

Bricolage Behaviour in Small Established Firms Operating in Resource Constrained Environments

By

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Abstract

The current descriptions of bricolage largely present it as a behaviour in new businesses in richer contexts. Therefore, more diverse context-specific explanations are needed in order to deepen our understanding of bricolage. While Bricolage behaviour has been largely explained in new businesses, in extremely constrained environments, even established firms use bricolage to mobilise resources.

This study set out to contribute to the understanding of bricolage by exploring it in an extremely constrained context. Using an interpretivist paradigm, empirical evidence from 8 case studies was collected through in-depth interviews and each is presented in a rich, 'thick' description. Through inductive coding, data-driven themes that highlight the nuances of bricolage when settings are extremely poor were derived.

The study examines the idiosyncrasies of bricolage behaviour in small established firms, found in poor settings, it finds that, everything is a resource that can be bricolaged. It also finds that there is varied intensity with which underlying constructs of bricolage- making do, using resources at hand and recombining resources are manifested throughout the entrepreneurial process. In the starting phases, making do dominates, in the surviving phase, using resources at hand becomes more prominent, while in the growing phase, recombining resources is prioritised. This suggests that in poor contexts, bricolage manifests as a process that occurs throughout the life of the business.

Additionally, the study highlights the sub-processes of bricolage, -scavenging, buttressing and refining. It explains how they interact by showing that scavenging precedes making do, buttressing precedes using resources at hand and refining precedes recombination of resources. Moreover different resources are used varyingly along the bricolage process.

Furthermore, it integrates bricolage with two concepts of adaptive persistence and community embeddedness. Adaptive persistence is an active and dynamic experimentation to meet new challenges with the aim of finally solving them. It is exhibited as continuous adjustment to absorb emerging environmental shocks. On the other hand, community embeddedness highlights the firms' close connection and interface with its local community on activities beyond its core role. In turn, the community becomes both an active advocate and a customer of the firm. These behaviours facilitate firm development.

This work contributes to the understanding of bricolage behaviour by showing that the sub processes are more elaborate in poor settings and that established firms adopt these sub-processes varyingly as they develop.

Keywords

Bricolage, Case study, Context, Constrained Environment, and small firms

Declaration

I, **Rebecca Namatovu**, declare that this thesis is my own work. It is submitted in partial fulfillment of the requirements for the **Doctor of Philosophy Degree of the University of Pretoria** at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Table1: Definition of key terms

Term	Definition (Author)
Adaptive Persistence	This is an active and dynamic experimentation to meet challenges with the aim of finally solving them (Klarner & Raisch, 2013).
Community Embeddedness	Community embeddedness is whereby people become attached in social webs in their communities (Kraimer, Shaffer, Harrison & Ren, 2012)
Entrepreneurial Bricolage	Making do by applying combinations of resources at hand to new problems and opportunities (Baker & Nelson, 2005)
Entrepreneurship	The identification, evaluation, and exploitation of opportunities (Shane, 2012: p 14)
Established business	Any venture that has been in existence for more than 42 months (Levie & Autio, 2008)
Entrepreneurial process	An action based phenomenon of entrepreneurship that involves interaction between creative, strategic and organising processes (Hindle, 2011).
Micro and small businesses	Any venture ranging from 1 to 4 is micro and 5-10 is a small business (UBOS-COBE, 2011).
Embeddedness	Embeddedness is anchoring economic action with cognition, social structure, institutions and culture (Uzzi, 1997)
Informality	Economic activities that are unregistered but produce legal products (Nichte and Goldmark, 2009)
Legitimation	A process which involves the continuous testing and redefinition of the legitimacy of the organization through ongoing interaction with the environment (Baum & Oliver, 1991)
Small to medium sized	An enterprise ranging from 5 to 50 persons (Nooteboom, 1994)

Chapter 1: Problem Definition and Context

1.0 Introduction

Shane (2012) defined entrepreneurship as the identification, evaluation, and exploitation of opportunities, while, Garud & Giuliani (2013) described the entrepreneurial journey as emerging from dynamic processes of actors, who conceptualise futures and continuously make adjustments based on their past recollections. Other scholars contend that the entrepreneurship process is informed by the recombination of social and material elements (Baker, Miner, & Eesley, 2003; Stinchfield, Nelson, & Wood, 2012; Welter, Baker, Audretsch, & Gartner, 2017).

Entrepreneurship is context dependant (Bruyat & Julien, 2000; Fletcher, 2011; Lingelbach, de la Vina, & Asel, 2005; Welter, 2011; Zahra, 2007) and can occur at different phases of firm development (Su, Zhai, & Landström, 2015; Welter et al., 2017; Wright & Zahra, 2011; Zahra & Wright, 2011). Therefore, it can best be understood if contextual nuances and actions of actors over time are incorporated in evaluating it. Moreover, the entrepreneurship field is at a stage where the heterogeneity of conditions and behaviours needs to be emphasised in research (Fuller, Warren, & Argyle, 2008; Kaynak Mockler & Dologite, 2014).

However, some scholars have narrowed the boundaries of entrepreneurship as only referring to any new economic activity and/or organization (Davidsson, 2015, 2017; Page & Noel, 2009; Westhead, Wright, & Ucbasaran, 2001). But this conceptualization and standardization of entrepreneurship has been questioned (Welter et al., 2017; Wood, 2017; Bruton, Zahra & Cai, 2017) on the grounds that it eliminates potential for new insights. Shane (2012) critiqued the new firm formation logic because he argued that focusing on 'new' is simply one institutional

arrangement for the identification, evaluation, and exploitation of opportunities. He explains that the same actions that occur during firm formation, can also be taken by people in existing firms or through mechanisms in the market. Indeed, in recent times, an abundance of studies outside these strict boundaries have been published (Bruton, Ireland, & Ketchen, 2012; Bruton, Ketchen, & Ireland, 2013a; Rehn, Brännback, Carsrud, & Lindahl, 2013; Sarasvathy, 2001, 2004; Sarasvathy, Menon, & Kuechle, 2013; Smallbone & Welter, 2012; Venkataraman, Sarasvathy, Dew, & Forster, 2013; Vermeire & Bruton, 2016; Volery & Mazzarol, 2015; Welter, Smallbone, & Pobol, 2015).

The main contention is that if we opt to narrow our view of entrepreneurship, then entrepreneurship in some spaces, will not be explored or understood. For example, entrepreneurship in developing countries is distinctive (Lingelbach et al., 2005). Kiggundu (2002) argued that in Africa - a relatively understudied context - entrepreneurship is examined within the informal and formal sectors, around the individual entrepreneur, small and medium enterprises (SMEs), and family businesses among other forms. Moreover, Xu & Meyer (2012) posit that developing countries tend to have more extreme resource constraints than developed ones and yet our understanding entrepreneurship in this context is limited (Bruton, Ketchen, & Ireland, 2013). In penurious contexts, such as sub Saharan Africa, entrepreneurs walk different business paths, often engaging in entrepreneurship not only to grow themselves but also their communities (Vermeire & Bruton, 2016).

In support for studying entrepreneurship outside the strictly set boundaries, Devine & Kiggundu (2016) argued that “given the context that Africa provides, which is one of a resource munificent environment steeped in a post-colonial setting with poverty and authoritarian governments, with recent sparks of reforms and progress, there would be the expectation that new theoretical

contributions could emerge” (Devine & Kiggundu, 2016: p367). These nuances have provided richer understandings of entrepreneurship behaviour, for example, recently Vermeire & Bruton (2016) exposed how religious beliefs help entrepreneurs cope with uncertainties and that failing to create opportunities pulls entrepreneurs back into poverty.

Given that such nuances colour our perspective of entrepreneurship, and are a good source of new theory and definitions, this study sets out to explore entrepreneurship in small established businesses in Africa. Uganda, a low-income country in sub-Saharan Africa, has a GDP per capita of 675.6 USD, with 19.5% of the population living below the poverty line of one dollar per day (World Development Indicators, 2016). Uganda has a substantial informal sector (Spring & Rutashobya, 2009) that makes a significant contribution to its economic development. It is a bureaucratic system, ranking 99 in the world, with weak institutional structures and high corruption rates, ranking 19 out of 25 in Africa (Lopez-Carlos, 2006). Since formal sources are not aligned to meet the requirements of oft informal and small sized enterprises, firms tend to opt for innovative options which advance their activities (Bruton, Khavul, Siegel, & Wright, 2015). In some cases, they tinker with the available meagre resources at their disposal and translate value out of them (Sonenshein, 2014). The study thus, sets out to explore how small established firms operating in extremely constrained environments display bricolage behaviour.

1.1 Theoretical context

Amidst resource scarcity entrepreneurs strive to create the most realistic solutions for current problems or challenges. They try to interpret, change or even create suitable products and markets. In concert with these views, there are newer and varied theoretical perspectives explaining the logic and behaviour in the entrepreneurship process when resources are constrained. For example,

effectuation (Sarasvathy, 2001), entrepreneurial bricolage (Baker & Nelson, 2005), creative perspective (Alvarez & Barney, 2007), and user entrepreneurship (Shah and Tripsas, 2007). These theories have been widely explored, cited and studied. Some similarities have been exposed, but there has been an overwhelming documentation of their distinctiveness (Fisher, 2012; Salimath & Jones, 2011; Selden & Fletcher, 2015; Stinchfield et al., 2012; Welter, Mauer, & Wuebker, 2016).

The creation perspective implies entrepreneurship action underlying an ontology (Welter et al., 2016). Effectuation and bricolage have been quite central because they offer general explanations of entrepreneurship (Fisher, 2012). They provide behavioural models that reflect what entrepreneurs do in practice, implying how they exploit opportunities (Welter et al., 2016). Effectuation involves identifying opportunities in an environment that is highly uncertain (Sarasvathy, 2001), while bricolage involves entrepreneurs in a penurious environment, who refuse to enact limitations and opt to make do with what is at hand (Baker & Nelson, 2005). Sub-Saharan Africa, as a context presents a mesh of uncertainty and poverty and therefore would benefit from theoretical perspectives of both effectuation and bricolage. However, entrepreneurs often do not have the “luxury” of making decisions based on experimentation and iterations (Sarasvathy, 2001) since resources are acutely scarce. Therefore, entrepreneurial bricolage is a more suitable theory to explain entrepreneurship under extreme scarcity because it depicts resources as being socially constructed, permitting social mechanisms to support creation of something from nothing (Baker & Nelson, 2005).

Although the term ‘bricolage’ was first introduced in literature by anthropologist, Lévi-Strauss (1967), his work did not provide a specific definition of bricolage but provided useful insights of what is involved. It was popularized in the field of entrepreneurship by Baker and Nelson (2005) who defined bricolage “as making do by applying combinations of the resources at hand to new problems and opportunities”(Baker & Nelson, 2005: p333). According to Baker and Nelson (2005) common features of bricolage are a) *making do*- a proclivity towards active engagement to act on problems or opportunities as opposed to wondering whether a workable solution can be found with the what is at hand. b) *refusal to enact limitation*- a disregard for commonly accepted interpretation of practices, definitions, standards and material inputs but instead trying out solutions and dealing with results. c) *using resources at hand*- physical artifacts, skills or ideas that are accumulated because it is believed that they may come in handy, which may sometimes be deemed useless and of no value and d) *recombining resources*- combining and reusing resources for different applications than what they were originally intended for.

While these features may imply mundane, imperfect, second-best, inefficient and incomplete solutions (Lanzara, 1999), bricolage can sometimes “reach brilliant unforeseen results” (Lévi-Strauss, 1967: p17). For example, Garud & Karnøe (2003) revealed that participants in the Danish wind turbine industry that adopted bricolage behaviour competitively prevailed over American competitors that sought breakthrough solutions.

Bricolage illuminates how entrepreneurs go beyond the limit of resources within their direct control to exploit resources that they do not have (Sonenshein, 2014). In recent times, reviews of entrepreneurial bricolage have been done at various levels, including at the level of a business or

firm (Baker & Nelson, 2005; Perkmann & Spicer, 2014), at network level (Mckague & Oliver, 2016), community level (Di Domenico, Haugh, & Tracey, 2010), industrial level (Garud & Karnøe, 2003), institutional level (Mair & Marti, 2009), and at the individual level (Duymedjian & Ruling, 2010; Hmieleski & Corbett, 2008; Rai, 2015; Zahra, Gedajlovic, Neubaum, & Shulman, 2009). It has further been evaluated in a variety of contexts including developed economies (Davidsson, Baker, & Senyard, 2017; Plowman et al., 2007; Senyard, Baker, Steffens, & Davidsson, 2014; Stinchfield et al., 2012), developing economies (Bond, 2014; Linna, 2013; Mair & Marti, 2009; Ros-Tonen, Insaiddoo, & Acheampong, 2013), social entrepreneurship (Desa, 2012; Di Domenico et al., 2010; Sunley & Pinch, 2012; Zahra et al., 2009), service entrepreneurship (Salunke, Weerawardena, & McColl-Kennedy, 2013), multinationals (Desa & Basu, 2013; Halme, Lindeman, & Linna, 2012), nursing (Warne & McAndrew, 2009), system development (Lanzara, 1999) and agricultural systems (Houkonnou et al., 2012).

Further, a stream of literature focuses on nuances of bricolage such parallel and selective bricolage (Baker & Nelson, 2005; de Jong, 2013), ideation bricolage (Mair, Marti, & Ventresca, 2012), information bricolage (Daipha, 2015), intrapreneurial bricolage (Halme et al., 2012), and evolutionary bricolage (Duboule & Wilkins, 1998). Baker & Nelson (2005) distinguished between selective and parallel bricolage. In parallel bricolage, they posited, that there is a mutually reinforcing pattern of resources. For example, as firms hunt for resources, they develop new self-taught skill sets combining them with flexible standards and practices, thereby improving network ties. On the other hand, selective bricolage represents those firms that temporarily adopt bricolage but avoid it when the demands of embedded ties arise. These studies account for varieties of bricolage (Vanevenhoven, Winkel, Maewicki, Dougan, & Bronson, 2011) and how it unfolds in

new firms. However, these studies do not explain whether, or how, bricolage manifests in established firms.

Moreover, most of the recent work done on entrepreneurial bricolage is focussed on developed world contexts where resource scarcity is not as extreme as that of the developing world (Xu & Meyer, 2012). Where research has been extended to developing economies, it has focused on understanding social entrepreneurship (Linna, 2013; Zahra et al., 2009) rather than opportunity-based or for-profit entrepreneurship. In Sub-Saharan Africa, entrepreneurship includes small businesses (Kiggundu, 2002) and yet there is a limited understanding of the behaviour of entrepreneurs operating these ventures.

Against this backdrop, this study has an overarching research question of “how do small established firms operating in extremely constrained environments display bricolage behaviour?” It aims to explain the dynamics of bricolage behaviour in an extremely poor context. It links context and process variables to add to theoretical explanations and predictions (Zahra, 2007) by exposing missing nuances (Zahra & Wright, 2011) that are not yet adequately documented in literature. In addition, it responds to the methodological individualism (Steyaert, 2007a) that perils the field (Fletcher, 2011) by adopting a qualitative inquiry to understand the interaction of actors, events, and activities in the entrepreneurship process (Suddaby, Bruton, & Si, 2015) when resources are constrained.

1.2 Statement of research problem

Many conventional descriptions of entrepreneurship are still inadequate to explain the inherent dynamics of the entrepreneurship process (Welter, Baker, Audretsch, & Gartner, 2017) and of

entrepreneurial behaviour (Vermeire & Bruton, 2016) because they are mainly dependent on developed world contexts (Kiss, Danis, & Cavusgil, 2012).

There is a significant difference between developing and developed world contextual conditions (Bruton, Ketchen, & Ireland, 2013). In the developing world, entrepreneurs tend to operate within extreme resource constraints (Xu & Meyer, 2012), that are manifest in institutional malfunctions and voids (Mair & Marti, 2009; Oyelaran-Oyeyinka, 2015), property paucities (Khavul & Bruton, 2013; McDade & Spring, 2005), and skills and knowledge inadequacies (Eisemon, 1989; Frese, 2000; Schreiber, 2004). Such conditions compel entrepreneurs to behave differently from their counterparts in more developed settings (Devine & Kiggundu, 2016).

While it can be argued that entrepreneurs' behaviours the world over do not fit conventional rational thinking (Stinchfield et al., 2012), their behaviour when operating in extreme resource scarcity is marred by a host of non-economic considerations such as social embeddedness (Khayesi & George, 2011; Khayesi et al., 2014; Langevang, Namatovu, & Dawa, 2012). This justifies an inquiry into a distinctive description of bricolage behaviour, because current descriptions are inadequate to explain the dynamic in small established firms in resource constrained environments.

1.3 Purpose statement

The purpose of this study is to explore bricolage behaviour of small established firms operating in resource constrained environments.

1.4 Research questions

The study is set to answer the research question: “How do small established firms operating in resource constrained environments display bricolage behaviour?” It addresses the following sub questions:

- a) How is bricolage behaviour manifest in small established firms operating in extremely poor settings?
- b) How does the extremely constrained context enable bricolage behaviour?
- c) How does bricolage unfold in the entrepreneurship process?

