Similarly, Goltz, et al (2020) and Adomako et al (n.d.) understand institutional voids as conflict and insecurity that create an unfavorable business environment for farmers.

Chiba, et al (n.d.) understand institutional voids as underdeveloped communication infrastructure that creates a lack of specialized intermediaries, which further leads to ineffective and unreliable consumer-information organizations and acts as deficiencies in the product market. Similarly, (Liedong, et al., 2022) understand institutional voids as institutions that fail to support the functioning of markets.

Taking this debate further, institutional voids have been understood as a financial constraint resulting from a lack of credit for entrepreneurs (Liang, Marquis, Li Sun, 2014) simply because the regulatory institutions are either weak or absent to support institutional arrangements. Emerald Group Publishing (2021) similarly defines institutional voids as a lack of access to microfinance or loan schemes, in which case failing to access such loans prevents entrepreneurs from growing their small businesses (Ibid., 2014). (Goltz, et al. (2020) argue that institutional voids are when businesses find it difficult to make transactions in agriculture because they have no access to financial loans and credits. Institutional voids emerge when the

business environment exists without financial institutions (Singapore Management University, 2013).

Having been approached from different perspectives by different authors, the reviewed literature on the institutional voids concept found four key classifications. The first one is a lack of strong formal institutions, or the underdevelopment of formal institutions as argued by Luiz et al.(2021); Singapore Management University (2013); Adomako et al (n.d.); and Goltz et al. (2020) to refer to institutional voids. Secondly, Axele Giroud (2018); Adeniyi (2021); and Goltz et al (2020) agree on the definition of institutional voids as insecurity or political instability. Thirdly, Luo Chung (2013); Adeniyi (2021); and Adomako et al (n.d.) share similar views on defining institutional voids as the absence of market-supporting functions, or underdeveloped infrastructure, as well as underdevelopment of businesses. Finally, Liang, Marquis, and Li Sun (2014) differ from other authors and define institutional voids as financial constraints that prevent businesses from growing in an unfavorable operating environment.

However, to prove if the institutional voids concept fits in the context of South Sudan based on how the above authors defined it, this research provides the pre-existing knowledge of the little literature on South Sudan's business environment. The literature classified three key constraints that commercial sorghum small-holder producers encounter in their operating environment. World Bank (2020) identifies the ineffective functioning of markets in South Sudan as a serious void. This is the same as Luo Chung (2013); Adeniyi (2021); and Adomako et al(n.d.) who refer to institutional voids as the absence of market-supporting functions. Secondly, checkpoints exist in South Sudan's business environment (Goltz et al., 2020) and are created by local authorities, which could mean a lack of strong formal institutions, or the underdevelopment of formal institutions as argued by Luiz et al.(2021); Singapore Management University (2013); Adomako et al (n.d.); and Goltz et al. (2020) to refer to institutional voids. Thirdly, while a lack of access to enough land and its preparation was identified as a constraint facing sorghum producers in South Sudan (UNDP, 2020), no source mentioned it in the literature on the concept of institutional voids. Sorghum production requires big stretches of land because small-holder farmers in South Sudan usually cultivate land sizes not more than 0.4-1.7 hectares of land (Cano-Rubio et al., 2017) cited by Tindiwensi et al (2020).

2.1.2 Entrepreneurial bricolage

Levi-Strauss (1967:17) first coined the concept of 'bricolage' to refer to 'making do with whatever resources are available at hand. With 'making do', the entrepreneur behaves in a biased way towards action and engagement to find a solution to the problem. Such resources

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can be in the form of skills, and knowledge, which the entrepreneurs creatively deploy to overcome the institutional challenges such entrepreneurs face in their resource-constrained business environment (Kwong, et al., 2018). Labor, material resources such as capital and/or materials in kind, practices, assets, and social networks are some of the features that characterize bricolage, and which are regarded as 'undervalued' resources that entrepreneurs faced with institutional environments deploy to address such challenges (Ibid., 2018).

Another way of deploying entrepreneurial bricolage is through engagement with a wide range of stakeholders as partners when faced with institutional challenges in a resource-constrained environment (Shen, 2018; Sunduramurthy, et al., 2016) cited by Tindiwesi et al. (2020). Value creation and application of cheap or free resources are some of the key dimensions of bricolage that entrepreneurs deploy to solve their business problems in a resource-constrained environment (Ibid., 2020), and it doesn't matter whether such bricolage strategies have risks and failures involved (Mangnusa & Schoonhoven-Speijerb, 2020).

There are some situations where bricolage involves the use of new resources in existence, but not the same resources that entrepreneurs may have previously used to address their business challenges in the same context. "In all new combinations, the loss in realizable value is always more certain and often more immediate than in any gain in potential value" (Moran and Ghoshal (1999: 393). Baker (2005) views bricolage as it is when entrepreneurs create an economic value without necessarily drawing resources from what is in current use. Borrowing from Kwong et al., (2018), there are three types of bricolages:

A financial bricolage means utilizing easy-access, small-scale financial resources, but not the ones sourced from formal financial institutions because it is not costly to acquire them from informal channels given the autonomy of the borrower.

Network bricolage involves the use of resources from friends, family members, and acquaintances because this type of bricolage is useful in a resource environment (Ibid., 2018).

Localized bricolage is also another important as the entrepreneurs utilize those resources they have within their pre-existing personal and professional networks (Ibid., 2018).

Furthermore, entrepreneurs deploy resource bricolage strategies in a business environment where resources are scarce and where the available resources have not yet been utilized (Zheng, 2021). Such entrepreneurs' aim is to realize the entrepreneurial value. In addition to this point, the literature indicates one example where the bricolage concept was applied to the agricultural workers who operated in resource-constrained environments, and where sellers were taking advantage of the buyers' lack of knowledge about the market information in terms of demand and supply in China (Ibid., 2021).

Therefore, for a better understanding of how institutional voids are overcome using the concept of entrepreneurial bricolage, this research study employs the use of a qualitative approach to explore the farmers' experiences of operating their commercial farming in a conflict-affected South Sudan.

Chapter Three: Methodology and Methods

3.0. General research approach

The research study used a qualitative approach to explore and understand how commercial sorghum small-holder farmers deploy coping strategies to address the institutional voids that make their business operating environment uncertain in South Sudan. As the researcher was aware of the sensibility of a specific time and space during the fieldwork/knowledge production (Cerwonka, 2007), the researcher started with the letter of introduction from the supervisor, which was delivered to the South Sudan Farmers' Union to seek consent to conduct interviews with the commercial sorghum producers. The introduction letter was received on 13th July by the chairperson of the farmers' union, Mr. Osman Anai who approved the introduction letter and consented to my entry to farmers' areas to conduct interviews with them.

The choice of South Sudan Farmers' Union as a starting point provided quick and easy access to commercial sorghum small-holder producers. This Union helped me with identifying commercial sorghum smallholders producing for market purposes, cultivating a piece of land not more than 0.4-1.7 hectares, as well as the use of family labor (e.g., those small-holder farmers employing their wives, sons, etc. to run their farming businesses), and using less than \$1,000 as their starting capital.

In the process of conducting this qualitative research in Juba, I had informal conversations with commercial sorghum small-holder farmers during the recruitment of participants prior to the actual interviews. The idea was that such informal conversions were also an important source of data because the words they used when they shared their experiences prior to the time of interviews laid a strong ground for understanding what questions were to ask the interviewees during the first round of interviews and even in the follow-up interviews. While the narratives farmers provided were not enough alone, the approach involved the use of pictures, as seen in the introduction, as well as in the discussion section. Using pictures was to capture the realities explained by participants whose message in the pictures conveys the experiences of those small-holder farmers who struggle in their hardships to meet their basic needs in the conflict-affected South Sudan.

Also, to serve as a guide to the researcher, a list of questions (Appendix A) was developed. For confidentiality purposes, interviews were audio-recorded based on the participants' discretion and consent. The translation of the quotes in the research was done by me, taking into consideration the uniqueness and inclusion of the relevant original words used by participants. Although 12 participants consented to use their first names under pseudonyms and other demographic information, four participants requested anonymity in the research. The two government officials in the Ministry of Agriculture and Food Security agreed to use only their first names and their titles in the research.

Whereas these qualitative techniques gathered relevant information, the empirical data was generated by using a bricolage methodology that included existing (found) knowledge about institutional voids (constraints) identified, as well as the new data produced through interviews (empirics) for this research study (Wibberley, 2017).

However, there is importance in exploring how the topic of this research, the researcher, and what has been researched about become constructed throughout the process of research by bringing into understanding how commercial sorghum small-holder producers apply bricolage strategies to cope with the institutional constraints (voids) they (farmers) face in their commercial farming in a fragile setting as South Sudan.

3.1. Data collection: Participants' recruitment and introduction

This research targeted commercial small-holder producers of sorghum crops in South Sudan. The study collected primary data from commercial sorghum small-holder farmers and the South Sudan Ministry of Agriculture and Food Security while written reports about Food and Agriculture Organizations (FAO) and the World Food Programme (WFP) were reviewed. Because of widespread insecurity across the country, most of the participants were found around Juba where their farms are located not more than ten miles away from the city. The researcher also recruited government officials with whom two interviews were conducted. FAO and WFP were also recruited but appointment interviews failed, and secondary sources, especially the written reports on what these humanitarian organizations do to support South Sudanese farmers. Both FAO and WFP work hand in hand with the government of South Sudan where both deal with humanitarian emergencies, mainly helping farmers in difficult times of shocks caused by natural factors such as flooding, as well as man-made factors such as inter-communal violence among local communities.

A snowball sampling was used, and this made most participants turn up for the interviews because they got informed through their social networks after my introduction to the interviewees by the Diar Foundation's chairperson Mr. John Makoi, who explained to participants the importance of their participation in the research. This led to conducting 16 semi-structured interviews with commercial small-holder farmers.

These semi-structured interviews were designed to allow the participants to express their experiences, opinions, and feelings, in an in-depth style (Boeiji, 2010). Interviews varied from 30 minutes to 40 minutes. While the first interviews with small-holder farmers started from 25th July to 11th August, eight of these interviews were follow-up interviews in the form of focus group discussions from 28th August to 29th August, respectively. While I was moderating these follow-up discussions, each of the four participants was allowed to talk for 10 minutes and there were eight members in both groups, bringing to a total of 80 minutes (one hour and 20 minutes) as the duration for which the follow-up interviews lasted. Two interviews were also conducted on 12th September with the South Sudan National Ministry of Agriculture and Food Security and each of these lasted for 30 minutes making the total of 60 minutes (one hour) for both interviews.

3.2. Coding and analyzing the data

The researcher followed the process of open coding which involved reading the fieldnotes, as well as transcribing the notes to get familiar with the data and relevance of the patterns. Considering the experiences shared by farmers, code names were generated. Categories and themes were also organized, and attention was paid to connections by shifting them to a bigger unit of analysis. When analyzing

themes, categories, and codes as found in (Appendix C) the researcher kept moving between theory and empirical data to compare facts presented by farmers. Linking the conceptual framework with the coding, the first theme identified was institutional voids. Under the institutional voids, categories such as lack of finances, and effects of inflation were mentioned by commercial sorghum small-holder farmers. Each of these categories had its own codes (for example, under the effects of inflation, participants mentioned, but not limited to the decline in purchasing power of individual consumers and the rise in prices of farm inputs which made it difficult for them to afford to buy them). Under a lack of finances, they mentioned low-quality production and not paying their workers because they don't have low incomes.

Another theme identified was understanding the entrepreneurial bricolage strategies of commercial small-holder farmers. Under this theme, categories such as food aid by WFP and other humanitarian agencies, and the role of the village chiefs, clan elders, and rich individuals within communities were identified. Each of these categories had its own codes (for example, under food aid, participants mentioned that they use it to feed their hungry families, pay workers in kind, and even sell it to get cash to buy other farm input requirements), while under the village chiefs, participants mentioned that they receive cows from chiefs who contribute in form of cows and give them to poor small-holder farmers. Under clan elders, participants mentioned that they receive their share of the bride's wealth in the form of cows as this is a traditional custom and value among the cattle-keeping tribes of South Sudan, especially the Dinka, Nuer, and Mundari tribes who pay cows as a bride price and allow every relative to have a share from the dowery paid for the girl. Under the rich individuals within communities, participants mentioned that they use social networks and compose songs praising such individuals whom they meet only during churches, Christmas time, and the celebration of South Sudan Independence Day.

3.3. Limitations and Practical challenges during the fieldwork

Given the strict time framework of the educational institution, as well as the limited budget, the fieldwork interviews lasted for only two and a half weeks. Appointment requests to meet participants for interviews were passed through the Farmers' Union and area chiefs who approved entry to farmers' areas for interviews. Because the connection to interviewees was through the South Sudan Farmers' Union, and the area chiefs, the interviewees quickly turned up for the interviews and freely expressed their views without reservations and fear since they were assured by the Union that they were free to talk with me and that their views in the research will not harm them. This means that it was through the Union that I got the right information which would have taken me long to get, given South Sudan's volatile security situation where some ordinary citizens have been victims of torture and arrests by the government authorities on the grounds that they interact with spies and rebels who disguise as journalists and researchers.