1.5 Significance of the study

The study makes a theoretical, methodological practical and empirical contribution to the body of knowledge (Corley & Gioia, 2011; Whetten, 1989).

First, the study contributes to bricolage theory by explaining how it unfolds in small established firms operating in extremely poor external environments. Understanding bricolage behaviour in such settings exposes how firms develop amidst scarcity. By focusing on an extremely poor context, the study contributes to new knowledge by showing that everything can be used as a resource for bricolage. It illuminates how bricolage manifests as a process with three underlying sub-processes of scavenging, buttressing and refining. It describes how these sub-processes interact by showing that scavenging precedes making do, buttressing precedes using resources at hand and refining precedes recombination of resources.

Furthermore, it makes a connection between bricolage and two concepts of adaptive persistence (Klarner & Raisch, 2013) and community embeddedness (Kraimer, Shaffer, Harrison & Ren, 2012). Adaptive persistence is an active and dynamic experimentation to meet new challenges with

the aim of finally solving them. It is exhibited as continuous adjustment to absorb emerging environmental shocks. On the other hand, community embeddedness highlights the firms' close connection and interface with its local community on activities beyond its core role. These behaviours facilitate firm development through bricolage.

Second, the study contributes to research methodology by using a qualitative multiple case study design. It thus responds to calls to extend the methodologies in entrepreneurship studies (Welter, 2011). The case study design can generate qualitative data (Eisenhardt, 1989a; Yin, 2009) that can contribute to the understanding of a newer theory (Edmondson & Mcmanus, 2007). Insights gained from this study represent a fresh contribution because existing studies of bricolage behaviour in established firms operating in an extremely poor environment are scarce.

Third, the study makes an empirical contribution by highlighting the experiences of participating firms using rich empirical data (Ponterotto, 2006). It provides thick descriptions, which portray an understanding of the local context and include the researcher's image of understanding the context (Geertz, 1973). It thus shows evidence of how, in poor settings, everything is a resource that can be used for bricolage and the intensity of bricolage varies along the entrepreneurship process. It therefore exhibits that bricolage behaviour changes at different phases of firm development when the environment is poor and volatile.

At a practical level, policy makers can use findings from this study to make more informed decisions on how best to support entrepreneurs when the environment is poor (Stiglitz, Lin, Monga, & Patel, 2013). The study depicts how small established firms behave to circumvent

resource scarcity. The study contributes to the discussion of the importance of entrepreneurship in developing economies where small and medium sized enterprises are recognised engines of economic growth (Naudé, 2012; Naudé, Santos-Paulino, & McGillivray, 2009).

While there are many interesting research problems that could advance the entrepreneurship field, this study chose to explore bricolage behaviour in small established firms operating in extremely constrained external environments. The researcher adopts a combination of both objective and subjective ontology, the study uses an interpretivist epistemology to collect and analyse qualitative data. This study adopts the bricolage theory because a) it has been linked to resource constraints and b) it portrays entrepreneurial activities as that which does not fit the model rational behaviour (Welter, Mauer, & Wuebker, 2016).

1.6 Structure of the thesis

The thesis includes 14 chapters and is presented in three parts. Part one is comprised of three chapters. Chapter one describes the problem and the context of the study. Chapter two presents the relevant theoretical and empirical literature and chapter three explains the research methodology. The study is guided by an interpretivist philosophy and uses multiple case study design to explore how micro and small firms operating in extremely constrained environments bricolage. Data from eight small established firms are collected mainly through semi-structured interviews and analysed inductively.

Part two presents the within-case analysis and comprises of eight chapters. Each chapter presents thick descriptions of the resource mobilisation process complemented by photo displays of the context. The data are analysed for individual cases under the following themes of context and

situation: (a) The entrepreneur's behaviour, (b) The firm's development and bricolage behaviour, (c) Response to environmental changes, and (d) Summary of the case

Part three contains three chapters. Chapter 12 contains the cross-case analysis, which synthesises and corroborates findings with themes. Chapter 13 details the emerging theoretical framework and chapter 14 provides a summary of the main conclusions, contribution, limitations and suggestions for further research.

Chapter 2: Literature review

2.0 Introduction

This chapter reviews the literature by highlighting converging and diverging views of entrepreneurship (Mouton, 2011). It distinguishes what has been done from what needs to be done (Hart, 1998) in the context of entrepreneurship and bricolage. It synthesizes perspectives on entrepreneurship by identifying relationships between ideas and practices in bricolage. The review further rationalises the significance of the problem and establishes it in the context of the study (Randolph, 2009). The literature review is organised according to the following themes: (a) Entrepreneurship as a field; (b) Advancement in entrepreneurship Research; (c) The entrepreneurship process; (d) The importance of Context in Entrepreneurship research (e) Importance of resources for entrepreneurship; (f) Theory in Entrepreneurship; (g) and Bricolage Theory.

2.1 Entrepreneurship as a field

The field of entrepreneurship is relatively young and suffers from unclear construct definition (Drakopoulou-Dodd, McDonald, McElwee, & Smith, 2014) and conceptual disconnect (McMullen & Dimov, 2013). It lacks a distinct, systematic, and comprehensive model (Bergmann & Stephan, 2012; Moroz & Hindle, 2011; Van Burg & Romme, 2014;). While Hindle (2010a) and Gartner, (2007) argue that such diversity stifles the field's growth, Zahra & Wright (2011) and Gregoire et al. (2006) regard diversity as being necessary for field advancement.

There is no agreed definition of entrepreneurship (Van Burg & Romme, 2014; Stearns & Hills 1996). Schumpeter (1934) defined entrepreneurship as innovation, while Kirzner (1979) defined it as the ability to seize an opportunity and profit from it. Schumpeter's view is regarded as a strong

form of entrepreneurship (Venkataraman,1996). It posits that changes in technology and the regulatory environment create new information that dictates using resources differently.

Conversely, Kirzner's (1979; 2009) view hails opportunists' alertness to mistakes in the markets, implying that opportunities can only be discovered (Alvarez & Barney, 2007). The systematic scanning of the environment to discover opportunities could be profitable, but it may not necessarily yield new products or services.

There is a need for new ways of researching to be explored (Drakopoulou-Dodd et al., 2014), in order to identify constructs needed to explain entrepreneurship and the underlying interplay of actors (Sarasvathy & Venkataraman, 2011). One of the ways entrepreneurship scholars can engage in constructive theory building is by understanding the dynamics (Zahra, 2007) and uniqueness of the contexts (Fletcher, 2011) in which entrepreneurship unfolds. There is a dearth of context research in entrepreneurship (Welter, 2011). More so, clarifications of how entrepreneurial processes link with context may address the disconnect between entrepreneurship research and public policy or management practice (Zahra & Wright, 2011).

2.2 Advancement in Entrepreneurship research

The field of entrepreneurship incorporates scholarship from disciplines of psychology, economics, sociology and management (Kuckertz & Mandl, 2016; Rehn et al., 2013) and is therefore bound to create ambiguity in constructs used (Kuckertz & Mandl, 2016). For instance, the terms 'entrepreneurial firms' and 'small business firms' have often been used interchangeably (Bruyat & Julien, 2000; Jun Li & Matlay, 2006). Indeed, there are conceptual overlaps of these two terms (Kuckertz & Block, 2016; Kuckertz & Mandl, 2016; Ritchie & Lam, 2006; Volery & Mazzarol,

2015). The debate about whether they are related (Jun Li & Matlay, 2006), distinct (Carland, Hoy, Boulton, & Carland, 1984; Davidsson, 2017) or the same (Devine & Kiggundu, 2016) continues to be at the forefront of entrepreneurship research.

Carland et al (1984) argued that these fields are distinct because their contribution to economic growth is significantly different. In their work they attempt to distinguish a small business owner from an entrepreneur and an entrepreneurial firm from a small business firm. In doing so, they state that, a “*Small business venture* is any business that is independently owned and operated, not dominant in its field, and does not engage in any new marketing or innovative practices.”

An “*Entrepreneurial venture* is one that engages in at least one of Schumpeter's four categories of behaviour: That is, the principal goals of an entrepreneurial venture are profitability and growth and the business is characterized by innovative strategic practices.”

A *Small business owner* is an individual who establishes and manages a business for the principal purpose of furthering personal goals. The business must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the business as an extension of his or her personality, intricately bound with family needs and desires”.

“*An Entrepreneur*: An entrepreneur is an individual who establishes and manages a business for the principal purposes of profit and growth. The entrepreneur is characterized principally by innovative behaviour and will employ strategic management practices in the business” (Carland et al., 1984: p 358).

Since then, research has begun to question the nature of these boundaries. For example, Delmar & Wiklund's (2008) work highlights how small businesses pursue growth and studies have exposed how family ties and kinship networks support entrepreneurship (Arregle et al., 2015; Khayesi & George, 2011; Khayesi et al., 2014).

In relation to the development of the field of entrepreneurship, Shane (2012) remarked, “While debate still remains in many areas and some areas have seen more advancements than others, the field appears to have moved toward a consensus around the core idea that entrepreneurship is a process that depends on both opportunities and individuals. (Shane, 2012: p18). Shane further contends that entrepreneurship is a dynamic process that involves continuous adjustments by those involved. Garud & Giuliani (2013) agree “that entrepreneurial journeys are dynamic processes requiring continual adjustments by actors” (2013: 159). However, Davidsson (2015) suggests that the field needs a new conceptualisation of entrepreneurial opportunities. He contends that, “even with a stated definition authors struggle to apply a consistent view of “opportunity” within individual works. In short, “opportunity” is a very elusive concept”. (Davidsson, 2015: p 675), that is particularly problematic when applied at the micro-level of the entrepreneurship process, which is at the individual(s), venture or individual venture dyads level. Thus, he proposes a major re-conceptualization to replace ‘opportunities’ with three constructs, namely External Enablers, New Venture Ideas, and Opportunity Confidence, which will agglomerate the many views discussed under the “opportunity” label.

Although he explains the rationale of his work is to ensure that the field benefits from theoretical precision and to create study designs that are useful for empirical investigation, there has been a

rebuttal from Wood (2017). Wood's main point is that variation in conceptualization of the opportunity construct is useful for future entrepreneurship research, but pushing for construct change would deter growth of the discipline. He argues that "our understanding of the entrepreneurship process is still evolving, continued definitional diversity of the opportunity construct seems inevitable"(Wood, 2017: p24). Therefore, he expresses his misgivings about dismantling the opportunity construct, highlighting that it is a superior construct that encompasses the unfolding of a range of cognitive and behavioural dynamics as actors engage in entrepreneurship over time.

What Wood (2017) highlights as the evolving nature of the entrepreneurship process, including that the underlying cognitive and behavioural dynamics emerge spatially and temporally, has been supported by other scholars. Trettin & Welter (2011) and Welter & Smallbone (2011) revealed that entrepreneurship behaviour is closely related to the social contexts in which it is emerging and therefore cannot not be well understood independently of the context. Lindgren & Packendorff (2009) posited that a social constructionist perspective contributed to the development of entrepreneurship research because it opened up the possibility of including new theoretical dimensions. When Zahra (2007) and Zahra & Wright (2011) called for more contextualized studies of entrepreneurship, they expressed that the field needed more contextual insight in order to advance.

Shane (2012) stated that, "I believe the appropriate way to define entrepreneurship is to incorporate everything that shares the dimensions researchers consider unique to the field and to exclude everything that does not share these common dimensions. To me, firm formation does not meet

this standard, because the creation of a new firm is merely one institutional arrangement for the identification, evaluation, and exploitation of opportunities. The same acts of identification, evaluation, and exploitation of opportunities that occur through firm formation also can be undertaken by people in existing firms or through market mechanisms” (Shane, 2012: p13).

Apparently in support of this argument, some entrepreneurship journals have had special issues inviting works that illuminate variations from the known understanding of entrepreneurship. For instance *Entrepreneurship and Regional Development* published a special issue in 2013, challenging the myths of entrepreneurship (Rehn et al., 2013). For example, Williams & Nadin's (2013) work challenged the view of the entrepreneur as heroic figure-head of capitalism, by studying social entrepreneurs in the informal sector in the UK, while Verduijn & Essers's (2013) work displayed the engendered ethnicity of entrepreneurship and was conducted among female ethnic minority entrepreneurs. Additionally, Kiviluoto (2013) revealed that growth of entrepreneurial firms is not an assumption that holds more generally, he recommends more research to exhibit how growth hampers an entrepreneurial company. Ojo, Nwankwo, & Gbadamosi's (2013) study focuses on the myths surrounding informal and illegal enterprises, and was amongst immigrant Africans in the UK. This special issue opened new settings and constructs in entrepreneurship research.

Recently, Welter, Baker, Audretsch, & Gartner (2017) suggested that the two outcomes of entrepreneurship - wealth and job creation - need to be evaluated more broadly to consider why and how entrepreneurship emerges. They suggest that non-discriminatory and wider perspectives

on what constitutes entrepreneurship will lead to better theory and more insights that are relevant to the phenomenon.

Therefore, to a considerable extent, there is an agreement that entrepreneurship should be studied broadly so that scholars can uncover the meaning and boundaries of entrepreneurship. The Entrepreneurship Division at the Academy of Management - arguably one of the largest meetings of entrepreneurship scholars' –describes its specific domain as “(a) the actors, actions, resources, environmental influences and outcomes associated with the emergence of entrepreneurial opportunities and/or new economic activities in multiple organizational contexts, and (b) the characteristics, actions, and challenges of owner-managers and their businesses”. This appears to invite scholarly work from a wide range of contexts, not ignoring the new economic activity, but also embracing the emergence of entrepreneurial opportunities, and the challenges of owner managers and their businesses.

If we opt to narrow our view of entrepreneurship by focusing on the “valorised” for example, that which is growth oriented, opportunity based, innovative, and formal we are implying that we discard the “disparaged” for example necessity based, informal, small business, and imitator perspectives (Welter et al., 2017). The result would be that entrepreneurship in some spaces, will not be explored or understood. Moreover, Kiggundu (2002) portrayed that in Africa, a relatively understudied context, entrepreneurship is examined within the informal and formal sectors, around the individual entrepreneur, small and medium enterprises (SMEs), and family businesses among other forms.

Therefore, scholars who have chosen to study disparaged areas, have learned that in penurious contexts in sub Saharan Africa, entrepreneurs are different. They engage in entrepreneurship not only to grow themselves but also people within their community (Hanson, 2009). Their religious beliefs help them cope with uncertainties and failing to create opportunities pulls them back into poverty (Vermeire & Bruton, 2016). These nuances colour our perspectives, and are a good source of new theory and definitions. Devine & Kiggundu (2017) state that “Given the context that Africa provides, which is one of a resource munificent environment steeped in a post-colonial setting with poverty and authoritarian governments, with recent sparks of reforms and progress, there would be the expectation that new theoretical contributions could emerge (Devine & Kiggundu, 2017: p367).

In sum, there are two important conversations going on in the entrepreneurship field, one seeking for the distinctness of the field and the other seeking for more nuanced views of entrepreneurship behaviour. This study adopts the view that varied contexts will contribute to the field and not deter or diverge its conceptualization Therefore, this study, focusing on an extremely constrained context in Africa, will review entrepreneurship as a process that includes identification, evaluation and exploitation of opportunities (Shane, 2012), wherever this process may occur.

2.2.1 Methodological advancement in Entrepreneurship research

Entrepreneurship’s opportunity to establish itself as a field of study should emanate from methodological rigour (Short, Ketchen, Combs, & Ireland, 2010) that matches its uniqueness. While the standard positivist research has been successful in other fields, it may be incongruent with the ephemeral and indefinite nature of entrepreneurship (Leitch, Hill, & Neergaard, 2010). Some scholars argue that theories of the entrepreneurial process developed from such paradigms are conflicting (Moroz & Hindle, 2011) and inadequate (Steyaert, 2011) in explaining the

interaction of the entrepreneur and the contextual conditions. This justifies the need for methodologies in entrepreneurship that enhance theory building (McGrath, 2015; Hallen & Eisenhardt, 2012).

Given that the entrepreneurial process is a dynamic journey that transpires over time, involving different agents, events, motives, and opportunities (McMullen & Dimov, 2013), it cannot be fully understood in mere observational or time-bound studies focusing on a specific stage in the journey (Levie & Lichtenstein, 2010). While entrepreneurship scholars are advocating for longitudinal perspectives to guide the understanding of the entrepreneurial process (Zahra & Wright, 2011) there is still concern about the amount of time and resources needed to carry out such studies (McMullen & Dimov, 2013). For instance, the Minnesota Innovation Research Program (MIRP), a study which successfully devised the real time review of the entrepreneurial process was done by 14 researchers studying 14 projects over a 17 year period.

However, given that the start and end of the entrepreneurial journey can be clearly demarcated in this dynamic process (McMullen & Dimov, 2013), it is plausible to engage either retrospective or forward-looking narratives of the entrepreneurial process. Entrepreneurial activity is being measured or explored by studies such as the Global Entrepreneurship Monitor (GEM), which conducts annual entrepreneurship surveys in more than 70 countries. However, even though GEM reveals some regional contextual nuances, it uses a standardised questionnaire that portrays a positivist paradigm adopted by GEM scholars (Bygrave, 2007). The challenge with positivism is that its prescriptive nature is difficult and inappropriate to adopt in poor contexts (Gough,

Langevang, & Namatovu, 2013). This makes it less adept at developing a process theory which focuses on “how” and not “why” as the causal processes do (Delbridge & Fiss, 2013).