Also, given South Sudan's worsening economic situation, some interviewees expected that each of them would get some money after the interviews since they heard that I am a student researcher coming from the Netherlands. I observed this behavior during the first round of the interviews, but this was addressed by hiring a car to facilitate interviewees' movement from home to the interview venue and back home

after the interviews. Addressing it in this way motivated participants to keep turning up for all interview sessions I scheduled during the fieldwork.

With South Sudan's poor power infrastructure, it was extremely difficult to have regular access to electricity and internet. Addressing this challenge by arranging to work during the day at the South Sudan National Ministry of Health from Mondays to Fridays where I was a staff in 2016. This was the only place I could have access to power and the internet, although there were instances where power blackouts occurred which prevented working on the RP draft on such a day. Although private hotels do have constant power and internet café, entering such places was costly and I was not able to afford to pay for power and internet use there.

Considering my position, I was aware that the study was limited to a particular perspective (understanding the entrepreneurial bricolage strategies of commercial small-holder farmers operating in a business environment characterized by institutional voids in South Sudan) and the specific timeframe. Although this research used a sample size of 18 qualitative interviews, the in-depth analysis of the data gathered from my informal conversions, as well as the extensive use of literature, including the use of secondary sources, especially the written reports about FAO and WFP are useful to answer the research question.

3.4. Positionality and reflexivity

I carried out my research fieldwork in a very complex environment because I am a young person pursuing a master's degree program in Europe and come from the Dinka ethnic community which is regarded as one of South Sudan's leading dominant tribes. As a youth, my first encounter with the government officials during the interviews was marked by a high level of bureaucratic procedures to meet the officials in the national Ministry of Agriculture and Food Security. African government officials perceive that young African people who go to the Western world for their education get brainwashed by Western ideologies and when they come back to Africa, they turn to be pro-regime change. My informal conversation with the Director-General for Agriculture Research in the Ministry of Agriculture clearly signaled that researchers, especially young African students who study in Europe and go for research in their home countries find it difficult to get easy access to information in countries torn apart by armed conflicts, and where the role of youth has been perceived as negative by the leaders. South Sudan is no exception because of its long history of conflict, which the Sudan People's Liberation Movement (SPLM) party leaders believed was masterminded by the West, especially the United States of America, as well as the call for the civil disobedience in the capital Juba in 2021, which was spearheaded by two South Sudanese leading academics who got their education in Europe and America.

As a Dinka ethnic community member, farming communities who are non-Dinka first perceived me as a security detective sent by the government to collect information about land owned by Bari communities (Bari is one of South Sudan's ethnic communities) predominantly farmers who have often clashed with the Dinka communities who are predominantly pastoralists. Land grabbing is one of the main causes of conflict in South Sudan, and the Dinka ethnic community where I come from is one of the accused communities practicing land grabbing from farming communities mainly in the Equatoria region,

including Juba where I conducted this research. And government is partly blamed for not preventing the pastoralists from moving with their animals to farming communities because these animals destroy their crops. One farmer had to ask me: “Which tribe do you come from? This is the only piece of land I must sustain my family.” Additionally, communities, especially the uneducated ones in the remote areas fear talking to young South Sudanese coming from abroad because they have been misled by politicians that if they (local communities) interact with the educated youth coming from abroad the government would regard that area as anti-government and this would put that area under government surveillance throughout. This is a sign of the mistrust between the civilian population and the leadership of the country, coupled with branding African youth outside the continent as ‘anti-regimes’ in their countries and ‘pro-regime change’ masterminded by the West. So, these factors, being a youth acquiring education in Europe and a Dinka ethnic member, all shaped my experiences and created a complex situation in Juba. All the experiences explained above would have affected my findings in the sense that participants who had the sense of ethnic feelings would refuse to talk with me leading to failure to get right information, while those participants who had a sense of fear of being arrested by government for talking with a disguised rebel or spy would provide wrong information or completely refuse to provide information leading to insufficient data.

Quoting Rose (1997), a researcher must have a double positionality as an outsider and insider who must negotiate multiple identities perceived by the researcher. Farming communities perceived me as a black South Sudanese, African because of my skin color (blackness), speaking some common languages (Arabic) although it was a bit hard to understand some farmers’ local languages. When I first visited farming sites, some of the farmers were in a welcoming mood and were quick to interact with me informally, although some of them hesitated to interact when they learned that I studied in the West. For easy access, I approached the South Sudan Farmers’ Union’s representative Mr. Osman Anai who formally informed the village chiefs about my research intentions, and to allow me to talk with the farmers and take pictures of their gardens if they consented. Apart from talking to the Farmers’ Union’s representative, I also approached the chairperson of the Diar Foundation Mr. John Makoi who was always in my company wherever I went for interviews with farmers. Because of political sensitivity in South Sudan, entry to any area for research requires official permission in most cases. It was through the Farmers’ Union and the Diar Foundation that I was able to get the 16 participants for the interviews. Two interviews with the National Ministry of Agriculture and Food Security were through my connection with the Ministry of Health where I was a staff in 2016. One privilege I had was that I had more access to women farmers than to men during the second round of follow-up interviews something different from my earlier thinking about the agriculture sector being dominated by men.

Regarding being a young African person studying in Europe and my ethnic background, I positioned myself as a learner about the institutional constraints (voids) experienced by farmers in their operating environment in the conflict-affected South Sudan. By using entrepreneurial bricolage to understand how farmers cope with the challenging business environment, I put myself in the position of a researcher adapting to learn from the commercial small-holder farmers’ experiences they wanted to share. During the interviews, I was considered as someone carrying a lot of euros and dollars because I was introduced to them as a researcher from Europe. This motivated farmers more to participate in the interviews because they expected money after the interviews. This is attributed to the worsening economic situation in South Sudan where the country’s inflation has reached over 100%, and it is this rising

inflation that sparked a subsequent rise in the prices of basic commodities, as well as the decline in the market-based value chains for sorghum farmers. Participants' expectation of money points to the fact researchers in the past may have used money to gain access to information from participants in South Sudan. During this time, I positioned myself as a student, but in the interest of maintaining good contact with participants, I borrowed my friend's car and fueled it to facilitate participants' movement from meeting venues to their locations after the focus group discussions, instead of giving them cash, as this would keep the cycle of mentality of expecting money from researchers in the future. However, participants' expectations for money motivated many of them to turn for the first round of interviews.

Finally, as a South Sudanese national, there was a commonality I shared with the farming communities which provided a space for participants who are also South Sudanese nationals. Because of this nationality commonality with South Sudanese farming communities, I was able to conduct interviews that flowed in a natural way, although there were issues of language barriers as I don't speak some local languages like the Bari and Mundari languages commonly spoken in the Equatoria region where South Sudan's capital Juba is situated. I addressed this by hiring a translator.

Chapter Four: Data Analysis/Interpretation

4.0. Introduction

Though the conceptual framework employed the concept of the institutional void to identify the challenges facing commercial sorghum small-holder producers in South Sudan, the focus of this research was to understand how commercial sorghum small-holder farmers deploy entrepreneurial bricolage strategies to cope with the uncertain business environment. Entrepreneurial bricolage has been used as a lens for understanding such coping strategies deployed by commercial sorghum small-holder farmers. To guide the reader, this chapter is organized as follows: the first sub-section (4.1) is for listing the general findings; and then sub-sub sections (4.1.1. and 4.1.2.) elaborately explain the effects of price instability/inflation, and lack of finances, respectively. Then other sub-sub sections (4.2.1.) mention the entrepreneurial bricolage strategies, and sub-sub sections 4.2.1. and 4.2.2.) explain in detail food aid, village chiefs, clan elders, and rich individuals within communities. Finally, the sub-section (5.0) is for the discussion of the insights and/or lessons drawn from the findings, all explained in different paragraphs.

4.1. Institutional Voids

Under this section, the institutional voids facing sorghum commercial small-holder producers are analyzed and discussed. In this case, the interviewees identified a number of constraints that make it difficult for them to fully participate in the market-based value chains in sorghum production in South Sudan. Generally, Participants listed several constraints including, but not limited to the instability of prices as a result of the absence of regulatory laws and policies, lack of finances, lack of local demand, lack of linkages with off-takers who buy framers' products, illiteracy, domination of local markets by foreign imports, lack of a trademark, the shifts in the onset to the rainy season and when rains end, lack of standard storage facilities, bad road conditions, flooding in low land areas, insecurity, and post-harvest losses. The findings indicate that some responses were more prevalent than other responses.

While the majority of the participants (n=8) mentioned the effects of inflation and/or instability of commodity prices in the first group discussions, other participants (n=5) mentioned a lack of finances as their major problem. Bad road conditions, post-harvest losses, the shifts in the onset to the rainy season and when rains stop, flooding, insecurity, lack of standard storage facilities, lack of a trademark, illiteracy, lack of local demand, and lack of linkages with off-takers were less common among the participants in the discussions.

Considering the relevance of the answers to the research question, the focus is now on the instability of prices resulting from inflation, and a lack of finances because these were identified voids that were more prevalent among the participants than other responses.

4.1.1. Price instability

Mentioned as one of the farmers' experiences, most participants (n=8) stated instability of prices in the markets throughout interviews was a major constraint to their commercial production in South Sudan. The effects of the prolonged conflict have exacerbated the rise in prices of the necessities and essential requirements farmers need for their production functioning. When asked what challenges greatly affect their commercial sorghum crop production than others and how, interviewees mentioned that inflation has caused a high rise in the prices of fuel (for example, a liter of diesel or petrol in Juba sells at \$1.5 USD, or 1,500 South Sudanese). When asked about the connection between fuel price and their business, participants answered that South Sudan depends on imports from Uganda, Kenya, and Sudan, including essential farm requirements for production.

“Fertilizers and good quality seeds are imported by foreign traders from Uganda, Kenya, and Sudan, and these foreign traders highly increase the prices of these items when they reach South Sudan markets, claiming that they experience high costs associated with too much fuel consumption on trucks and lorries carrying goods over long distances”, Sarah, one of the small-holder farmers stated in the FGD.

she added that the connection between the price of fuel and prices of commodities including farm inputs is like coughing and sneezing. However, it is not just price instability/inflation, but it is also smallholders' lack of access to input markets which results in too much reliance on foreign traders for such farm inputs.

Participants mentioned that to get high-quality sorghum yields, they need access to affordable high-quality seeds, and fertilizers which they said they could not afford to buy because such farm inputs sell expensively in South Sudan. Participants said they experienced spending more on a few necessities than they did some years back before the conflict erupted which led to fluctuations in general prices. They added that unstable prices in South Sudan make business plans and decisions very difficult and this increases the uncertainty in the market.

High cost of living and necessities were also other commonly mentioned experiences by participants because of price instability caused by inflation. Participants also talked about how the increase in prices

of necessities affects their commercial farming. They mentioned that prices of food, adequate housing, and medical care are unaffordable for small-holder farmers in South Sudan, especially in Juba city.

“I regard myself as a low-income household because I spend much of the little earnings on buying food, paying for housing that does not even meet quality standards, leave alone affording quality healthcare in South Sudan”, Moses, one of the small-holder farmers revealed in the FGD.

Participants explained that factors such as the devaluation of the South Sudan pound (currency) in favor of the international currencies, the degrading of farmers’ savings, decreased smallholders’ capacity to compete in the local products market, and the decline in their purchasing power, all contribute in a negative way to their business. Explaining how inflation has affected their business, participants mentioned the decline in farm productivity following the civil war in 2013. When asked how they perceived conflict in South Sudan, participants said it was the war that brought inflation, which subsequently led to a decline in the production capacity in agriculture.

“Before the war broke out in 2013 and 2016, my farm productivity every year of harvests was between 9-10 bags of sorghum grains from 2010 to 2012. I used to sell at 350 South Sudanese pounds, or its equivalent of (\$1.0 USD) per bag to local consumers and humanitarian agencies. But now it is a different story, my son!” Lualdit, one of the small-holder farmers lamented in the FGD.

He added that he harvested only 6 bags of sorghum crop during the last harvest season, saying that his productivity declined because the cost of living has increased in Juba, and his purchasing power is less to afford to hire an ox plow which he has been hiring to cultivate his 1.7-hectare sorghum garden most of his time.

Furthermore, participants explained that a decline in the consumers’ purchasing ability ultimately affected the value chains. They stated that most of the local consumers no longer have the purchasing power they used to before the war came with inflation to afford to buy the products from producers. This forces producers these days to sell their raw products to foreign traders who dictate the producers’ price to buy at a low price.

“I used to sell to local consumers, retailers, and wholesalers from South Sudan, and I was getting some profit because everyone at least had money and South Sudan currency was still strong in value before this inflation”, Monica, one of the small-holder farmers stated in the FGD.

When asked if middlemen are there or not to connect them with buyers, some participants mentioned majority of the middlemen have abandoned small-holder farmers living in remote areas because of insecurity and bad road conditions, and that it’s costly to deal with a few middlemen available.