Additionally, the notion of bricolage has been advocated as a methodological relationship. In this case, methods of inquiry would involve diverse theoretical and philosophical views of the unique elements in research (Warne & McAndrew, 2009). The relatively young theory of entrepreneurial bricolage needs to be understood better and therefore qualitative inquiry is still needed (Edmondson & Mcmanus, 2007). Many bricolage studies have been conducted using qualitative data, such as those by Perkmann & Spicer (2014), Linna (2013), Halme et al., (2012) and Baker (2007), as well as those using quantitative data, such as those by Li, Naughton, and Nehme (2015) and Senyard et al., (2014). The positivist studies have been useful to test what the qualitative studies have found (Senyard, Baker, & Davidsson, 2009) and also produce insights for further investigation. That said, more interpretivist studies are still needed to advance the theory because how it unfolds in diverse settings is not yet known.

2.3 The entrepreneurship process

Entrepreneurship is not an event or phenomenon but rather a process (Shane, 2012; Stearns & Hill, 1996) of identification, evaluation, and exploitation of opportunities (Shane & Venkataraman, 2000) that creates change (Li & Zahra, 2012) through socio-economic activity (Welter, 2011). It is a complex (Bygrave, 1993) and creative (Sarasvathy, 2001) process that may require improvisation (Baker et al., 2003) since it unfolds over time (Zahra & Wright, 2011).

The entrepreneurship process involves many activities which may take weeks, months, or even years (Shane & Venkataraman, 2000). It is a journey (McMullen & Dimov, 2013) of complex

(McKelvey, 2004) nonlinear activities that has been exhibited by conceptual and empirically driven models over the years (Shane, 2004). The extant models describe how young organisations mature and grow. They include stage, lifecycle, and organisational development models (Steyaert, 2007).

Bhave (1994) argued that the entrepreneurship process is three staged, with a natural transition from opportunity, technology setup and organisation, and finally exchange. It has also been described as a process with punctuated equilibrium based on time and events (Romanelli & Tushman, 1994).

Earlier studies had predisposed entrepreneurship towards a linear process with deterministically identifiable stages, but Bygrave (1993) exposed the inherent chaos and complexities of the entrepreneurial process. It is argued that using distinct stages of entrepreneurship undermines the entire process (Levie & Lichtenstein, 2010) because this infers an organised transition, which is often not the case. Moreover, there are disagreements on the number of stages that are crucial to the process and how they link with each other. In fact, later studies have continued to dissipate the stages theory both implicitly (Steyaert & Katz, 2004) and explicitly (Levie & Lichtenstein, 2010).

Most descriptions about the entrepreneurship process have been in relation to time and not in relation to events. This presents a mismatch, because firms operate amidst significant uncertainty between opportunity recognition and exploitation. The entrepreneurship process is supported by an interaction of actors, events, and processes such as intention, motivation, identification, exploitation, organisation, strategising, and surviving. These happen at different paces with varied

intensity, importance, and interconnectedness, all of which is inadequately explained in current literature (Steyaert,2007a). The empirical evidence shows that the entrepreneurship process has a start and end (McMullen & Dimov, 2013) and behaviours of entrepreneurs change over time (Müller, Volery, & von Siemens , 2012; Chen & Hambrick, 1995) and are non-linear (Bygrave & Hofer, 1991).

How the entrepreneurship process unfolds is dependent on the resources, activities, boundaries, components, actors, sequences, and outcomes (Bruyat & Julien, 2000) that should be accurately mapped to make a proper account (Zhou 2008). This is an amorphous and messy endeavour that could benefit from diverse foci within the process. While there is a log of previous studies such as those of Brixy, Sternberg, & Stüber (2012) who explored selectiveness of the process, Webb, Kistruck, Ireland, & Ketchen (2010) who included growth in the process, Hindle (2010a) who considered contextual constraints in the creation of new value in the process, Myres (2009) who highlighted the nuanced venture creation processes in a developing country, and Baron (2008) who explored the role of affect in the process, there are still a host of unexplored areas in the entrepreneurship process.

Additionally the current discussion on the entrepreneurship process does not detail entrepreneurship in developing economy settings (Webb et al, 2010) where resources are extremely constrained. This study explains how firms operating in extremely constrained environments behave. It therefore highlights the nuances, in- behaviours, and events over time in a penurious environment.

2.4 The importance of context in entrepreneurship

Although enterprises often operate in a definable state for some period of time, under certain conditional changes, they are forced to transition to some extent (Levie & Lichtenstein, 2010). It is such conditional changes that represent the context in which entrepreneurship evolves (Welter, 2011). According to Rousseau and Fried (2011), “The term ‘context comes from Latin meaning ‘to knit together’ or ‘to make a connection.’ Contextualizing entails linking observations to a set of relevant facts, events, or points of view that make possible research and theory that form part of a larger whole” (p.1)

Context and the entrepreneurship process are interrelated (Zahra & Wright, 2011). Context could be a lens or a variable, with the latter encompassing issues such as culture, politics, networks and the former specifying the focus as either individual, firm, or country (Welter, 2011). The entrepreneurship field has for a long time lacked contextual studies. In more recent times, Khavul & Bruton (2009) reviewed industrial context, Bruton (2010) and Dorado and Ventresca (2013) explored spatial context, and Bergmann and Stephan (2012) reviewed the temporal context. Even with these efforts, there are still contextual conditions that are not adequately represented in literature, for example cultural and social embeddedness (Bruton, Zahra, & Cai, 2017).

Previous studies, such as those by Xu and Meyer (2012), Zahra and Wright (2011) Fletcher (2011) and Moroz and Hindle (2011) have confirmed that context influences how the entrepreneurial process unfolds. Moreover, several authors have illustrated how the resources available in a particular context determine the level and magnitude of entrepreneurial activity (Baker, 2007; Bhagavatula, Elfring, Tilburg, & Bunt, 2010; Foss, 2011; Haber & Reichel, 2007; Villanueva, Van de Ven, & Sapienza, 2012).

Given that most entrepreneurship scholars come from wealthy economies in the global north, an understanding of entrepreneurship in impoverished or resource scarce context is limited (Bruton et al., 2013). Moreover, even the few studies done in poor nations do not portray an understanding of the uniqueness of the entrepreneurial process in developing economies (Aulakh & Kotabe, 2008). Specifically absent in major academic journals are investigations of the entrepreneurial process in Africa (Khavul, Bruton, & Wood, 2009). This study will review entrepreneurship in an extremely resource constrained context in an African setting.

2.4.1 Resource Constrained Contexts

Contextual conditions in Africa are significantly different (Bruton et al., 2013) from the rich global north contexts dominating entrepreneurship literature. This makes it an opportune context for exploring the entrepreneurial process in many dimensions (Zahra, 2007). It will however, require several studies to capture all the richness, complexity, and diversity of entrepreneurship therein (Khavul et al., 2009). This study specifically focuses on one sub-Saharan African country, Uganda, and the contextual condition of extreme resource scarcity.

Africa is endowed with untapped natural resources, but remains one of the world's poorest regions (Khavul, Bruton, Zheng, & Wood, 2007). Sub-Saharan Africa, comprising 48 African countries, is characterised by grinding poverty and yet government aid has largely failed to improve the situation (Collier, 2007). Development partners have highlighted entrepreneurship as a vehicle that will end the poverty cycle. Some of their influence in sub-Saharan Africa has spurred entrepreneurship and related services such as microfinance establishments (Khavul, Chavez, & Bruton, 2013). And yet governments remain challenged as to how they can create an environment

that enables entrepreneurship (Bruton, Ahlstrom, & Li, 2010; Kuada, 2009, 2015; Langevang, Namatovu, & Dawa, 2012).

Informality, though not unique to sub-Saharan Africa, greatly defines the features of entrepreneurial activity (Schneider, 2005; Webb et al. 2009). Arguably, informality is not criminal activity but rather a market-based legal production of goods and services that are deliberately concealed from public authorities for reasons such as taxation and administrative regulation (Schneider, 2005). The final products are legitimate (Khavul & Bruton, 2009) albeit the production and distribution may be illicit (Portes, Haller, & Guarnizo, 2002). A more nuanced term is economic informality, which is entrepreneurial activity existing within informal institutions, but outside formal institutional boundaries (Webb et al., 2009). The latter can be represented by laws and regulations and the former by any norms and values that are accepted or benefit large groups in society.

Sub-Saharan Africa possesses a rich cultural mosaic underscored by political and economic challenges (Kuada, 2010). Most enterprises in sub-Saharan Africa are micro with less than five employees (Fafchamps, 1996), unregistered or unlicensed, and typically do not pay taxes (Pretes, 2002). There is high economic informality and it is rare to find an enterprise that meets known legal standards (Khavul & Bruton, 2009).

The complexity is underscored by contextual conditions that vary. For example, there has been an emergence of institutional entrepreneurs whose desire is to satisfy the bottom of the pyramid market (Mair, Marti, & Ventresca, 2012). In addition, there is a recent new wave of opportunities

arising from the influx of multinationals in Africa, that has increased strategic and innovative activities of small and micro firms (Bruton et al., 2013). These varied contexts highlight the different ways in which the entrepreneurial process can unfold in resource poor contexts.

There is minimal contribution of insights of the entrepreneurial process in the African context (Naudé, Szirmai, & Goedhuys, 2011) and what is currently described in literature overlooks the nuances borne in imperfect markets. There is therefore a need to explore this gap further so that re-conceptualisations, epistemological, and measurement reviews are undertaken with the goal of achieving a better fit between theory and practice of entrepreneurship.

2.4.2 The Ugandan context

The current entrepreneurship conversation is inhibited by limited information on activities in resource constrained economies such as Uganda (Gough et al., 2013). This may imply that the entrepreneurial process as currently explained may not be a true reflection of what happens in practice. Since entrepreneurship in such contexts remains largely unexplained, efforts to appropriately promote or support entrepreneurs in Uganda remain unguided.

One of the reasons for slow economic growth in sub-Saharan Africa is autocracy and specific ethnic resident power centres due to political and historical ties (Khavul & Bruton, 2009). Particularly in Uganda, the colonial imprint in terms of favouritism of some tribes regarding access to education and employment are still observable (Khavul & Bruton, 2009).

Moreover, the adopted land reforms affect private property systems (Green, 2010) creating inequalities. Uganda is mainly agrarian and the poverty levels are high (UBOS, 2006). It has a

high HIV prevalence rate of up to 7%, unequal distribution of wealth and a youthful population with high unemployment rates (UNECA, 2005).

The informal economy in Uganda constituted 43% of the total economy in 2000. There are long and cumbersome administrative hurdles to business registration and licensing underscored by high related costs. Many entrepreneurs operate in the informal economy, and remain unregistered, thereby avoiding government sanctions (Khavul et al., 2009) but experiencing long-term disadvantages that limit wealth creation.

There have been mixed views of the role of contextual conditions in Uganda in the entrepreneurial process, varying from how strong family ties inhibit entrepreneurial action (Khavul et al., 2009) to how cultural and social norms are enhancers of the high entrepreneurial rates (Rosa et al., 2006). It is thus important that a clear understanding is gained of how the entrepreneurial process interacts in such complex contexts, because this will produce more nuanced theoretical foundations for future research and practice (Khavul & Bruton, 2009; Zahra, 2007). Moreover, due to the complex interactions of the actors, it is opportune to include micro level analyses of entrepreneurs' choices so that insights about the informal economy are generated.

The lack of legal protection for participants in the informal economy spurs innovative strategies for self-protection and survival. Astute methods of operation such as pluriactivity (Rosa et al., 2006) or an octopus form of organisation (Kiggundu, 2002) are adopted. Entrepreneurs mitigate risk by having several small businesses as opposed to concentrating on growing one core business. In some cases, entrepreneurs deliberately compromise professionalism (Khavul et al., 2009) by

using substandard factors of production, or devise operational technologies in order to survive at the expense of growth.

There are other nuances in entrepreneurial behaviours and activities among Ugandans. For instance, women entrepreneurs are more likely to engage in entrepreneurial activity within the service sectors because these are perceived to be compatible with their gender roles (Stevenson & St-Onge, 2005). Entrepreneurs with more experience actively seek for more information and so are better positioned to identify opportunities (Gielnik, Frese, Graf, & Kampschulte, 2012). Young Ugandan entrepreneurs' motivations are constantly shifting from opportunity to necessity and back as their entrepreneurial journey unfolds (Langevang et al., 2012). The innovation systems are just emerging, and small firms are not used to articulating their demand for knowledge (Trojer, Rydhagen, & Kjellqvist, 2014). These nuances, albeit partial and fragmented, display the inherent complexities in the unfolding of entrepreneurship in a resource poor context.

As mentioned above, pluriactivity is a common technique used to counteract harsh environmental variations (Rosa et al., 2006). Through pluriactivity, entrepreneurs start a chain of small firms that do not necessarily complement each other but rather ensure that the entrepreneur has a sustained source of income or economic stability in economic turbulent times. Pluriactivity is used as a diversification strategy for a highly volatile environment. The volatility in the environment ranges from political unrest (Blattman, Fiala, & Martinez, 2011), to health hazards (Ssengooba et al., 2007), institutional malfunctions such as corruption (Anokhin & Schulze, 2009) and economic upheavals such as inflation, poverty and unemployment (Collier, 2007).

2.5 Importance of Resources for entrepreneurship

When firms decide to exploit an opportunity, they devise ways of acquiring an adequate bundle of resources to create value from the perceived opportunity (Ireland, Hitt, & Sirmon, 2003). Resources arise from malleable activities as shaped by individuals (Sonenshein, 2014) and are not simply fixed entities as was argued by organisational and creativity scholars (Amabile, Conti, Coon, Barney, 1991;Lazenby, & Herron, 1996;Pfeffer, 1995). Resources are objects that have been acted upon to make them useful (Feldman, 2004). This means that when individuals do not take action to utilise qualities of an object, then it is not a resource. Thus, it is the actions that shape the utility of a resource (Sonenshein, 2014) and consequently facilitate activities.

Ideally entrepreneurship would only be initiated when there are enough resources to exploit an opportunity. Studies have however shown that entrepreneurship emerges amidst resource constraints. Entrepreneurs mobilise a wide variety of tangible and intangible resources, and it is common for entrepreneurs to operate within limited resources (Foss et al., 2008), often pursuing opportunities without regard for the resources required. What differentiates entrepreneurs' behaviours is the breadth and depth of resource constraints with which they are faced. This suggests that resource constraints actually ignite resource mobilisation initiatives that match their needs.

Resources are important for the existence and growth of firms (Penrose, 1995). Entrepreneurs identify helpers with resources and ensure that they reach out to them for support as they advance their firms. Alternatively they engage in strategic actions to become more legitimate (Zimmerman & Zeitz, 2002). Legitimacy is a resource that helps the firm gain more resources. The more resources available to the entrepreneur the more likely they will survive (Carter & Van Auken,

2005). The breadth or heterogeneity of resources are critical for the survival of the firm (Khayesi & George, 2011; Khayesi et al., 2014).

2.5.1 Resources in poor contexts

Resource mobilisation has been referred to as a creative entrepreneurship process (Kodithuwakku & Rosa, 2002). It includes outright postponement of consumption in order to build capital resources, accumulation of resources over a long period of time and aggressive search for knowledge through training or support through networks among other things. Entrepreneurs in resource poor contexts can rely more on social dimensions (Diomande, 1990) and possibly social capital derived from the entrepreneur's interaction with kin, people, and communities (Linna, 2013).

There is a variety of knowledge, skills, talent, and experiences in the environment that are acknowledged when the burdens of scarcity intensify. Moreover, in these settings there is a tendency to utilise "hidden assets" or indigenous knowledge. Characteristics of indigenous knowledge include: (a) it is embedded in its particular community; (b) it is contextually bound; (c) it does not believe in individualist values; (d) it does not create a subject/object dichotomy; and (e) it requires a commitment to the local context unlike western knowledge which values mobility and weakens local roots (Banuri & Apffel-Marglin, 1993).

This knowledge is not just about immediate solutions to everyday problems, but incorporates non-technical insights, wisdom, ideas, perceptions, and innovative capabilities (Thrupp, 1989). It is practical knowledge about everyday life's concrete and relevant issues in the community (Agrawal, 1995).

In resource poor settings, people make use of what is at hand in sometimes bizarre but innovative ways. There is a shift from the throw-away mindset that prevails in resource-rich contexts (Linna, 2013) and entrepreneurs utilise all possible avenues to garner resources that are crucial for their advancement. Therefore, there is a need to pay close attention to the important resources in the entrepreneurship process of firms operating in poor contexts.

The social embeddedness perspective suggests that there should be a joint dependence for two parties if they are to benefit from their relationship (Villanueva et al., 2012). It is through group formation that parties create interactions and affiliation (Vande Ven & Poole, 2004). The exchanges between parties are embedded in social relations (Granovetter, 1985). When two parties are involved in an interdependent relationship they will have rich and useful interactions that benefit both parties (Larson, 1992). New ventures that engage in such relations will have a higher chance of outplaying other powerful parties as they seek external resources (Villanueva et al., 2012).