4.1.2. Lack of finances

Another institutional void participants mentioned was a lack of finances to operate their business. When asked what other major challenges they face in their operating environment, five participants mentioned that a lack of financial capital to expand their business is a major problem to their business. They said without financial capital, they cannot be able to afford agro supplies for farms or new equipment. Participants mentioned that lack of financing lowers productivity and further creates low-quality production, as well as low incomes among commercial small-holder farmers year after year. As a serious institutional challenge, most participants explained that when they don't have money, they get deprived of the opportunities to use better farming tools and advanced techniques that increase crop yields.

“Our main challenge is to get advanced farming tools to be able to cultivate enough land and get more produce than we do use the “melody”, which means in Dinka language, a locally made hand hoe and mostly used for cultivating all types of crops. Using traditional hand hoes is very laborious and tiresome”, Elizabeth and Mary stated while displaying their traditional locally made hand hoes inside their garden.

Small-holder farmers expressed that using traditional tools such as what the two women in the picture below hold cannot produce enough yields because the use of such tools cannot cultivate enough land compared to what an ox plow could cover. “If we had money, we would buy an ox plow because we know how to operate it. It's easy to operate compared to operating a tractor”, added.

Figure 3



Source: author

Two women with a child in between them standing inside their sorghum garden, Juba, South Sudan.

Additionally, participants mentioned that due to a lack of money, they are not able to afford fertilizers and quality seeds. They stated that their business does not grow because they harvest low yields and even poor, and then consume much of it because some of them host extended families. “I started my farming business with less than 100 South Sudanese pounds in 2008 before South Sudan became independent, but no progress made since then, only to maintain it to survive, as I have no money to expand it,” David, one of the small-holder farmers stated. Other participants said that quality sorghum

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seeds are only available in big-town markets like Juba, Malakal, Wau, and Yei, but it is very costly to afford to buy them from Ugandan and Kenyan dealers who import them into South Sudan. Participants added that the Food and Agriculture Organization (FAO) supplies seeds, but only the lucky smallholders receive five kilograms of sorghum seeds each, and some times when hunger becomes severe, some farmers start consuming their own seeds before the cultivation season which leads to no harvests in the following harvest season. Interviewees said that they don't have the high purchasing power to afford to buy seeds even if they are available on markets. The majority of the interviewees revealed that the Food and Agriculture Organization (FAO) and other local organizations supply fertilizers, but only the large-scale farmers and some lucky small-holder farmers have been beneficiaries of this assistance. However, participants said that even if development partners are ready to help farmers with fertilizers, the government of South Sudan does not allow the use of fertilizers on the South Sudanese soil, claiming that South Sudan is a very fertile country that wouldn't need fertilizers. When asked what risks are involved when using fertilizers supplied by development partners, the majority of the participants said that they have never used fertilizers and they have never heard of anyone being penalized for using fertilizers, although some farmers may have had access to fertilizers from FAO and local NGOs. Participants also said that because of a lack of money, they are not able to pay their workers on farms. Some participants revealed that they are too old to manage to do hard work on farms, yet they are not able to maintain hired workers because they don't pay them. They said they hired three to four youths to clear plants from their gardens, and after they finished the work, they almost took them to the police station because they didn't pay them on time. The majority of the participants further added that payment failure of workers after they had worked on farms made some workers lay down tools and leave the work unfinished. When asked if a lack of finances is a constant challenge to their business, three participants said that sometimes they get finances and sometimes they don't have them but added that "other challenges such as the rise in the prices of good quality seeds, fertilizers, and paying workers emerge."

When asked in what ways the government of South Sudan supports commercial small-holder farmers, two officials in the Ministry of Agriculture and Food Security stated that the government does not have any direct support to farmers, but it supports the farmers through international development and humanitarian organizations. Both Luga and George speaking on behalf of the Ministry of Agriculture and Food Security explained that South Sudan receives financial aid to farmers from the International Fund for Agricultural Development (IFAD), in which case the Ministry of Finance and Economic Planning is the main recipient of the funds, and then ministry of Agriculture and Food Security issues instructions to the Food and Agriculture Organization (FAO) which has been chosen as the implementing agency.

"The International Fund for Agricultural Development (IFAD) is the main donor of the funds to the agriculture sector in South Sudan. The funds are received by the Ministry of Finance and Economic Planning, and then again the Food and Agriculture Organization (FAO) is the implementing partner who deals directly with farmers to supply them with seeds and fertilizers", George, a Director-General for Agriculture Production in the Ministry of Agriculture and Food Security revealed in the interview.

Having identified and explained the above institutional voids based on the views of the participants in the interviews, and the indirect role of the government of South Sudan through development partners, our focus is on understanding the entrepreneurial bricolage strategies they deployed to overcome such institutional voids.

4.2.1. The bricolage strategies

In this section, the participants were asked how they managed to cope with the institutional voids facing them in their operating environment as they mentioned in the previous section. Although bricolage strategies may have been applied to other similar settings as these ones, there is no available literature on bricolage studies about South Sudan. For this case, the researcher asked the small-holder farmers to explain what strategies they deploy to address their business challenges, and two coping strategies have been mentioned.

4.2.2. Food aid

When asked what strategies they deployed to cope with the institutional challenges, participants mentioned that when they run into business challenges, they use food that is distributed by the World Food Programme (WFP) and other relief organizations during disasters and community rehabilitation. Participants said food aid has been existing in South Sudan for so long and some people have used it to address some of their business problems.

Figure 4



Credit: WFP

Community members constructing the road in South Sudan

When asked about the criteria for getting it, most of the participants (n=9) answered that they must first participate in community work which is facilitated by the World Food Programme. They said some of them participated in community road construction to link villages with nearby town markets for the purpose of enabling commercial small-holder farmers to sell their products and avoid transporting the products to far-end cities like Juba, Yei, and Wau which involves a lot of costs of transportation and high taxes charged along the way by local tax authorities. Interviewees mentioned that the transportation costs increase for small-holder farmers because the roads that connect villages with town markets become impassable during the rainy season.

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Other participants said they received food aid because they were part of the affected communities by the inter-communal violence that broke out between the Mundari and Bari communities in Terekaka of Juba in 2020, and they used it to support their farm operations, as well as feeding their families. The majority (n=8) of participants mentioned food aid including using it to pay workers whether in kind or selling it to get money and use the money to pay workers.

“I received this food and I used some of it to make mandazi and cakes and sell them to get money which was used for paying my workers on the farm”, Josephine, one of the small-holder farmers explained.

Some participants said they use money generated from selling food aid to buy local sorghum seeds from women who sell them in markets established in remote areas. Other participants stated that if they don't have fertilizers, they can use the food aid in kind or sell it to get money to buy the local manures which they pour all over the garden before the rains start. Participants explained that local manures are in the form of cow dung and residues from the breweries which they said is cheaper to acquire than fertilizers and has no restrictions from the side of the government. Other participants revealed that they use food aid in exchange for traditional construction requirements such as bundles of grass and wooden poles which small-holder farmers use to construct a grass-thatched hut that is used as a storage facility. The void here is a lack of standard storage facilities.

Participants explained that each of the small-holder farmers is supposed to receive varieties of cereal crops, including sorghum crops, and that the quantities each of them receive vary from one small-holder farmer to another, and depending on the nature of work they do, where they do it from, as well as in times of humanitarian concerns as was the case for the victims of flooding in Bor in Jonglei and Lakes states.

“I bought a bicycle with the food aid I received twice from the World Food Programme when I got displaced in 2019 and I used it to buy a bicycle. Each time I could get the ratio of food, I could sell it to get money. When I made 50,000 South Sudanese pounds from selling it, I borrowed some money for up to 15,000 South Sudanese pounds to make a total of 65,000 South Sudanese pounds or its equivalent of \$50 and I paid this money to the seller of the bicycle,” Daniel, one of the small-holder farmers narrated.

He said he now uses his bicycle to address a lack of means of transportation of his products from his farm to the local markets, using his son to ride it. He added that he sends his son by this bicycle to carry sacks of sorghum grains to the market, as well as carrying manures and residues, and grass and poles from the forest to use for constructing a hut as a storage facility for keeping the products.

Figure 5



Source: author

A man standing beside his son on a bicycle

When asked how sustainable this aid is, participants said this support has been there since the country became independent in 2011 but they could not tell whether this development assistance will stop flowing any time or not.

However, secondary sources reviewed on development partners have not indicated how sustainable this development assistance or food aid is for the South Sudanese people, but FAO and WFP have had a long history of humanitarian operations in South Sudan as seen below in which a man carried a bag of his food aid supplied by the World Food Programme.

Figure 6



Credit: WFP

A man carries away his share of a bag of food aid, Pibor, S. Sudan

The World Food Programme (WFP) distributed this food aid in Pibor County, South Sudan in 2012 when the conflict displaced farming communities in Jonglei and Upper Nile states. According to Reuters news reports, the World Food Programme suspended food aid in South Sudan in 2022 due to fund shortages. This means that even if the WFP has a long history of humanitarian activities in South Sudan, participants were not able to predict when this humanitarian agency will stop supplying them with food which most of them use for supporting their farm operations.

4.2.3. The village chiefs, clan elders, and rich individuals within communities

Answering how they still cope with institutional challenges, seven participants mentioned that they have been beneficiaries of the help in the form of cows given by the village chiefs and clan elders who are entrusted with leadership roles in the communities. Participants explained that the village chiefs and clan elders feel socially sympathetic to helping the poor people, including small-holder farmers who are interested in maintaining their commercial farming business in the villages.

“They raise contributions in the form of cows or goats and then they select a leader to sell the cows and distribute among the small-holder farmers who are not able to raise capital on their own for farming”, Samuel narrated.

Participants explained that there are cultures and norms that encourage this spirit among some different communities in South Sudan. Five participants revealed that they come from the Dinka tribe which is the leading cattle-keeping community in South Sudan, and that they have a social bond that binds their relationships and encourages sharing of some common resources like the bride's wealth. Bride's wealth in the context of cattle-keeping tribes of South Sudan, especially among the Dinka and Nuer ethnic communities, means that when your uncle's daughter is married, the wealth in the form of cows is distributed among relatives, in which case the clan elders take the leading role in distributing the wealth. Below is a picture of Dinka elders who prioritized giving shares of the bride's wealth to smallholders who were affected by the 2013 civil war.

Figure 7



Source: author

Clan elders distributing bride's wealth in Cueibet County, South Sudan

When asked how this social bond helps them address the institutional challenges they face in business, participants stated that they get a share of the bride's wealth and use it to support their farm operations.

“I was given one small bull as my share from my uncle's daughter's bride wealth/dowry. This was in late July 2023 after inter-

communal violence escalated in my community, and after losing everything to looting by attackers who took control of our area at that time”, Deng narrated in a focus group discussion.

He added that he sold the small bull at 100,000 South Sudanese pounds, or its equivalent of \$100 (USD) to use the money to resume his farm. Below is his picture with his bull as a share of his uncle’s daughter’s bride’s wealth.

Figure 8



Source: author

A man taking his small bull after receiving it from the clan elders

This point was stated throughout the interviews by most participants from Nuer, Dinka, Mundari, and the Taposa communities who are the cattle-keeping tribes in South Sudan and who embrace these social ways of life. Participants said their connection with individuals with abundant resources helps them to address a lack of finances, as they sell cows to get money and use the money to buy other farm requirements such as seeds, and hand hoes. Some participants explained that when they plan their commercial activities, and they don’t have the finances at hand, they must get their share of the bride’s wealth in the form of cows which they sell to get money and use the money to support farm operations. They added that cows are a source of wealth among

In a related context, participants from the Bari and Azende communities said that what helps them the most is their social connections with their friends who are connected in one way or another with individual rich men and women in their communities.

“I got a chance to know someone who knows Lukak who is a rich Bari man and helps the needy people in Juba, including people running small businesses. I joined the group of people whom he told me to meet with at his house on one of the Saturdays. We went there and he gave each of us 50,000 South Sudanese pounds, or its equivalent of \$50 and this was in 2019,” Kaden narrated.

She added that she used this money to clear her abandoned garden and even utilized some of it which she used to pay her workers on farms. When asked how often they have used social networks with rich

individuals in their communities, some participants said that it's on rare occasions they have met them because it's not easy to get access to rich individuals, but sometimes during Christmas in churches, or when people compose songs to praise them, they can give a lot of money.

Chapter Five: Discussions, Conclusions, and Suggestions for future research

5.0. Discussions

The armed conflict in South Sudan has had a negative impact on agriculture in general and specifically created multiple institutional voids for the commercial sorghum small-holder farmers in their business environment. Despite these institutional voids, it's evident that there are some commercial small-holder farmers who continue producing for market purposes in South Sudan. This chapter provides reflections on findings that answered the question about what institutional voids commercial small-holder farmers face in their business environment. The chapter also provides answers to the main research question about how commercial small-holder farmers deployed their entrepreneurial bricolage strategies to overcome the institutional limitations they face in their operating environment. The chapter ends with conclusions and some suggestions for future research into more institutional voids other than price instability and a lack of finances which were more common responses, as well as investigating into other entrepreneurial bricolage strategies other than food aid and village chiefs, clan elders, connection to resource-abundant people within communities.