The formation of groups or affiliations is generally referred to as networks (Nahapiet & Ghoshal, 1997). The relational resource attained through these networks is often referred to as social capital. “Social capital is the actual and potential resource embedded within, available through and derived from the network of relationships possessed by individuals or social unit.” (Bourdieu, 1986: p. 248).

Networks are important contextual variables that influence the entrepreneurial process (Webb et al., 2010). Smaller firms often cite family and friends as their business advisors (Bennett, 2009). They usually shun seeking professional advice because it is often not feasible for them to pay for it (Kuhn & Galloway, 2015). They prefer to seek support from their personal networks. Decision-makers tend to be influenced by advisors whom they perceive to have high expertise (Gino, Argote, Miron-Spektor, & Todorova, 2010) or those whom they believe to be similar to them, naturally causing them to act on the advice of peers in the same trade. Likewise, entrepreneurs gain value for their firms through networking with others in their sector or industry (Kuhn & Galloway, 2015).

The micro-social processes that underlie resource mobilisation determine the quality and quantity of resources that can be mobilised (Baker & Nelson, 2005). Although there are a number of studies that focus on entrepreneurship resource mobilisation through financiers (Zheng, Liu, & George, 2010), professional investors (Eckhardt, Shane, & Delmar, 2006), resource mobilisation from family, friends and colleagues is less studied even though it is a plausible avenue through which entrepreneurs garner resources (Khayesi & George, 2011; Kotha & George, 2012). New ventures typically mobilise resources from individuals based on past friendships and kinships with the entrepreneur. In some cases, the resources provided by the family, friends, and colleagues translates into equity or ownership by the enterprise (Ruef, Aldrich, & Carter, 2003). While the need for plurality of resources from friends, family, and colleagues in the start-up phases has been explored (Kotha & George, 2012), there is a need to understand how this bundle of resource providers support the venture as it advances. All these views provide only a partial explanation of role of the service provider in the entrepreneurial process. Resource providers who have close social relations with the entrepreneurs tend to part with resources even when they are unsure about

the survival of the venture. They simply help the entrepreneur because they are content with their social acclaim. The entrepreneurs therefore opt for contributions from family members because they are perceived as less expensive. However, Khayesi & George (2011) show how family and friends can unknowingly nibble away the capital base of the venture they support.

When a network has close family ties, it tends to host other redundant ties that are not part of the entrepreneur's network (Granovetter, 1985). These ties may have fewer individuals that can competently contribute to the required resource pool. Moreover, such actors may be more homogenous and thus have less novel ideas in comparison to the heterogeneous networks. It was previously argued that entrepreneurs with more family ties tend to mobilise more personal, as opposed to professional, resources from their networks (Kotha & George, 2012) but the value of the positive effects diminishes over time (Arregle et al., 2015).

Hite and Hesterly (2001) argue that networks are a crucial source for accumulating the resources necessary to meet emerging demands. Entrepreneurial networks assist in identifying and acquiring resources (Sullivan & Ford, 2014). Resource needs and challenges are not static, and therefore the role and composition of the networks change over time. Moreover, such networks can constrain or enable resource acquisition. Entrepreneurs intentionally link or organise their networks so that they can build their firms. They must interact with others in the external environment in order to accumulate the needed resources (Salancik & Pfeffer, 1974). Hite and Hesterly (2001) state that "networks of emerging firms evolve in order to adapt to the firm's changing resource needs and resource challenges" (p. 275).

When firms are new and are operating in highly risky and uncertain environments, they often suffer from smallness (Sullivan & Ford, 2014) and resource providers tend to be sceptical of the plausibility of their ideas (McMullen & Shepherd, 2006). In the newer phases, the firm may have multiple networks as it establishes the best possible potential for enabling long-term advancement (Sullivan & Ford, 2014). Firms may opt to work with networks on which they can depend for resources. These include suppliers (Mahmood, Zhu, & Zajac, 2011), co-opetition (Jack, Dodd, & Anderson, 2008), and customers (Shepherd & Williams, 2014; Waldron, Fisher, & Navis, 2015).

However, network ties that provide the more desired resources to the firm are more likely to have some control over the firm because they have created certain dependencies which may reduce the firm's autonomy. Highly embedded networks can result in lower economic performance and reduction in access to information (Podolny & Baron, 1997; Uzzi, 1996), higher risk of failure (Uzzi, 1996), and lower efficiency (Jack, 2005). This means that strong ties are viewed as engines of diminishing returns because they do not provide the new knowledge and resources necessary for firm development (Hagedoorn & Frankort, 2008; Jack, 2005).

A contradictory view reveals that in small towns, social networks have been instrumental in the development of local capacity in business communities (Hayton, George, & Zahra, 2002) and they facilitate both learning and innovative processes (Torri, 2010). Firms with strong community bonds create and renew positive identities which facilitate a deeper appreciation of their entrepreneurial purpose (McKeever, Jack, & Anderson, 2015). Firms and individuals with such networks are advantaged in the quest for performance (Kuada, 2009).

While some studies highlight the role of partnerships in overcoming resource scarcity and the lack of appropriate capabilities, other studies have argued that it is the resource-poor settings that drive innovations to design indigenous products and services with less expensive and easier-to-use procedures that fit into the limited infrastructure.

2.6 Resource Theory in Entrepreneurship

There is a plethora of theories and concepts to explain resources in entrepreneurship (Bhagavatula et al., 2010; Saskia de Klerk, 2015; Desa, 2012; Kotha & George, 2012; Villanueva et al., 2012).

These theories can broadly be categorised as structured and enactment theories. The former stems from the classical rational school that consider an objective world and include theories such as the resource-based- and knowledge-based view. The latter on the other hand view the world as subjective and include resource mobilising concepts such as bootstrapping, improvisation, effectuation, and bricolage (Fisher, 2012).

2.6.1 Structured theories

Structured theories are relatively more developed and have been explored in many empirical studies (Foss, 2011; Wiklund & Shepherd, 2003) that assume that entrepreneurs are rational economic beings. The protagonists of such theories consider success as maximising economic gains (Stinchfield et al., 2012) and therefore search for the most productive resources to generate economic rents. For example the resource-based view highlights the importance of unique and inimitable resources for the firm's success (Barney, 1991; Davidsson, Steffens, & Fitzsimmons, 2009), whereas the knowledge-based view focusses on the importance of knowledge in the firm's growth (Ambos, Ambos, & Schlegelmilch, 2006; Wiklund & Shepherd, 2003). Although these theories are well tested, they are not appropriate to answer the research question for this study because they are greatly hinged on economic rationality of the entrepreneur. This kind of economic

rationality is not usually sufficient to explain the behaviour of an entrepreneur in an African developing context, where there is deep embeddedness with family and personal networks and many activities are highly informal.

2.6.2 Enactment theories

Enactment theories and concepts are based on the contention that the entrepreneur is less economically rational (Stinchfield et al., 2012). Less rational entrepreneurs acquire resources in rather radical ways. These include bootstrapping, which emphasises the importance of working around the challenge of mobilising financial resources (Ebben & Johnson, 2006; Grichnik & Singh, 2010; Vanacker, Manigart, Meuleman, & Sels, 2011; Winborg & Landstrom, 2000) by using any other resources available to the entrepreneur. Effectuation stipulates that entrepreneurial action is based on available resources as opposed to predicted resources (Chandler, Detienne, McKelvie, & Mumford, 2009; Deligianni, Voudouris, & Lioukas, 2015; Fisher, 2012; Read, Dew, Sarasvathy, & Song, 2009). This is clearly explained by using a kitchen analogy.

In the kitchen analogy she describes how one who gets reason for making a meal (opportunity recognition) goes to her kitchen cupboard and looks at the available ingredients (resources), then uses these ingredients to make a meal (exploitation). The meal is a result of the ingredients that were available to her. This process is different from one who starts by saying I need to make a meal X and therefore I need ingredients P and Q. So I will look for those ingredients to make Meal X. In essence, effectuation is about working with available resources.

Improvisation explains how entrepreneurial action starts with using the limited resource pool available to the entrepreneur (Daipha, 2015; Hmieleski & Corbett, 2003, 2006, 2008). Adopting the kitchen analogy, the improviser, needing to make a meal, gets to the kitchen cupboard and

realises that the ingredients are too few/ insufficient to make a proper meal. He however is not deterred by this and continues to make a meal. The improviser works with the meagre resources available to him.

Bricolage highlights making do by applying combinations of resources at hand to new opportunities and challenges (Senyard et al., 2014; Baker & Nelson, 2005, 2003b). Again using the kitchen analogy, the bricoleur, needing to make a meal, gets to the kitchen cupboard and finds few and insufficient ingredients. He is also not deterred by this; he uses some of the ingredients but, due to their insufficiency to make a meal, he may recombine or mix some of the ingredients to create a new variety, which he then uses to make his meal. He could even go to his friend's kitchen and ask for any ingredients that are not being used or find other tools within the kitchen to make a unique type of meal. The bricoleur makes do by combining resources at hand in creative ways.

While these enactment theories have been useful in extending the discussion on how less rational entrepreneurs mobilise resources, bricolage theory, which considers discovering and enacting of resources as complementary, is best suited for this study. Given that it reviews resource mobilisation in a more holistic way than improvisation and bootstrapping, it can aptly account for the interlink between mobilising resources and opportunity exploitation in a firm (Baker & Nelson, 2005).

In many developing economies, a sizeable number of entrepreneurial firms are small with very low levels of capital. The owners of these firms are socially embedded and pluriactive (Khayesi & George, 2011; Namatovu, Balunywa, Kyejjusa, & Dawa, 2011; Rosa, Kodithuwakku, & Balunywa, 2006) in behaviour. Such behaviour, underscored by a rich mosaic of socio-economic

interactions, influences how they mobilise resources for their firms. It is for this reason that this study is located in the domain of bricolage theory, by exploring how bricolage behaviour is manifest when firms are operating in an extremely constrained context.

2.7 Bricolage theory

Although Levi Strauss' theory of bricolage did not offer a specific definition (Stinchfield et al., 2012), contemporary scholars such as Baker and Nelson (2003) have built on his works to extend to the entrepreneurship discipline. For instance, Baker and Nelson (2005) extended bricolage theory by exposing how entrepreneurs in resource-scarce environments create something from nothing. They define bricolage as "making do by applying combinations of the resources at hand to new problems and opportunities" (Baker & Nelson, 2005: p.333). They argue that bricoleur entrepreneurs will ignore the generally acknowledged limitations in tangible and intangible resources and instead forge through by trying out different solutions. Their uniqueness is exposed by how they make do, combine pre-existing resources, and use resources at hand for new purposes.

Firms make do by disregarding commonly accepted materials inputs or practices, and instead insisting on trying out solutions and consequently dealing with the results (Baker & Nelson, 2005). Several authors have pointed out that making do solutions may in fact be of lower quality, technically inferior, or at most, just good enough (Duymedjian & Ruling, 2010; Garud & Karnøe, 2003). In other cases, bricolage has been regarded as a second-best solution implying imperfect, inefficient and incomplete, yet is the only reasonable thing to be done in some situations (Desa & Basu, 2013; Lanzara, 1999).

When resources are scarce and thus difficult to access, entrepreneurs tend to shift their focus to their already existing resources. Such resources are explored in a bid to solve a specific current problem. Ciborra (1996) posited that by using resources at hand, firms are able to evaluate processes, forms, routines, and structural mechanisms. Garud & Karnøe (2003) reviewed how embedded individuals used modest resources to develop Danish wind turbines, while Baker, Miner, and Eesley (2003) showed how social capital and network resources are useful for building new ventures. Other researchers have shown how ideational resources (Desa & Basu, 2013; Mair & Marti, 2009) and other physical artifacts (Lanzara, 1999) are used. In reference to resources at hand Baker and Nelson (2005) describe “resources that are available very cheaply or for free, often because others judge them to be useless or substandard” (p.336).

Bricoleurs often end up recombining resources after evaluating their resource constraints. What is significant about their behaviour is that they use resource combinations for purposes that they were not originally meant (Plowman et al, 2007) or even use the combinations to create something totally new (Garud & Karnøe, 2003). These resource combinations have inherent sub processes such as experimentation, tinkering, manipulation, and reframing old resources. Bricolage is therefore a practical and experiential approach in which entrepreneurs organise and reorganise resources to adapt to market and environmental shifts (Steffens, Senyard, & Baker, 2009).

Making do and combining resources suggests that bricoleurs create solutions that may not be perfect, using unwanted or unusable elements, as a way of getting the job done but not necessarily getting the job well done (Senyard et al., 2014; Steffens et al., 2009). This creates important implications for the entrepreneurial firm since it should be able to do an excellent job if it is to

survive in the competitive world (Delmar & Wiklund, 2008; Terpstra & Olson, 1993; Wiklund, Patzelt, & Shepherd, 2009).

When Baker & Nelson (2005) highlighted entrepreneurial bricolage as the pursuit of opportunities through close regard to resources at hand, they distinguished between selective and parallel bricolage. The latter referred to those firms that had more than one project running at the same time. These firms had a regular collection and storage of resource troves. Resource troves include physical inputs which are often goods that others disregarded, labour inputs are arranged from abroad spectrum of mostly self-taught skills, local institutional and regulatory frameworks which are repeatedly bypassed or tested and customers meshed in a multiplicity of ties. In parallel bricolage, there is a mutual reinforcing pattern of resources for example, as firms hunt for resources, they develop new self-taught skill sets combining them with flexible standards and practices, thereby improving network ties. On the other hand, selective bricolage represents those firms that temporarily adopt bricolage but avoid it when demands of embedded ties arise. This account describes what transpires in bricolage but fails to explain how bricolage manifests in firm development.

In recent times, bricolage has been explored in the innovation management and entrepreneurship fields. Table 2 shows how bricolage has been studied in management and organisational fields over the past two decades.

Table 2: Bricolage studies over the past two decades in management and organizational fields

Authors (Year of study)	Type of study	Philosophy of study	Study Context	Key findings	Contributions	Type of bricolage
Ciborra (1996)	Empirical	Inductive	Developed economy- profit organization	By using resources at hand, firms are able to evaluate processes, forms, routines, and structural mechanisms.	In a study of Olivetti suggested that bricolage helped Olivetti to adapt, but simultaneously constrained firm effectiveness.	n/a
Lanzara (1999).	Empirical	Inductive	Developed world- profit organization	The design of information systems and technologies ought to be more sensitive to bricolage and the related strategic opportunities	That the logic of bricolage, even though inconspicuous is a viable form of design to address transient and permanent problems in information system development.	n/a
Baker and Nelson (2003)	Empirical	Inductive	Developed world- profit organization	Exposing how entrepreneurs create something from nothing.	They suggest behavioral patterns that could account for making do entrepreneurial firms to flourish.	n/a
Baker, Miner, and Eesley (2003)	Empirical	Inductive	Developed world- profit organisation	It showed that but improvisational processes can permeate entrepreneurial activity to create uncommon implications for firm strategies and competencies.	They develop four domains of strategic and tactic improvisation, network bricolage; and improvisational competencies	Network bricolage
Garud & Karnøe (2003).	Empirical	Inductive	Developed economy- profit organization	That when actors become involved with a technology, they consequently generate inputs that result in the Transformation of an emerging technological path.	That Breakthrough and bricolage are contrasting approaches that actors adopt to develop technological paths.	n/a
Baker and Nelson (2005)	Empirical	Inductive, A constructivist approach	Developed economy- profit organization	They show the role of Bricolage and how resource environments are socially constructed.	They advance a formal definition of entrepreneurial bricolage and induce the beginnings of a process model of bricolage and firm growth.	Selective and Parallel bricolage

Authors (Year of study)	Type of study	Philosophy of Study	Study context	Key finding	Contribution	Type of Bricolage
Ferneley and Bell (2006)	Empirical	Inductive Longitudinal case studies		Bricolage fits the can do mentality of SMEs and is useful for them to learn about in situ possibilities of information systems.	In information system, for bricolage to flourish, organizational space and a growing trust among end users, developers and management as visions are explored and revised is required.	n/a
Baker (2007)	Conceptual/ Analytical	Inductive, narrative	Developed world.	Applies the lens of bricolage to a series of critical events and activities described in the Toy Store(y),	reflect and express themes and points of view that are useful for understanding other organizations	Organizational bricolage
Hmieleski & Corbett (2008)	Empirical	Deductive	Developed economy	That entrepreneurial intention is significantly associated with improvisation.	That improvisation accounts for a significant amount of variance in entrepreneurial intention.	Creative bricolage
Anderson (2008)	Empirical	Inductive	Developed economy- profit organization	That bricolage was prevalent in bottom-up innovation processes and it is important to utilize know how and social capital accumulated over years during organisations' innovative courses.	Uses bricolage to illuminate bottom up innovations by utilizing resources on hand.	n/a
Zahra, Gedajlovic, Neubaum, & Shulman (2009)	Conceptual			They define social entrepreneurship and discuss its contribution in creating social wealth.	They offer a typology of social entrepreneurs that includes social bricoleurs, constructivists and engineers.	Social bricolage
Steffens, Senyard & Baker (2009).	Empirical	Deductive	Developed world	Firms will have a more advantageous resource position if they have higher levels of bricolage behaviour	Empirical testing of the relationship between bricolage and the firm's strategic resource position.	n/a
Senyard, Baker & Davidsson, (2009)	Empirical	Deductive	Developed world	Bricolage positively influences firm performance in new businesses but diminishes as the firm grows.	The relationship between bricolage and firm performance	n/a