Participants mentioned price instability resulting from inflation and a lack of finances were most prevalent among the participants. Whereas a lack of finances was mentioned by participants, it was later confirmed by the literature to be a pre-existing institutional void as reported by the World Bank (2019). Participants talked about it in the interviews because finance/capital is one of the pressing requirements farmers need for commercial sorghum production, and it means that when small-holder farmers don't have the capital they need, sorghum production cannot function well (UNDP report, 2020). Also, previous studies indicate disruption of agriculture-linked markets, poor road conditions, insecurity on the roads, lack of local demand, intermediaries as well as checkpoints by local tax authorities as cited by Goltz, et al. (2020). When markets are disrupted, it creates a drastic decline in local production, creating a loss of local demand for products. This is the same as when roads are bad which makes it difficult for smallholders to deal with intermediaries because there are high transportation costs associated with such poor road conditions, as well as insecurity along highways to the town markets (Ibid., 2020). These factors contribute negatively towards the market-linked agriculture in South Sudan. Whereas lack of local demand, a lack of intermediaries, poor road conditions, a lack of enough land and its preparation, and insecurity were among the pre-existing knowledge confirmed by the literature and were also expressed by participants as institutional voids; only the issue of checkpoints by local tax authorities among the pre-existing knowledge but was not mentioned by the participants. Whereas enough land is very important for sorghum production, most small-holder farmers find it challenging because cultivating sorghum crops requires large stretches of land to cultivate and harvest more produce (UNDP report, 2020).

However, in addition to price instability, other findings which the previous studies didn't mention include the absence of regulatory laws and policies, illiteracy among small-holder farmers, domination of local markets by foreign imports from Uganda, Kenya, and Sudan, a lack of trademark, the shifts in

the onset to rains and when the rains end, a lack of storage facilities for sorghum harvests, flooding in lowland areas in Upper Nile, Lakes, and Unity states, and finally post-harvest losses at the farms.

Although a lack of finances and price instability were the most prevalent responses to the research question, I chose to discuss only the price instability which most of the participants considered as institutional voids stemming from the effects of inflation due to the absence or failure of institutional arrangements which should regulate laws and policies to support the proper functioning of the product markets (Adeniyi, 2021).

Under the instability of prices, the individual consumers have lost their purchasing power and because of this, they are unable to afford to buy products from farmers. Because small-holder farmers have lost local demand from individual consumers, sorghum small-holder farmers resort to selling their raw products to foreign traders at a dictated price which foreign traders continue and sell these products at higher prices in the international markets to which South Sudanese commercial small-holder farmers don't have access because they don't have a trademark. This contradicts the meaning of the value chains in South Sudan which says 30% of the local production of sorghum is sold to individual consumers, retailers, and wholesalers for commercial purposes (World Bank, 2020). The dependence of South Sudan on foreign imported products as mentioned by most participants (n=8) indicates that the local market is dominated by foreign goods which come with high costs associated with the rise in fuel prices and this blocks the room for the local value chain production which subsequently constrains the sorghum producers because the markets are not functioning properly (Goltz, et al., 2020). The decline in their ability to "compete" in the local products market, the devaluation of South Sudan's national currency, as well as degrading commercial smallholders' savings which participants cited as effects of inflation, are manifestations of ineffective financial regulatory systems as noted by Luiz et al (2021), or as the absence of regulatory laws and policies in governing the proper functioning of the market (Goltz, et al., 2020).

Giving their perspective on conflict, participants noted the prolonged effects of conflict as what exacerbated the rise in the prices of necessities leading to the rise in the cost of living which affected the low-income households, the majority of whom were commercial small-holder farmers, which demonstrated South Sudan's environment as politically unstable with a high level of insecurity that makes it hard for commercial value chains to move on well (Giroud, 2018).

Although the previous studies cited effective policies and regulations (Abdihlahi, 2021), good roads, and access to input and output markets (World Bank, 2019) as some of the support functions sorghum commercial producers require for their business, the elaborate discussions I had with participants noted the need for good quality seeds and fertilizers which farmers don't have because inflation prevented them from accessing loans and credits to secure finances which definitely is a result of weak financial support institutions (Liang, Marquis, Li Sun, 2014). Participants mentioned that to get high-quality sorghum yields, they need access to affordable high-quality seeds, and fertilizers which they said they could not afford to buy because such farm inputs sell expensively in South Sudan, which means that it is not just an issue of inflation or price instability, but it is also about a lack of access to input markets which results in high reliance on foreign traders.

After discussing the above reflections on findings about institutional voids, this research also discusses some key reflections on the entrepreneurial bricolage strategies including food aid, village chiefs, clan

elders, and connection with resource-abundant people, deployed by commercial small-holder farmers to address institutional constraints they face in their business environment in South Sudan.

For the second sub-question, “How do commercial small-holder farmers deploy the entrepreneurial bricolage strategies to overcome institutional voids in their business?”, the use of food aid received from development partners demonstrated making do with whatever resources were available at their disposal (Tindiwensi, et al., 2020). Additionally, small-holder farmers also received help in the form of cows from the village chiefs and clan elders of the tribal communities, where those who deserved their share of bride wealth from one’s uncle’s daughter got through a network bricolage, which means involving friends, family members, and acquaintances in a resource-constrained environment (Kwong, 2028). When participants used the supplied food to pay their workers in kind as eight participants revealed during the discussion, they used innovative thinking to deal with the lack of finances, as argued by Kwong et al (2018) that entrepreneurs are supposed to be innovative thinkers to address business challenges in a resource-constrained environment.

The use of food aid helped small-holder farmers to solve some of their farm operations, including selling it to get money and using the money to buy some inputs such as high-quality seeds, local manures, and residues which farmers use to address a lack of fertilizers. Transforming food aid into locally baked mandazi, and cakes and selling them to get money to afford buying other inputs requires creativity (Kwong, et al., 2018). Some participants acted by borrowing cash from individuals they know, which means that they deployed financial bricolage (Ibid., 2018) because they found it easier to utilize access to such small-scale financial resources (for example, borrowing 15,000 South Sudanese pounds or its equivalent of \$15) in an informal way than from formal financial institutions (Ibid., 2018). Using a bicycle as a means of transportation on the farm is about value creation and the application of cheap resources deployed by entrepreneurs to overcome their business problems in a resource-constrained environment (Mangnusa & Schoonhoven-Speijerb, 2020; Manikandan & Ramachandran,2015).

In addition to these entrepreneurial bricolage strategies, it would be of help to use cash transfers which South Sudan receives in the form of financial aid from the international development partners. For example, South Sudan received \$8.1 million in 2022 as financial aid from the African Development Bank to finance agricultural markets and value addition with the aim of reducing food insecurity and poverty among farmers (African Development Bank Group, 2022). Distributing such money directly among small-holder farmers would be more helpful than the food aid which they sell for cash to support their farming business.

5.1. Conclusions

Although the conflict has created a negative impact on agriculture in South Sudan (UNDP report, 2020), it is important to understand the strategies that some commercial small-holder farmers deploy to deal with the institutional voids they face in their commercial farming.

By identifying the institutional voids facing commercial small-holder farmers, this research study established that the price instability stemming from the effects of inflation created a drastic decline in the purchasing power of individual consumers who could not afford to buy the commercial small-holder farmers' products which subsequently made smallholders lose customers with effective demand, forced them at some point to sell their products to foreign traders who dictate the price, and not forgetting the fact that the local markets in South Sudan are also dominated by foreign imports which outcompeted smallholders' products. Not only has the price instability/inflation created a decline in consumers' purchasing power, but also the low-income smallholders have experienced a high cost of living which affected their financial capacities, making them poorer and unable to afford to buy other essential farm inputs such as good quality seeds and fertilizers lack of which was said to have resulted in poor and low crop yields, leading to low farm productivity. However, it is not just about price instability/inflation that prevents smallholders from accessing input markets, but also it is the lack of access to input markets itself that results in high dependence on foreign traders for such input requirements.

However, to answer the research question, "How do commercial small-holder farmers deploy the entrepreneurial bricolage strategies to address institutional voids in their business in South Sudan?", this research study established two key strategies that commercial sorghum small-holder farmers creatively deployed to deal with the institutional constraints: the use of food aid distributed by the humanitarian partners, particularly the World Food Programme (WFP), and the use of help given the village chiefs and clan elders in form of cows from bride's wealth. Additionally, commercial sorghum small-holder farmers also used their social network to connect with the resource-abundant individuals within communities, who give them financial assistance that they use to support their farm operations.

5.2. Suggestions for the Future Research

Future research into investigating the institutional voids facing commercial small-holder farmers in the business environment and how they address such institutional voids in South Sudan should focus on establishing how voids other than price instability/ effects of inflation contribute to the institutional environments. The reason why the price instability of the effects of inflation appeared more prevalent than other institutional voids could be because small-holder farmers are experiencing the immediate effects of the conflict rather than the conflict itself and other conflict-related effects, and this could be a reason most of the participants didn't talk much about insecurity as an issue.

Also, the use of cash transfers should be considered in the sense that cash should be paid directly to commercial small-holder farmers since one of their major institutional constraints is a lack of finances in which case, they use food aid as an entrepreneurial bricolage strategy of addressing such an institutional void. The study suggests the use of cash transfers because they have led to an increase in production and investments in inputs and seeds which are vital requirements for farming (African Development Bank Group, 2022).

While the bricolage concept has never been used to study South Sudan's institutional environment, future researchers are required to use the findings of this research to give them an idea of how commercial small-holder farmers operating in a resource-constrained and conflict-affected country deploy coping strategies to overcome institutional constraints.

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Appendices:

Appendix A: Interview schedule

Section A: Identifying institutional challenges facing sorghum commercial smallholders.

Questions

1. What challenges do you face in your business?
2. How do these challenges affect your business?
3. Who are your main customers?

Section B: Understanding the coping strategies of commercial small-holder farmers using the bricolage concept.

Questions

4. How do you address the challenges you face in your business?
5. Are there other commercial smallholders who address their challenges in the same way you do?
6. Where do you get the support from?
7. How often do you get this support and is it this support that keeps your business running?

Section C: the role of government and development partners.

Questions to government

8. Do you support commercial small-holder farmers?
9. How do you support them?

Appendix B: Respondents' characteristics

Pseudonym	Age	Gender	Income level	Occupation	Type of labor used	Estimated Size of land cultivated
Sarah	35	Female	\$500	SHF	Two brothers employed	0.7 hectare
Moses	40	Male	\$400	SHF	Individually run a farm	0.5 hectare
Lualdit	65	Male	\$200	SHF	Two sons employed	0.3 hectare
Monica	40	Female	\$600	SHF	Siblings employed	0.8 hectare
Elizabeth	30	Female	\$300	SHF	Individually run farm	0.6 hectare
Mary	29	Female	\$200	SHF	Individually run farm	0.4 hectare
David	45	Male	\$400	SHF	Individually run farm	0.7 hectare
Josephine	50	Female	\$300	SHF	Hired paid workers	0.5 hectares
Daniel	62	Male	\$200	SHF	Employs his son	0.3 hectare
Samuel	50	Male	\$500	SHF	Employs his three sons	0.7 hectare
Deng	49	Male	\$450	SHF	Individually runs a farm	0.6 hectare
Kaden	47	Female	\$650	SHF	Hired paid workers	1.4 hectares
Anonymous	-	Male	\$400	SHF	Individually run farm	0.4 hectare
Anonymous	-	Female	\$700	SHF	Employed two sons	1.5 hectares
Anonymous	-	Male	\$500	SHF	Individually run farm	0.7 hectare
Anonymous	-	Female	\$300	SHF	Employed one son	0.6 hectare

Goerge				
Luga			D/G D/G	

Appendix C: Overview of themes, categories, and codes

Theme	Category	code
Institutional voids	Price instability/effects of inflation	- Decline in purchasing power.
		- Rise in prices of essential farm inputs.
		- Decline in farm productivity.
		- Rise in prices of necessities.
		- Loss in value of South Sudan national currency.
		- Domination of South Sudan markets by imports.
		- No profit gained.
		- Degrading smallholders' savings.
	Lack of finances	- High cost of living among low-income households.
		- Lower farm productivity.
Entrepreneurial bricolage strategies	Food aid	• low-income year after year.
		• lower quality products.
		• Deprived of opportunities to use tractors, ploughs as they are expensive.
	Village chiefs, clan elders, and rich individuals within communities	➤ Used to pay workers in kind on farms
		➤ Used to make mandazi and cakes for sale and invested in other commercial activities.
		➤ Used to feed hungry families at home.
		▪ Chiefs contribute cows, goats to poor smallholders.
		▪ Bride's wealth as shares to relatives.
		▪ Financial help from rich individuals within communities.