Authors (Year of study)	Type of study	Philosophy of Study	Study context	Key finding	Contribution	Type of Bricolage
Di Domenico, Haugh, & Tracey, 2010;	Empirical	Inductive	Developed world	They identify making do, refusal to be constrained by environmental limitations and improvisation as key in epitomizing the process of creating social enterprises.	They identify social value creation, stakeholder participation and persuasion as constructs that extend social bricolage.	Social bricolage
Stinchfield, Nelson and wood(2012)	Empirical	Inductive	Developed economy	They develop a five category typology of entrepreneurial behavior that includes art, craft, engineering, bricolage, and brokerage.	They explain the significance of the typologies with financial performance and venture longevity.	n/a
Sunley & Pinch (2012)	Empirical	Inductive	Developed economy-social enterprise	They expose how social enterprises use adaptive response for financial survival and improvisation in uncertain times.	They apply, develop and evaluate bricolage and evolutionary theory on forms and practices of social enterprises.	social bricolage
Halme, Lindeman and Linna (2012)	Empirical	Inductive	Developed economy- social enterprise	That intrapreneurial bricolage may be important for MNCs to create innovative pro-poor or inclusive business models.	Introduce the concept of intrapreneurial bricolage to impact on inclusive innovation, there needs to be a level of tolerance for out-of- ordinary activities.	Intrapreneurial bricolage
Fisher (2012)	Empirical	Inductive	Developed economy	That there is behavioral similarities and differences in theoretical perspectives of effectuation, causation, and Bricolage.	Using alternative templates research method to explain how theories complement each other and how they can be integrated.	n/a
Desa (2012)	Empirical	Abductive	Global	Finds that social entrepreneurs operating in constrained institutional fields use bricolage to reconfigure resources at hand	That bricolage is legitimating process for institutional change.	n/a
Desa & Basu (2013)	Empirical	Deductive	Global	That environmental munificence and organizational prominence have U-shaped associations with the use of bricolage and positive associations with the use of optimization.	They provide antecedents and conditions that influence venture selection of optimization and bricolage processes	n/a

Authors (Year of study)	Type of study	Philosophy of Study	Study context	Key finding	Contribution	Type of Bricolage
Salunke, Weerawardena & McColl-Kennedy (2013)	Empirical	Deductive	Developed economy	That service entrepreneurship and bricolage influence interactive and supportive service innovation and consequently sustained competitive advantage.	That in project based firms, higher levels of bricolage are associated with higher levels of interaction and supportive innovation	Bricolage mindset
de Jong, 2013;	Conceptual		Emerging economy	That cautious and selective approaches reflect Chinese tradition of institutional bricolage.	Critique of the practices in the Euro-Asia policy transplantation	Institutional bricolage
Senyard, Baker & Steffans (2014)	Empirical	Deductive	Developed world	bricoleurs create solutions that may not be perfect, using unwanted or unusable elements, as a way of getting the job done but not necessarily getting the job well done	Despite these negative aspects attributed to bricolage, there is no evidence of negative returns when bricolage is used excessively. In fact, there is empirical evidence that bricolage improves innovativeness	n/a
Perkmann & Spicer (2014)	Empirical	Inductive		That it is the organisation's imprinting form coupled with its values that reinforce their core features differentiating them from antagonistic forms that conflict their values.	They develop a process model showing how imprinted forms are eventually modified. They exhibit the limits of relative arbitrariness to bricolage identity	Organisational bricolage
Daipha (2015)	Empirical	Inductive (ethnography)		That collage mediates information bricolage and decision making in organisations.	That collage serves as heuristic frame for decision making and cognitive practice of distilling complex data into coherent decisions	Information bricolage
Li, Naughton & Nehme (2015)	Empirical	Deductive	Developed economy	That resource bricolage may reduce query performance degradation	That resource bricolage is useful technique in data base management.	n/a
de Klerk, 2015	Empirical	Inductive	Developed economy	That bricolage can be used by artists to create projects and develop their skill	That network bricolage is useful for the creative industry	n/a
Mckague & Oliver (2016)	Empirical	Inductive (case study)	Developing economy	That network bricolage can play an important role in reconciling informal indigenous African institutions with formal foreign institutions.	That network bricolage in social enterprises involves interest alignment and a relational governance structure among network actors.	Network bricolage

Davidsson, Baker & Senyard (2017)	Empirical	Deductive	Developing economy	That there promising results concerning the reliability as well as the discriminant and nomological validity of the measure of bricolage.	A novel measure on the prevalence, antecedents, and consequences of entrepreneurial bricolage.	n/a
Kwong, Tasavori & Cheung (2017)	Empirical	Inductive	Developed economy social enterprises	That mission drifts are observed when there are more integrated relationships with high power asymmetry	That social enterprises that develop more collaborative/complementary types of partnerships with symmetrical power dependency, or with transaction based engagement have less drifts in their mission	n/a

Bricolage has been studied under an underfunded and unplanned process (Garud & Karnøe, 2003). Moreover, it has been done at various levels of analysis spanning from industrial (Garud & Karnøe, 2003) to institutional (Mair & Marti, 2009), firm (Baker & Nelson, 2005) and individual (Hmieleski & Corbett, 2008) levels. It has also been evaluated in a variety of contexts including, developed economies (Senyard et al., 2014; Baker & Nelson, 2005; Garud & Karnøe, 2003) developing economies (Bond, 2014; Linna, 2013; Ros-Tonen, Insaído, & Acheampong, 2013; Mair & Marti, 2009;) social entrepreneurship (Sunley & Pinch, 2012; Di Domenico, Haugh, & Tracey, 2010; Mair & Marti, 2009; Zahra, Gedajlovic, Neubaum, & Shulman, 2009; Mair & Marti, 2006), service entrepreneurship (Salunke et al., 2013) multinationals (Halme et al., 2012) development of wind turbines (Garud & Karnøe, 2003) nursing (Warne & McAndrew, 2009) system development (Lanzara, 1999) and agricultural systems (Hounkonnou et al., 2012). These studies, although varied in focus, do not address how bricolage is manifest throughout firm development.

The current robust stream of research is purposed to teasing out nuances of bricolage such as parallel vs selective bricolage (de Jong, 2013; Baker & Nelson, 2005), ideation bricolage (Mair et al., 2012), information bricolage (Daípha, 2015), intrapreneurial bricolage (Halme et al., 2012), evolutionary bricolage (Duboule & Wilkins, 1998) improvisation and bricolage (Baker et al., 2003), optimization and bricolage (Desa & Basu, 2013), bricolage mindset (Duymedjian & Ruling, 2010) organisational bricolage (Perkmann & Spicer, 2014) internal and external bricolage and so forth.

However, most of the recent work done on entrepreneurial bricolage is focussed on developed world contexts (Senyard et al., 2010; Steffens et al., 2009; Plowman et al., 2007; Baker & Nelson, 2005) where resource scarcity is not as extreme as that of the developing world (Xu & Meyer, 2012). Where research has been extended to developing economies, it has been used to extend social entrepreneurship (Mair & Marti, 2009; Zahra et al., 2009). This means that we lack a description of how profit maximising firms in developing economies bricolage.

2.7.1 Bricolage as a method of organisation

Many of the earlier resource-based theorists argued that a firm controlled its basic resources (Wernerfelt, 1984) and therefore used these resources to create a competitive advantage for themselves (Barney, 1991). However, in recent times, it has been recognised that resource bundles change and develop as the firm grows (Brush, Carter, Gatewood, Greene, & Hart, 2006; Winborg & Landstrom, 2000). Most new firms do not have an optimal resource base (Sarasvathy, 2001), instead they accumulate resources as time goes by. Moreover, accumulation of these resources relies on active combinations and re-combinations (Baker et al. 2003; Baker & Nelson, 2005) coupled with frugal sequencing of the resources over time.

Acquiring resources is significantly difficult (Martens, Jennings, & Jennings, 2007) and yet it is the firm's ability to leverage resources productively that distinguishes its growth potential (Brush et al., 2006). Scholars have long argued that acquiring resources can be expensive (Graebner, 2009) and slow (Eisenhardt & Tabrizi, 1995) causing firms to engage in inter-organisational relationships so that they can quickly accumulate a variety of resources (Katila, Rosenberger, & Kathleen, 2008). These sentiments suggest that resources needed by entrepreneurial firms are often

controlled by others external to the firm (Katila et al., 2008) and therefore strategies devised by the firm are more outward looking.

Prior research has highlighted how the entrepreneur's capabilities and social framing influence venture failure and survival (Singh, Corner, & Pavlovich, 2014; Stinchfield et al., 2012). Building on the premise that the entrepreneur's resource mobilisation strategies are important for firm growth, then business growth is top priority in entrepreneurship (Iacobucci & Rosa, 2010; Leitch, Hill, & Harrison, 2010; Prats, Sosna, & Velamuri, 2012). Firms need to identify appropriate resource mobilisation strategies that aid growth. One of the significant barriers to growth is a lack of appropriate resources. An entrepreneurial firm may desire to grow, but if it is challenged in mobilising resources then it cannot advance as required.

Until recently, literature has been dominated by the view that resource mobilisation subjects entrepreneurs to the vulnerabilities of resource providers. Newer theories such as entrepreneurial bricolage (Baker & Nelson, 2005) indicate that entrepreneurial behaviour may differ from what the traditional approaches have posited. The entrepreneurial mindset with the capability to discern and engage peripheral resources in order to gain an innovative outcome can be described as that of a bricoleur (Salunke et al., 2013). For bricolaging enterprises to flourish, the bricoleurs need to employ some degree of self-regulation because rigorous control stifles innovation (Ferneley & Bell, 2006). It is entrepreneurs that can creatively combine resources under their control who are better positioned to advance because they can exploit opportunities readily.

Moreover, resource mobilisation does not only emerge from the external environment but existing resources are also a source of opportunity (Fisher, 2012). Ventures that are creative in resource mobilisation are more likely to achieved rapid development (Brush et al., 2006). Penrose (1959) argued that when ventures seek growth, they adopt creative resource- building processes and capital raising ingenuity. Entrepreneurs create opportunities and markets by utilising resources on hand (Baker & Nelson, 2005). Bricoleurs re-arrange and redistribute resources until they find a robust balance of productive resources. The resources are organised into horizontal and vertical interconnections to permit wide simultaneity (Nonaka, Kodama, Hirose, & Kohlbacher, 2014). It is the firm's ability to creatively arrange and organise resources that provides it with a competitive advantage over others (Barney, 1991). Moreover, even when firms do not have a rich resource base, they build a competitive advantage by concentrating on their individual capacities - skills, knowledge, and relationships (Dew, Read, Sarasvathy, & Wiltbank, 2009). Previous studies explain how firms bricolage within their organisational domains and how these are enhanced by the external environment. However, they do not account for bricolage when the organisational and external domains are extremely poor.

2.7.2 Bricolage sustained through adaptive persistence

Adaptive persistence is an active and dynamic experimentation to meet challenges with the aim of finally solving them (Klarner & Raisch, 2013). Through adaptive persistence, firms address environmental volatilities by adjusting their activities through increased recombining of resources at hand to meet new challenges (Hoang & Gimeno, 2010). Organisational scholars have had much interest in adaptation, with a historical account of two extreme perspectives, the first being that inertia in organisations does not permit significant change (Ansoff, 1991) and the second being that organisations are malleable enough to realign activities with evolving conditions (Mintzberg, 1990). The latter perspective was further developed to understand how and when adaptation occurs

(Eisenhardt & Tabrizi, 1995; Henry Mintzberg, Pascale, Goold, & Rumelt, 1996). It can occur through small, frequent shifts or punctuated equilibrium (Brown & Eisenhardt, 1997; Hoskisson, Shi, Yi, & Jin, 2013).

Management research supports the notion that the firm's ability to persistently adapt to changes in the environment will foster its advancement (Mintzberg, 1990). The terms adaptation, adaptive capacity, and resilience are interrelated and have been used widely in change science (Smit & Wandel, 2006). Resilience could be interpreted as the capacity to absorb shocks and still remain functional (Folke, 2006) as well as the ability to renew and re-organise functions (Walker, Anderies, Kinzig, & Ryan, 2006).

Focusing on attributes that play a role in the dynamics of the environment can improve long term performance of an entity (Anderies, Walker, & Kinzig, 2006). These insights have been tested in the fields of economics, ecology (Folke et al., 2004), political science and resource management (Walker et al., 2006). Beyond the ability to absorb disturbances and the ability to persist, resilience triggers social change through human communities' ability to withstand external shocks and upheavals (Adger, 2000). The more vulnerable the system is, the more susceptible it is to drastic social consequences, even when the disturbances are small. Uncertainty, surprise, and non-linear dynamics interact with social dimensions across spatial and temporal scales (Folke, 2006).

Resilience is not just about being persistent or robust, "It is also about the opportunities that disturbance opens up in terms of recombination of evolved structures and processes, renewal of the system and emergence of new trajectories" (Folke, 2006, p. 259). Resilience encourages

adaptive capacity and therefore breeds continuous development, a dynamic adaptability which sustains and develops with change (Smit & Wandel, 2006). Within an ecosystem, shocks or distortions create an avenue for doing new things and developing innovations (Folke, 2006).

Innovations may include detours and dead-ends, but are problem-solving processes that dictate re-combinations, relocation, and manipulating existing resources to create new resources (Nelson & Winter, 1982). Uncertainty avoidance may become a bottleneck that inhibits firms from realising their full potential (Halme et al., 2012). In poor contexts, firms adopt innovative strategies as a means of advancing in their entrepreneurial journey (Fu, Zanello, Essegbey, Hou, & Mohnen, 2014). The innovative strategies firms adopt amidst dynamic environments have been explored, but how these firms persistently adapt to changes in extremely poor and risky environments is unexplored.

While bricolage is hailed for allowing firms to create something from nothing (Baker & Nelson, 2005), it has been described as messy (Ciborra, 1996), inefficient, and slow (Lanzara, 1999) and authors have cautioned that if a firm adopts “ mutually reinforcing patterns... a firm identity and community of practice ... cements firms into the practice of parallel bricolage and stalled growth” (Baker & Nelson, 2005, p.354). Despite these negative aspects attributed to bricolage, there is no evidence of negative returns when bricolage is used excessively (Senyard et al., 2014). In contrast, there is empirical evidence that bricolage improves innovativeness (Senyard et al., 2014), and helps overcome constraints for inclusive businesses (Halme et al., 2012). Sunley & Pinch (2012) use bricolage and evolutionary economic theory to expose how social enterprises use adaptive response for financial survival and improvisation in uncertain times.

When firms identify skilful from less skilful bricolage (Baker, 2007) and incorporate it with persistence, or in other words, they refuse to be barred by environmental inadequacies (Di Domenico et al., 2010; Garud & Karnøe, 2003) and they become innovative (Baker & Nelson, 2005). Barrett and Sexton (2006) argued that when small firms persistently move forward through efficient and effective use of the constrained resources in the environment are they able to gain competitive advantage. Salunke et al. (2013) found that behaviours linked to adaptiveness, such as proactiveness, risk taking, and innovativeness, are drivers behind efficient resource mobilisation. Halme et al. (2012) posited that for intrapreneurial bricolage to impact on inclusive innovation, there needs to be a level of tolerance for out-of-ordinary activities. This further implies a level of persistence that is required to further bricolage.

Although these studies extend the bricolage theory by relating it to other constructs or phenomena, the exploration of bricolage and adaptive persistence has not been done. Moreover, reviewing this phenomenon in extremely poor settings will improve our understanding of how the entrepreneurial process is influenced by bricolage.

2.7.3 Bricolage an avenue for innovation

In more recent studies, it has been shown that new firms perform better when their resource demands exceed supply (George, 2005) and when firms want to achieve economic success they become more creative with their limited resources (Kodithuwakku & Rosa, 2002). In addition, resource constraints serve as sources of creativity and innovation (Fisher, 2012). However, Sonenshein (2014) argues that creativity in resource poor firms is only temporary. Firms tend to

become more creative so that they can survive as new ventures, but as they grow their creativity reduces because they have access to more resources.

There is a contradictory view that holds that it is the abundance of resources that aids creativity (Foss, Lyngsie, & Zahra, 2013; Katila et al., 2008; Ranga, 2012), however, there is evidence that resource scarcity increases learning and experimentation (Cohen & Levinthal, 1990) and generates creative behaviour (Baker & Nelson, 2005) which enhances task challenge (Ohly & Fritz, 2009).

Entrepreneurial firms continuously seek means of improving their resources on hand (Baker et al., 2003; Bhidé, 1999) so that they can competently address new challenges (Senyard et al., 2010; Bhave, 1994). These actions fit with the bricolage logic that “because bricolage often draws on degraded, fallow, and otherwise undeveloped resources to construct new combinations, it represents a form of value creation... an engine of value creation through innovation ... much more important as a value creation tool and not a tool of value appropriation” (Baker & Nelson 2005:p.362).

Firms that engage in bricolage are willing to experiment and tinker to try out solutions without worrying too much about whether they have the right tools, resources, or skills at hand (Senyard et al., 2014). Further to this, inventor bricolage, which involves the reallocation and recombination of existing scientific talent has been argued to contribute to firm advancement (Banerjee & Campbell, 2009). However, little is known about how bricolage behaviour unfolds when firms are in extremely poor settings. Understanding this relationship will shed more light on how an extremely poor context enables bricolage behaviour.

2.7.4 Bricolage and community embeddedness

The traditional logic of resource mobilisation is that a holder of a resource will maintain a superior position over others as long as they act rationally (Wernerfelt, 1984). However, it has been found that entrepreneurial firms prefer to create strategic alliances based on needs and social opportunities in the community (Eisenhardt & Schoonhoven, 1996) as opposed to making partnerships with more powerful players (Katila & Chen, 2008; Katila et al., 2008).

Firms willingly assist their communities, and in turn, it is through help giving (Hargadon & Bechky, 2006), that the firms' status in the community is improved. Firms that help their host communities are perceived positively and their help is reciprocated through other economic and social actions by community members. The firm's existence becomes crucial to the community identity and in return it benefits from the local support through acceptance of sometimes imperfect products or services, cheap labour, and a wide base of self-appointed marketers or "evangelists" and access to information (Fisher, 2012; Waldron et al., 2015).

A bricoleur's mindset is characterised by deep familiarity with their context and intimate knowledge of the various elements therein (Duymedjian & Ruling, 2010). Bricolage is not just about resource integration but it also involves a mindset attuned to addressing challenges and opportunities underscored by a deep knowledge base of the operational domain (Halme et al., 2012). The community embedded resources contribute to firm advancement and help the firms to forego other "resource seeking options, which means attempts to attract and use resources that are not at hand" (Baker, 2007: p. 695). In other words, the community becomes a partner, adding to the existing resource bundles, in other words, a multiplicity of networks (Baker, 2007; Baker &

Nelson, 2005; Baker et al., 2003). Moreover, because the community provides information, the firm acts on this information to generate new ideas and consequently more innovative/ appropriate products that satisfy the market (Hargadon & Bechky, 2006). The role of embeddedness in bricolage has been explored, but this has not been extrapolated to the entire entrepreneurial process. If this is explored, it will contribute to our understanding of how bricolage influences the entrepreneurship process.

This review shows how previous studies have not fully accounted for how bricolage behaviour is manifest in firms operating in poor settings, how the extremely constrained context enables bricolage or how bricolage unfolds in the entrepreneurship context. It thus exposes that there is a need to explore bricolage behaviour in firms operating in extremely poor settings.

2.8 Conclusion to the literature Review

The literature review shows a gap in our understanding of entrepreneurship in extremely poor contexts. This work extends the bricolage theory by exploring it when the external environment is extremely constrained. Previous studies, Halme et al.(2012) have reviewed bricolage amidst internal resource constraints in the firm. Moreover, since the seminal work by Baker and Nelson (2005) was done in a developed world, this study, which is conducted in a developing world context, exposes new nuances to the theory in a different setting. It complements other developing economy studies (Halme et al., 2012; Mair & Marti., 2009; Seelos & Mair, 2004, 2005) that have explored entrepreneurial bricolage in social enterprises by concentrating on mainstream entrepreneurship. Here, bricolage entrepreneurship is explored in established profit maximising firms operating in a resource poor environment in the developing economy of Uganda.

It specifically shows that: (a) there is limited understanding of how bricolage behaviour manifests in firms operating in poor settings; (b) it is not clear how the extremely constrained external context enables bricolage behaviour and (c) there is no information on how bricolage unfolds throughout the entrepreneurship process. These gaps justify the need to explore how small established firms operating in resource constrained environments display bricolage behaviour.

Through bricolage theory the study exhibits how resource mobilisation contributes to firm advancement. This work makes the contribution by answering the following research questions, a) How is bricolage behaviour manifest in firms operating in poor settings? b) How does the extremely constrained external environment enable bricolage? c) How does bricolage unfold in the entrepreneurship process? The next chapter contains a detailed discussion of the research design and methodology.

Chapter 3: Methodology

3.0 Introduction

This chapter explains the epistemological and ontological paradigms that motivated this study. It further details the research design, sampling strategy, case selection, methodology, quality assurance and data analysis used in the study.

3.1 Research paradigm

Often theory and practice fail to complement each other, and are perceived to operate in unrelated or separate modes (Rauch, van Doorn, & Hulsink, 2014; Van Burg & Romme, 2014). If theories do not reflect how actors enact their practice, then their relevance to practice is questionable. Rousseau and Fried (2001) and Van de Ven (1989) posited that the theory-practice gap can only be mitigated via collaborative forms of research. Sandberg and Tsoukas (2011) argue that many of the organisational theories generated by scientific rational thinking do not resonate with organisational practices.

Given that bricolage is complex, context-bound and can be interpreted by both observer and participant and conveyed through dialogue and enactment of actors, this study adopted a subjective epistemology. Such an epistemology provides paradigms that guide theories, which capture how actors enact practices, while accounting for the essential aspects of logic (Sandberg & Tsoukas, 2011). Based on this perspective, this study uses an interpretivist paradigm entailing a relativistic ontology and a subjective epistemology to highlight processes that exist within a resource constrained context.

3.2 Research design

The relative newness and complexity of the entrepreneurship research domain renders qualitative approaches appropriate for building theory (Bruton, Ketchen, & Ireland, 2013; Edmondson & Mcmanus, 2007) and making theoretical contributions (Mair, Marti, & Ventresca, 2012; Eisenhardt, 1989a). Case studies contribute unique and substantial knowledge to the field of entrepreneurship (Rauch, van Doorn, & Hulsink, 2014). Yin (2009) posited that case studies capture holism and complexity. Furthermore, case studies connect the multi-level views (Chetty, Partanen, Rasmussen, & Servais, 2014) and contextual conditions (Van Burg & Romme, 2014) in a study.

The overarching research question of this study was: “How do small established firms operating in extremely constrained environments display bricolage behaviour?” It leaned to an explanation building analysis, purposed to obtain an appropriate account of bricolage behaviour in a resource constrained environment. Therefore, a qualitative research design involving multiple cases was used. Multiple case studies were more appropriate for this study because they highlight contextual nuances which in turn facilitated understanding of dynamics in resources constrained environments (Eisenhardt, 1989a; Eisenhardt & Graebner, 2007; Gibbert, Ruigrok, & Wicki, 2008). In this inductive and qualitative study, I didn’t have a “measurement process” highlighting bricolage because the study’s purpose was to elaborate bricolage (and its dimensions) in small and medium firms operating in constrained environments.

Field-based qualitative data collected through interviews and some supplemental secondary data permitted a detailed multi-level account of the sub-process involved in bricolage. Information from

the interviews captured the interactions amongst the processes, actors and events thus providing situated knowledge (Steyaert & Landström, 2011). Such accounts contributed to explanations of bricolage in extremely constrained environments. In addition, causal links that are theoretically significant were made after ruling out any other explanations (Yin, 1981). This is evidenced in chapter 13. The links resulted from a series of iterations within the findings. The approach taken was to examine extant entrepreneurship literature and systematically combine it with evidence from multiple cases, to iteratively move between data and analysis (Parkhe, 1993).

3.3 Sampling strategy and case selection

The study used purposive sampling. Micro and small firms were selected if they were operating in the fabrication sector, which is extremely constrained. As explained in chapter two there is a prevalence of bricolage in resource constrained small and medium firms (Baker & Nelson, 2005), and considerable heterogeneity exists among such firms, for example: size ((Schaper, Dana, Anderson, & Moroz, 2008); nature of entrepreneurs;((Lee, Kam, Foo, Leung, & Wong, 2011) and age (Lévesque & Minniti, 2006).

Uganda is mainly agrarian and the poverty levels are high (UBOS, 2006). It has a high HIV prevalence rate of up to 7%, unequal distribution of wealth and a youthful population with high unemployment rates (UNECA, 2005).The volatility in the environment ranges from political unrest ((Blattman et al., 2011), to health hazards ((Ssenkooba et al., 2007), institutional malfunctions such corruption ((Anokhin & Schulze, 2009) and economic upheavals such as inflation and unemployment (Collier, 2007).

The informal economy in Uganda constituted 43% of the total economy in 2000. There are long and cumbersome administrative hurdles in business registration and licensing underscored by high related costs. Many businesses operate in the informal economy, and remain unregistered, thereby avoiding government sanctions ((Khavul et al., 2009),but experiencing long-term disadvantages that limit wealth creation.

The lack of legal protection for participants in the informal economy spurs innovative strategies for self-protection and survival. Entrepreneurs mitigate risk by having several small businesses as opposed to concentrating on growing one core business. In some cases, they deliberately compromise professionalism ((Khavul et al., 2009) by using substandard factors of production, or devise operational technologies in order to survive at the expense of growth. Therefore, the Ugandan context highlights extreme scarcity and volatility and is thus suitable for exploring bricolage.

In Uganda, metal fabrication was dominated by less educated young males. Market entry was relatively easy, and youth started micro firms immediately after their apprenticeship assignments. However, in 2012, the common grade of steel reflected a 30% increase in global prices, but translated into a 66% increase in steel commodity prices in Uganda (Weekly Observer, 2012). This and other socio-political shifts stand as challenges for fabricators' resources needs. Currently, there is fierce competition (with local and foreign competitors) in the sector, causing smaller firms to improvise as they meet the diverse local market demands. The firms are constrained by expensive and inaccessible raw materials (steel) and opted to tinker with scrap metal to create products. Moreover, many of the fabricators were self-taught, with minimal or no formal vocational or

business training. The sector thus provided a good context for assessing how small firms in a constrained environment engage in bricolage.

3.3.1 Unit of analysis

The unit of analysis needs to be well specified in order to develop a decent theory, because it reduces the possibility of making conclusions on a superficial unit of analysis (Yin, 2009). The study adopted a multilevel approach in exploring bricolage in constrained external environments, considering the entrepreneur, the firm, and the entrepreneurial environment. Bricolage would be linked to both the individual and the firm and yet it can occur both internally and externally. Hence the firm represented the unit of analysis. However, activities of the firm are enacted by individuals (Frese, 2009). Therefore, the firm was the unit of analysis and the entrepreneurs were the source of information.

3.3.2 Case selection

Rule & John (2011) and Yin (2009) stipulate that the selection process should be credible, while Onwuegbuzie and Leech (2007), and Eisenhardt (1989a) recommend that an ideal number of cases should be selected. Table 3 details how the cases for the study were selected.

Table 3: Firm Selection criteria

Factor	Criteria	Comment
Purpose of the study	Firms displaying bricolage behaviour and are more than 3 years old	Develop a theory to explain resource mobilisation in extremely constrained external environments
Category to which case belongs	Purposive selection of established bricolaging firm	Theoretical sampling as recommended by Denzin & Lincoln (2005)
Relationship to the category	Maximum variation	Recommended by Yin (2009)
Number of cases to be studied	Eight firms	Eisenhardt (1989) recommends four to 10
Practical consideration	Voluntary willingness to participate in the study	Adherence to ethics requirements

This study purposively sampled eight fabrication firms that displayed bricolage behaviour and had been in existence for at least three years. Firms older than three years could highlight and account for the “new shock” of increased steel prices that the sector has experienced. It sought to sample for maximum variation within the fabrication sector, making it suitable for within-case and across-case comparisons. Maximum variation was helpful in transparently exhibiting the bricolage behaviour employed by the different firms (Gibbert, Ruigrok, & Wicki, 2008; Pettigrew, 1990).

Moreover, multiple cases represent replication logic (Yin, 2009; 2003) and create a fine balance with thick and rich descriptions (Onwuegbuzie & Leech, 2007). Geert (1973) describes thick descriptions to include, a stratified hierarchy of meaningful structures, the ability to sort out the structures based on their significance and establishing the importance of their social ground. The cases in part 2 include the various structures at interplay and how they socially and economically influence bricolage behaviour.

Table 4 describes the type of firms that were selected in the sample. In addition, wherever possible, other participants and secondary sources facilitated the triangulation of collected data (Yin, 2009; 2003).

Table 4: Sample Description

Firm	Location	Firm age	Size: equipment	Size: no. of employees	Self-reference	Activity: Products	Registration	Growing	Exit Plans
1	Home based	16	Medium	6	Welder	House fittings: windows, doors	NIL	✓	NIL
2	Market based	60	Medium	12	Fabricator and Importer	Home appliances and Agro machinery	✓	✓	NIL
3	Roadside	28	Small	1	Welder and Mechanic	Exhaust pipes	NIL	NIL	✓
4	Roadside	8	Small	3	Welder and trader	Second-hand food processing equipment repair	NIL	NIL	✓
5	Market based	14	Medium	1	Machinist	Factory equipment and machines	✓	✓	NIL
6	Road side	15	Medium	3	Welder	House fittings: windows, doors	✓	NIL	✓
7	Market based	54	Medium	28	Foundry specialist	Agro processing machinery	✓	✓	NIL
8	Market based	27	Micro	0	Blacksmith	Charcoal stoves	NIL	NIL	✓

3.3.3 Respondent selection

A total of 30 participants were purposively drawn from the participating firms. The key respondent was the entrepreneur, whose bricolage behaviour was of critical importance to the study (Grossman, Yli-renko, & Janakiraman, 2007). Other participants were selected to add to the richness and consequently contribute to creating thick descriptions (Ponterotto, 2006). This is evidenced in chapters 4 to 11. For instance, if the entrepreneur referred to somebody as being critical in their bricolage behaviour, then the mentioned person was interviewed. This included family members, long standing employees, customers or suppliers.

Burgelman (1983) recommends that individuals whose importance becomes apparent during data collection should be interviewed. In this study, up to two related interviews were done. This approach helped in completing their narratives by confirming or contradicting the given information and thus adding to the richness and rigour through triangulation of data sources (Gibbert et al., 2008; Guest, 2006). Table 5 shows the interviews that were conducted in each firm.

Table 5: Sources of information

Firm	No. of Interviews conducted	Primary participants	Other primary sources					
			Employee(s)	Family Member	Customer	Supplier	Field notes	Photos
1	5	Founding entrepreneur	√√	√	√	√	√	√
2	5	2 nd generation entrepreneur	√	√	√√		√	√
3	4	Founding entrepreneur	√√		√		√	√
4	3	Founding entrepreneur	√			√	√	√
5	3	Founding entrepreneur	√√				√	√
6	3	Founding entrepreneur	√			√	√	√
7	4	2 nd generation entrepreneur	√	√	√		√	√
8	3	Founding entrepreneur			√	√	√	√

√ represents 1 √√ represents 2

3.4 Data collection process

The study began with a pilot case and evidence from the case was used to refine the interview protocol (Moorse, 2002; Roulston, 2010). The pilot data was included in the analysis. The protocol outlined the nature of data to collect from various respondents (Yin, 2009). It is an effective way of addressing the question of reliability of case studies (Miles & Huberman, 1984; Yin, 2009). The study ensured that data collection was focused, with verification that the same information was being collected for all cases, and was helpful in the data analysis (Gibbert et al., 2008; Shane, 2009). The interview protocol for the study is exhibited in Appendix 2.

The researcher ensured that permission to use the audio recorder was granted by the respondent, prior to which the participant was asked to sign a consent form as evidenced in Appendix 1. Twenty six interviews were audio-recorded while four were not because the respondents were not comfortable having the interview recorded. In these cases, detailed notes were taken during the interview.

Data collection was done by the researcher, supported by a trained research assistant (RA). This provided an opportunity for discussion of the reflections that emerged during data collection as exhibited in the field notes (see sample in Appendix 5). The data were collected in the local language (Luganda) and were translated into English for analysis. The translations were not interpretive or aggregative but rather exposed the complexity in the lived experiences of all the respondents (Downing, 2005).

Both the researcher and the RA fluently speak and write English and Luganda. The initial translations and transcriptions were done by the RA, and were reviewed by the researcher. Where there was a case of inconsistency in meaning or translation, the two discussed the issue until an agreement was reached. Data were collected using interviews, observations, and archival records. The researcher spent four months in the field, observing all the activities of the sector in question, gaining an understanding of how players in the sector operate. Table 6 shows the time the researcher devoted to each case.

Table 6: Duration of data collection

Case	No. of site visits	Length of interviews (minutes)
Firm1	4	88
Firm 2	3	92
Firm 3	3	87
Firm 4	4	62
Firm 5	2	64
Firm 6	5	84
Firm 7	2	112
Firm 8	3	67

3.4.1 Semi-structured interviews

The study relied heavily on semi-structured interviews with the individual entrepreneurs (Steyaert, 2007b). Interviews are important because they are a tacit self-explanation of what has played out

in the originating actions (Hindle, 2010). They capture sequences, events and how things evolve locally among different actors (Hjorth, 2007).

At the start, the researcher established rapport, after which the semi-structured interview began. The researcher typically referenced the protocol to start a new line of discussion after a previous point had run its course. The questions were designed to prompt the entrepreneurs for more details, combining both open-ended and probing questions to capture experiences and clarify details.

The interview structure consisted of three primary sections. The first section asked for a description and background of the business and the entrepreneurs. Once sufficient trust had been established between the participant and the interviewer that is once the participant started to speak more freely and “open up” about his or her experiences. The second part of the interview explored strategies used in the entrepreneurial journey. It was guided by a need to understand resource mobilisation behaviour. This was motivated by Eisenhardt’s (1989a) argument that researchers can start with the research questions and a priori expectations based on the extant literature. Some questions were refined during the interviews in order to capture what the researcher had not anticipated at the time of developing the instrument (Gioia, Corley, & Hamilton, 2012; Yin, 2009) and in response to the natural flow of conversation. The focus was on the significant events, exchanges, thoughts, feelings, decisions, and motivations as experienced by the entrepreneur. Finally, the interview concluded with a discussion of bricolage in constrained environments, what the entrepreneur did when the environment changed, how they applied or still applied that behaviour, and how they felt about the future. This consistent structure for the interviews was used, but the researcher allowed flexibility to go with the flow of the conversation.

The mean time for the interviews with individual entrepreneurs was 60 minutes with one interview lasting as long as 2 hours. The interviews with supplemental respondents lasted between 15 and 25 minutes. This resulted in a total of 656 minutes of recording and 440 pages of transcription.

3.4.2 Observation

Interviews were conducted at the firm's premises allowing us to observe some of the behaviour (Guest, 2006). The researcher kept a personal diary to make notes before, during and after the interview. This included informal observations (Mulhall, 2003) and discussions not recorded as part of the interviews (Emerson, Fretz, Shaw, & Emerson, 1995). The field notes from the diary (see appendix 5) were used in data analysis and were coded to contribute to the understanding of the study (Bernard, 2011; Campbell, Quincy, Osserman, & Pedersen, 2013). With inspiration from the work of Mintzberg (1973) and Mueller, Volery, and von Siemens (2012) the researcher coupled the flexibility of open-ended observation with the discipline of seeking certain types of semi structured data which was useful in developing categories of activity.

3.4.3 Documentary Review

The interviews resulted in historical narratives, which were substantiated (McMullen & Shepherd, 2006) through corroborative inferences from supplemental data from other primary and secondary sources (see Appendix 6). These sources were for the purpose of triangulation to address concerns of recall bias or hindsight bias (Yin, 2003; Eisenhardt 1989a) and added to the richness of the data. The additional secondary data were from secondary outlets such as newspaper or media reports (Miles & Huberman, 1994) which were about the entrepreneurs and their firms' bricolage behaviour. Table 6 represents the variety of secondary data sources that were used for each case.

Table 7: Secondary documents reviewed in the study

Firm	Secondary Documents Reviewed			
	Registration documents	Invoices and receipts	Photos	Newspapers and media reports
1	NIL	√	√	NIL
2	√	√	√	√
3	NIL	NIL	NIL	NIL
4	NIL	√	NIL	NIL
5	√	√	NIL	NIL
6	√	NIL	√	NIL
7	√	√	√	√
8	NIL	NIL	NIL	NIL

3.5 Data analysis process

Hsieh & Shannon (2005) recommend the use of inductive content analysis because it provides knowledge and understanding of the phenomenon under study, especially for multiple case studies such as in this study. Inductive content analysis was also particularly adopted because it was felt to be a good tool to review bricolage in poor settings, for the following reasons: (a) it is ideal for exploring processes, enablers, and supporting factors for idiosyncratic and developing theories like bricolage which need conceptual clarifications and explanations (Elo & Kyngas, 2008); (b) it was complementary to the data collection procedures employed because it is crafted for dynamic and multi-layered data collection and analysis (Wasserman, Clair, & Wilson, 2009); (c) in that it provides an interpolation between prior theory and field data ((Elo & Kyngas, 2008); (d) as per Elo & Kyngas' (2008) findings, it can make replicable and valid inferences of data to their context; and (e) it provided a platform to objectively explore bricolage in poor settings by allowing for new

issues to emerge ((Bryant, 2003) and was thus a building block for constructing formal theory. The data analysis process continued throughout the research process (Miles & Huberman, 1984). The three phases of preparation, organising, and reporting, as described by Elo & Kyngas (2008), were used.

3.5.1 Data preparation

Data were prepared and organised into cases and transcribed by a trained research assistant after extensive discussion with the researcher. Transcriptions were checked for accuracy (Bradley et al., 2007) before sending them to participants for review and validation. This process potentially enhanced construct validity (Gibbert et al., 2008; Yin 2009). A sample of the translated transcripts were sent to two independent researchers, to translate them again. One researcher translated a sample of the transcripts back into the original language (Luganda) and the other re-translated the “new translations” back to English. The retranslated transcripts were compared to the original ones and the two versions did not significantly differ. Refer to Appendix 8 for an endorsement from an experienced translator. This confirms that meaning was not lost in translation.

Data were backed up using external devices and Dropbox to maintain secure and online copies of the work, in case of any unforeseen challenges.

3.5.2 Coding and categorisation of data

Coding was done carefully, taking into account the subsequent influence on the conceptualisation and explanation-building processes (Guest, 2006). Labels were appended to data segments explaining what the segments meant (Bryant, 2003). The transcripts were read more than once to ensure proper codes were assigned (Saldana, 2009). Data were coded using ATLAS ti., a computer-aided qualitative data analysis software programme called CAQDAS (See Appendix 7-

Copy bundle). Using CAQDAS is fast and facilitates more complex coding and therefore has potential to improve the quality of data analysis (Basit, 2003). Richards and Richards (1995) posit that using software in data analysis adds rigour to qualitative research, with functions such as search helping to find evidence about how relationships were established between the cases. It also permitted a larger number of codes to be included than is possible manually. It further offered a variety of analytical tools such as memo-ing, network views, and co-occurrence tables (see Appendix 4).

Data were analysed inductively using the coding steps shown in Figure 1. The process involved identifying patterns Langley (1999) and conceptualising events (Gioia et al., 2012).

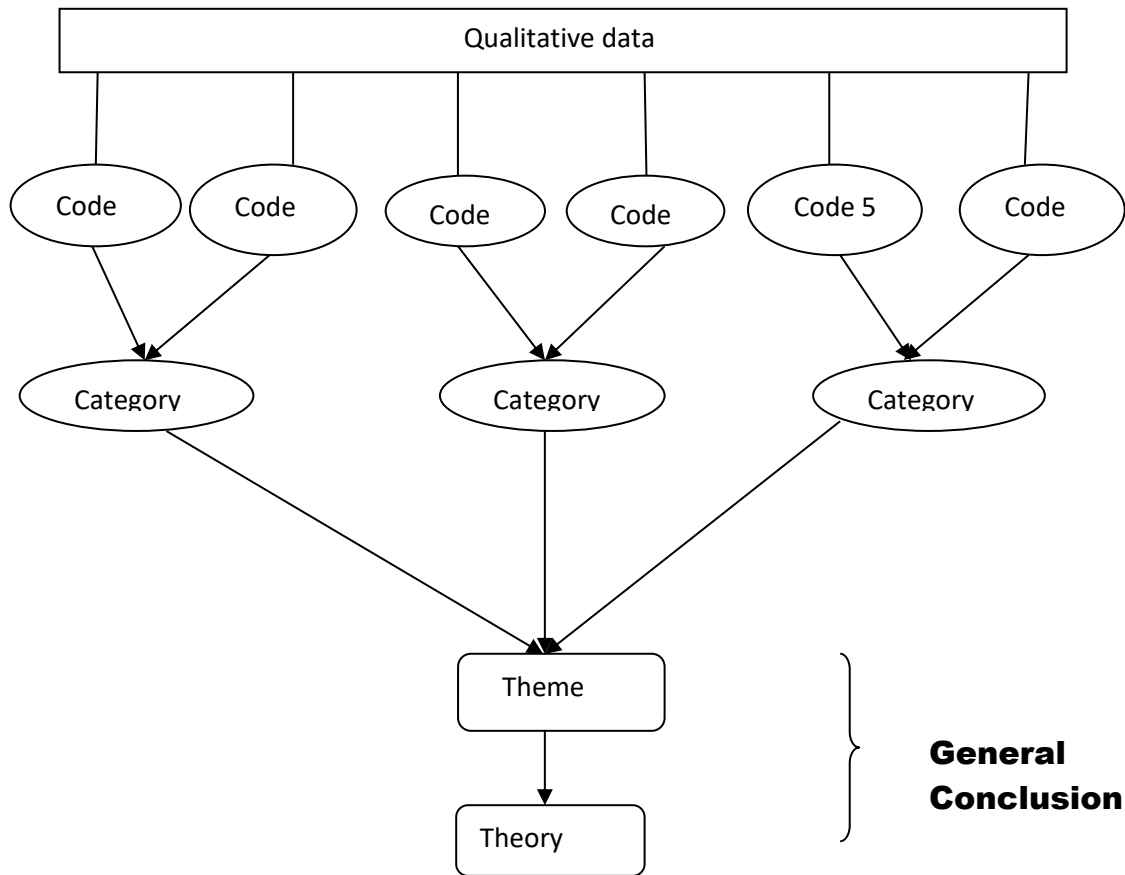


Figure 1: Data coding process

Source: Adapted from (Denscombe, 2010: p 286).

3.5.2.1 Open coding

Following the multiple case study method, a case was built around each firm and then compared to other groups of cases to allow a conceptual framework to emerge (Eisenhardt, 1989a; Yin, 2003). Data were allocated into case files. The data were then coded based on important categories (or nodes). In open coding, codes and headings were developed while reading the transcripts. The text was read repeatedly, so that as many codes as necessary were created to describe all aspects (Hsieh & Shannon, 2005). The first few data codes were developed by just noticing, listening to

and collecting data Friese (2014) and were mainly descriptive. There was no sorting or structuring at this stage. This made it possible to evaluate if the previously defined codes were fitting.

Codes were added until the cases' content was well presented by the set of nodes. The rate at which new codes were created declined as the coding progressed (i.e., saturation was reached, as can be seen in Figure 2). Figure 2 shows that up to half of the quotes were created in the first period of coding and only 5% were coded in the last period. Codes were kept close to the terms they represented (Miles & Huberman, 1984). This study had a total of 95 codes (See appendix 4) which was sufficient, falling within the recommended number of 80-100 codes (Saldana, 2009).

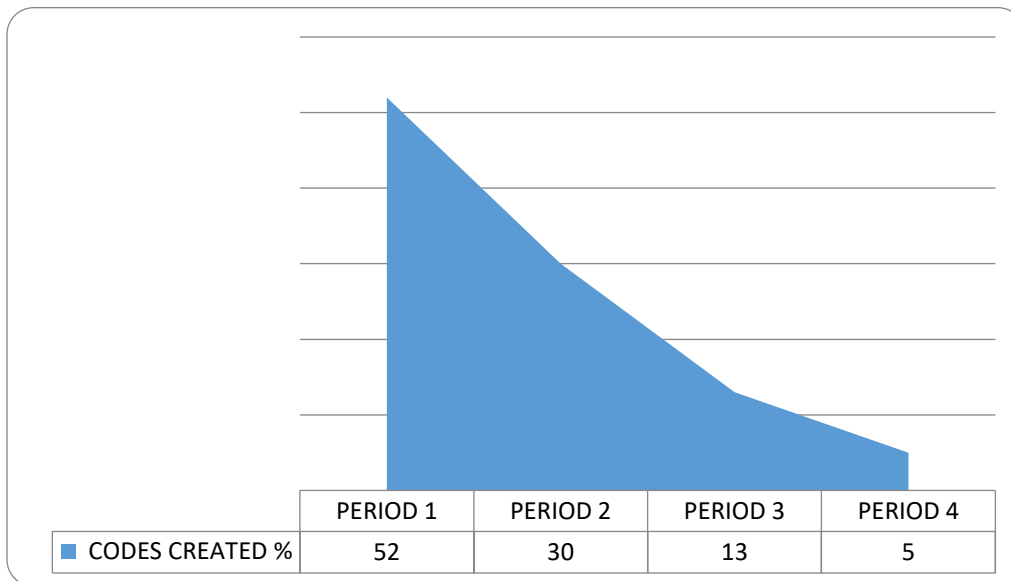


Figure 2: Saturation as evidenced by the coding process

Saturation was achieved when no new codes were being created, at that point up to 95 codes had been created.

3.5.2.2 Categorisation of data

The codes were reviewed and structure was added to them by adding prefixes, or renaming them using more conceptual and abstract terms. In some cases descriptive labels were merged. The generated list of sub-categories was grouped under higher order headings so that the list collapsed into similar or dissimilar broader categories of higher order. This was done carefully so that the groupings contained data that belonged to a particular issue or subject and could enable comparisons with other cases. A type of code label was developed by comparing data segments that were similar and adopting an appropriate name to suit the segments (Friese, 2014).

Each sub-category was named to reflect the collective of the codes in that category. Then sub-categories with similar events were grouped together to create categories which were eventually grouped to make main categories. This enabled analysis to move from a descriptive to a conceptual level and over time, to theoretical levels (Campbell et al., 2013).

Some categories were named based on constructs drawn from bricolage theory and other literature. These constructs guided the coding but did not constrain it. There was iteration between coding and data analysis. Therefore codes such as community embeddedness, and adaptive persistence were motivated by previous literature and were based on the firms' role in the external environment. Codes such as making do, using resources at hand, and recombining resources were from bricolage literature, and were supplemented by scavenging, buttressing and refining. These are based on internal behaviours of the firm. The contents of each category were compared with each case to develop themes (Gioia et al., 2012). Please refer to code list appendix 4

3.5.2.3 Theme Abstraction

Themes are embracing concepts or statements about a subject of inquiry (Langley, 1999; Miles & Huberman, 1984). In this study, they were developed through careful analysis of the patterns in the data and were abstracted from the categories after cases were compared (Saldana, 2009). In later stages, they were refined for thoroughness and completeness. The themes were developed based on the consideration that they could adequately handle and utilise the data.

In the 1st order coding, there was a high inclination to adhere to the respondents' terms with minimal attempt to distill codes. A large number of codes were exploded early in the study. As the study progressed, I started seeking similarities and differences among many of the codes. Related to axial coding. This therefore reduced the codes to a manageable number. It is then that the codes are given a phrasal descriptor or label, with high preference to maintain the respondents' phrases. The 2nd order theme was largely in the theoretical realm, I was querying whether the emerging themes were suggestive of concepts that would help describe and explain bricolage behaviour. Gioia, Corley and Hamilton (2012) argue that when an array of codes is before the researcher, they can or should assume the role of a knowledgeable agent, so that they can integrate the respondent terms with more abstract 2nd order theoretical level themes.

I focused on emerging concepts that were not common in existing literature, such as re-coursing, thriftiness and enlightenment or those that were significant because of their relevance to bricolage such as ad-hocery, interconnecting, experimentation, resilience and self-elicitation. These were further distilled into aggregate dimensions. This provided the basis for building a data structure. The data structure provides a graphic representation of how I progressed from raw data to codes to themes in conducting the analysis, a key component in demonstrating rigour in qualitative research (Pratt, 2008; Tracy 2010). This is illustrated in Figure 19 in Chapter 12.

A total of 4 themes were derived from the data. These are sufficient because they are still within the recommended number of 15 themes (Saldana, 2009). Generalising from the themes later resulted into theoretical propositions (Gioia et al., 2012; Pratt, 2009), based on the frameworks developed.

3.6 Presentation of case descriptions

It has been well documented that presenting cases study research is difficult (Gibbert et al., 2008; Miles & Huberman, 1984;Yin, 2009) and there is no boilerplate (Pratt, 2009). Therefore creativity without compromising quality is recommended for such work (Bansal & Corley, 2012, 2011). While some scholars have suggested ways of presenting such work (Eisenhardt, 1989a);Gioia et al., 2012;Langley, 1999;Langley, Smallman, Tsoukas, &Van deVen, 2013; Miles & Huberman, 1984), there is still more that can be done to illuminate rich data from inductive case studies. Therefore this study adopted a clear and coherent analysis adopting strategies from different scholars. The results are presented in sequenced structure, where each individual case is presented first, followed by cross-case analysis (Miles & Huberman, 1984;Yin, 2009).The work was purposed for development of a theoretical framework (Eisenhardt, 1989a; Gioia et al., 2012).

Using such a structure was useful to illuminate significant issues in each case (Ponterotto, 2006) and added analytical rigour by demonstrating evidence across cases (Corley & Gioia, 2011).The within-case analysis is based on categories and terms that are central to the firm, while the cross-case analysis is organised according to the themes that emerged from the data coding process (Charmaz, 2013; Denis, Langley, & Rouleau, 2007).

Both presentations summarise the study evidence. The within-case presentation is enhanced by photographs to portray the varying contexts, while the cross-case presentation is enhanced by tables or figures which are visual aids to presenting the data. The presentation strategy is briefly discussed, starting with individual (within) case and ending with the cross-case analysis.

3.6.1 Within-Case Analysis

Analysis of individual cases is presented in chapters 4 through 11. The analysis portrays the issues emerging in each firm's bricolage behaviour throughout the entrepreneurship journey, highlighting nuances at distinct phases. The respondents' voices are given prominence in building of sections (Corley & Gioia, 2011; Eisenhardt, 1989a; Pratt 2009) so that contextual dependent attributes are exposed (Easterby-Smith, Golden-Biddle, & Locke, 2008). Additionally photographs are used to add to the visual impression of the context within which each firm operates.

Based on the analysis of the data generated from the participating cases, the results are presented using five sections, namely: situation and context; entrepreneur's bricolage strategies; firm's development and bricolage behaviour; response to environmental changes; and summary of the case. The first section describes the setting of the firm, the second describes how the entrepreneur engages in bricolage behaviour, the third describes how the firm manifest bricolage behaviour and coping strategies it adopts when developing, the fourth describes the activities, technologies, procedures or plans that the firm uses when there's change in the environment and the final one summarises the case. Excerpts from the raw data are used to support the sections in order to ensure that the interpretation remains grounded in the data (Fereday & Muir-Cochrane, 2006). These sections informed the overall themes in the cross-case analysis as evidenced by Table 8 and Figures 19 in Chapter 12.

3.6.2 Cross-case Analysis

All eight cases were synthesized into themes that displayed similarities and contradictions between cases as shown in Chapter 12. They were derived from a critical comparison of the cases (Eisenhardt & Graebner, 2007; Yin, 2009). The analysis is a mix of sense making strategies including: (a) narrative strategy ((Gartner, 2007), (see chapters 4-11), (b) visual mapping ((Denzin & Lincoln, 1994) See figures 19 in Chapter 12, (c) temporal bracketing (Langley, 1999) (see table 8 in chapter 12); and (d) data structure (Gioia et al., 2012). See figure 19. This helped to address the multi-layered research questions that involved both spatial and temporal dimensions. Using the Gioian method of data structure, data were configured into sense-making visual aids and graphic evidence of the progression from raw data to categories to themes. This demonstrated rigour in qualitative research (Chenail, 2011; Gioia et al., 2012; Pratt, 2009). (See figure 19 in chapter 12).

3.7 Theory development process

A theory is a set of ideas that attempts to explain something (Corley & Gioia, 2011). These ideas are generally modifiable propositions that explain, predict, and interpret events or phenomena of interest (Bradley et al., 2007; Corley & Gioia, 2011). In this study, the researcher sought to extend bricolage theory by explaining how it manifests in the entrepreneurship process when the external environment is extremely poor. It presents an explanation of the relationship of constructs in a multi-layered context (Chenail, 2011; Denis et al., 2007; Easterby-Smith, Golden-Biddle, & Locke, 2008) and was guided by Eisenhardt's (1989a) approach to theory development using case studies.

An essential feature of the theory development process is the comparison of the unfolding literature with the extant literature. While literature served to confirm similarities in concepts, the divergent themes deepened insights into the emergent theory (Morse, 2004). There was focus on "nascent

concepts that did not seem to have adequate theoretical referents in the existing literature” (Gioia et al., 2012, p. 20).

3.8 Validity and reliability

Traditionally, constructs are tested for reliability and validity, however, in reviewing process constructs, there are no established procedures or tests (Pentland, 1999). However, given that this study used case studies, it adopted logical validity by linking empirical patterns with those of other contexts (Eisenhardt, 1989a). While interviews are a crucial source of insights, they are subject to bias (Yin, 1981). Therefore, the interview evidence was triangulated with multiple data sources such as archival records, photographs, observational field notes, news clips, and other documentation obtained from the firms (Parkhe, 1993). Additional interviews helped in gaining insights from multiple perspectives (Gibbert et al., 2008). These are a valid set of measures that signify construct validity (Denzin & Lincoln, 2005).

3.8.1 External validity: Validation

Validation was adopted as a process and not an outcome (Leitch, Hill, Harrison, 2010) to track the rigour adopted in the study (Short et al., 2010). During the analysis of the data, code definitions were written describing the meaning of the code and how it should be applied to the data refer to Code list in Appendix 4. Where necessary, an example of a typical data segment coded within the code was used. The coding system reflects the research questions and the aim of the study. It therefore contains data content, layout, language used, and aspects of time evaluations, level of importance and degree of expression among other things. Document families were created at different stages of the coding process. The document families were useful for classification and abstraction in the analysis and consequently helped in creating meaning.

3.8.1.1 Memo-ing

Memo-ing was done throughout the data collection and analysis process. Up to 48 memos were created refer to appendix 9. This helped the researcher to clarify, highlight, and explain issues that were useful for analysis. Memo-ing prompts data analysis and increases the level of abstraction of analytical ideas (Montgomery & Bailey, 2007). Both analytical and theoretical memos were written during the coding. The memos have titles and types and direction is from memo to quotation.

3.8.1.2 Querying the data

After the initial coding stages the research question memos started playing a role. Initially, descriptions were written down and later interpretations or ideas for further queries were jotted down. Using the query tool in Atlas ti, queries were checked/ verified against the various filters that were created in the data set. This helped in querying the data further and thus helped in creating meaning as well as ensuring clarity of emerging concepts.

3.8.2 Reliability

Reliability of the study is determined by the truth value, applicability, consistency, and neutrality (Seale, 1999) and detailed documentation of the case study protocol (Gibbert et al., 2008).

The cases for this study were selected because they were typically engaged in bricolage behaviour. The first two firms selected showed signs of advancement and provided insight into bricolage behaviour and firm advancement. This inspired the decision to select two other polar opposite cases, in other words, firms that displayed bricolage behaviour but were not advancing. Yin (2009; 1981) argues that maximum variation is useful in ruling out any other explanation for the phenomenon being observed. After the first four cases, the next four cases were selected to replicate the previous cases as a way of addressing the theoretical gap that had been identified (Maxwell, 1992; Morse, Barrett, Mayan, Olson, & Spiers, 2002).

3.9 Ethical considerations

The respondents were protected from harm throughout the research process by the researcher adhering to the principles of good ethical conduct as defined by the University of Pretoria's Gordon Institute of Business Science Research Ethics Committee (Non-Medical). Research Ethics Committee approval was granted for the study and the Ethics Clearance Certificate granted (See Appendix 3). The principle of voluntary participation based on informed consent was applied (Denscombe, 2010). The study purpose and how the information was to be used were explained to the participants who were also assured of anonymity and confidentiality. This gave the participants the opportunity to give informed consent about participating in the study and having the interview audio-recorded. The participants were also asked to sign the formal consent form (See Appendix 1).

3.10 Summary

The study was purposed to understand bricolage behaviour when the external environment is extremely constrained. Inspired by the interpretivist research paradigm, the researcher used multiple case study design to select eight firms displaying bricolage behaviour, operating in the fabrication sector. The firm was the unit of analysis, and the entrepreneur was the primary respondent. In this explanation building study, a qualitative methodology was appropriate (Creswell, 2012; Edmondson & Mcmanus, 2007; Eisenhardt, 1989a). Through purposive sampling, data was collected mainly from semi-structured interviews supplemented by observation and document review. The data collection process was supported by an interview protocol and all ethical considerations were followed during the field work. After the main interview, data were triangulated to at least two other respondents totalling up to 30 interviews. This was to ensure reliability of the data. The researcher also kept a detailed trail of all activities

through field notes and memos to enhance validity of the study. The data was inductively analysed using ATLAS ti. and later presented using matrices, tables and data structures. The findings for each case are presented separately in Chapters 4 through 11 that form Part 2 of this thesis.

PART 2: Within-Case Analysis

4.0 Introduction

The previous part comprised of the introduction, literature review and the methodology adopted to conduct the study. It showed the existing gap in the theory and the methodologies adopted to address the gap. It displays reliability and validity considerations undertaken during data collection. It further shows how data was organized and analysed using Atlas ti. It was from this analysis that elaborations and patterns of bricolage behaviour in constrained environments were created.

This section of the dissertation consists of eight chapters, each focusing on a case-an established firm that displayed bricolage behaviour, selected as described in chapter 3 of this document. The cases are presented based on data analysis and research evidence highlighting verbatim quotes from the interviews. They are organised under the following sections:(a) Situation and context, which describes the setting of the firm;(b) The entrepreneur's bricolage strategies, which describes how the entrepreneur makes do with his limited resources;(c) The firm's development and bricolage behaviour, which describes how when the firm is developing, makes do, or recombines resources to exploit new opportunities; (d) Response to environmental changes, which describes the activities, technologies, procedures or plans that the firm uses when there are changes in the environment; and (e) Summary of the case. This part of the dissertation ends with a conclusion, summarising the data that relates to the bricolage behaviour of small established firms operating in extremely constrained environments.

Chapter 4: Lule Metalworks -Firm 1

4.1 Situation and context

Lule Metalworks is located in Mperwrewe, a town towards the north of Kampala, the capital city of Uganda. It is a developing town with a large population of low income households.

Lule Crespo is the owner of the eponymous workshop, which is on a peripheral road off a main thoroughfare. The neighbourhood has many homes and several small grocery shops. The workshop makes windows, door, beds, and other home furnishings. This outdoor workshop is home-based.

At the scene, on the day of the first visit, five of his employees are working. Lule is dressed in overalls. He dusts himself off and hands the machine he was using to one of his employees before he talks to us.



Figure 3: Lule's employees finishing off their work at the workshop. Photo by candidate

Adjacent to the compound where the workshop is situated, is Lule's wife's grocery shop. A few feet to the right are bricks he is making to expand his home.

Lule is calm and attentive to everything we say. He is animated as he narrates his entrepreneurship journey. He sounds content and proud of his trade. Several passers-by wave at him, and call him by name a sign that he is well-known in the community. The workshop has a store where all the machines and other cut-offs or scrap material is kept. It is a messy place, but Lule claims he knows everything in it.



Figure 4: Lule's store for machines and scrap metal. Photo by candidate

At intervals, Lule stops the interview to check on the progress of work. There's little conversation between employees, all the noise is from bellowing machines and voices of children playing in the

neighbourhood. The employees do not wear any protective gear apart from sun glasses that shield them from the sparks of the welding metal.

4.2 The entrepreneur's bricolage strategies

Lule Crespo's mother was financially distressed and could not afford to further his education. After his O levels, she introduced him to a man in her local church, who recommended him for work at his brother in law's company-Stealex. It was a big metal fabrication company that specialised in medical and hospital equipment. He worked there for four years and was trained in making beds, bedside lockers, and other hospital equipment. It was during this employment that he saved to buy his first welding machine. In 1992, he partnered with a colleague to set up their own fabrication business.

At that time, Mr. Mugalu died, and things were not going on well. So we started our own business. With the knowledge I had got I bought a machine and started doing what we are doing now: windows and stuff. P35: Case 1 Entrepreneur.rtf - 35:6

Their business stayed small and returns were minimal. After four years, he went to look for a job, but his efforts were futile.

I'm proud of Mr. Kulubya - he really helped me. While I worked at the roadside, things got so tough and I got tired of metal works. I approached him and told him I was fed up of being a metal fabricator and I asked him to give me a job to be a driver because I knew how to drive, but he refused to employ me. He told me that, "If you don't have the materials to use or somewhere to work from, I will give you that but I will not employ you." I was not happy with what he told me and at that time I was very disappointed. P35: Case 1 Entrepreneur.rtf - 35:43

Shortly after that experience, a builder friend of Lule was finishing off a house site and asked Lule to join him so that he could fabricate the doors and windows for that site. He then took his machine to the site and began working. When his family and friends realised that he had persisted in fabrication, they provided him with ongoing support. To-date, one of his cousins is his biggest

customer. Whilst his business was still new and had no employees, Lule worked with his wife. She helped by carrying metal. Now his children also participate in the business even if in minor ways

... in this business of welding I don't do any major things. But I support them. For example I varnish the windows, smoothen the work in progress, I also cut the materials into the required measurements and sometimes, I also go to building sites and take measurements for windows, doors etc. That's part of what I do. P32: Case 1 Employee-son.rtf - 32:2

4.3 The firm's development and bricolage behaviour

When he started his business in 1996, all Lule needed was knowledge and a machine. In fact he argues that the most useful resource is knowledge.

Our business is different from other businesses like selling matooke or cement it is about knowing what you are doing. Wherever I go, be it Kenya, I know what to do even if you keep your materials for a year you will still use them, a welding machine can last for 10 – 15 years without getting spoilt but cement can get spoilt by water. P35: Case 1 Entrepreneur.rtf - 35:68

This business' bricolage behaviour is haphazard in nature. At a certain time, the proprietor decided to start another business, a grinding mill. The proceeds for the grinding mill were very helpful in maintaining liquidity in the metal fabrication business, even though the funds that started it were from the fabrication business.

It was helping me. From this welding business, I managed to buy the grinding machine as my second business. It used to make a lot of money. The grinding machine would make more money than this business. I would get the money from the grinding machine to buy materials for welding, pay school fees for my children. P35: Case 1 Entrepreneur.rtf - 35:23

His model has been to use his customers to create more customers.

Moreover, I do not have a display, most of my customers who come know me from the good work I have done for others. Another thing that has helped me is being honest with my customers. P35: Case 1 Entrepreneur.rtf - 35:17.

He further mentions a friend who continued to invite him to supply doors, windows, gates and other house equipment at all the sites he worked on.

...there was a house he was building nearby and gave me many jobs. He knew many Ugandans living in the Diaspora in America and would bring all their metal work needs to me. Moreover, in most cases, people who bring customers ask for commission but he did not...P35: Case 1 Entrepreneur.rtf - 35:57

He explains that business has transitioned over time. He had no employees at the start but he now employs five others. He started working with unskilled apprentices who eventually become his employees. In a bid to reduce the costs of hiring additional staff, Lule also built a house for his employees. The house is in walking distance from the workshop. This helps when the staff have to put in long working hours to meet the work demands in busy seasons.

It helps a lot, because I do not incur transport costs, when getting to work. Also anytime I'm needed at work I'm available. P34: Case 1 Employee.rtf - 34:25

The business has very good relationships with suppliers. It has a trade credit facility, which enables Lule to carry out many of his tasks without having the funds to pay for them. He clarifies that a lot of this happens because his suppliers trust him. This is reiterated by one of his biggest suppliers.

Since we have been together for long and we both trust each other, when he comes I can give him and he takes them. It is only that we write somewhere to show that he has taken on credit so even if he is not there I can claim my money. P106: Case 1 Supplier.rtf - 106:5

4. 4 Response to environmental changes

Lule says proudly that his business has grown. He values his business - based on the equipment and machines he has – at approximately UGX 10 million. (1 USD= 2,610 UGX as of August 2014, the time the interview was conducted). He considers this to be significant growth compared to when he started with one machine that cost him UGX 200,000/= . He further highlights the growth in relation to some of his personal achievements.

Lule's business is not registered. However, he has plans to register it. The lack of registration once cost him because a customer didn't pay and he could not sue. In another situation, when he realised

it was restricting his operations he asked a friend who owned a company to let him use his documents.

... I worked on a very big order of his employer. They told me they will pay by cheque, so I asked a friend of mine to give me his company invoice and information so that they would pay me through his company. P35: Case 1 Entrepreneur.rtf - 35:80

He confesses that most of his work or transactions are not written down. He however, prepare invoices for his customers and issues receipts when they make payment.

...he writes somewhere but when it is not an official receipt he has a book that he looks at and knows that this amount is left but not a receipt. Accounting is not in his line. P105: Case 1 Customer.rtf - 105:33

He comments that there have been changes within the business environment. He explains that the earlier years of the business were better because the cost of doing business was lower. Today, the environment is harsh. Competitors choose to use cheap material and so offer lower prices that appeal to most customers. Despite all this, he opts to maintain producing quality products for his customers.

I work for people I know. When they give me a job I charge them considering the good material I am going to use. If we fail to agree, I do not do that job. You will find that people make things from different materials and they look alike". P35: Case 1 Entrepreneur.rtf - 35:93

One way he has managed to cope with the changing circumstances of scarcity is that he only starts working if he has received a deposit, something he did not do previously. In future, he plans to buy more specialised equipment, such as a roover making machine. This equipment will ease his work load and will increase his sales as this machine is scarce and what it does is needed by almost every client making windows.

4.5 Summary of Lule Metalworks

Lule Metalworks is a first-generation family business that was started in 1996. It is located in a low income neighbourhood. This fabrication firm specialises in making windows, doors, beds, and other house equipment. The owner of the firm is respected in the neighbourhood because he makes products for a targeted group of customers who seek timely delivery of quality products.

Lule Metalworks' entrepreneurial journey is rather gradual. The business moved from the starting phase, crept into the surviving phase and is now in the growing phase. A number of tangible and intangible resources have remained crucial for the firm at the different phases. In Lule Metalworks, the most useful resource is knowledge and skills, family, customer and supplier networks. The firm displays bricolage behaviour by making do, where it uses local and minimal knowledge and skills to make products and by using resources at hand, where it engages the various networks such as family, customers and suppliers.

Lule Metalworks is growing, with an increase in machinery, and sales. Despite an influx of competition and substandard material, the firm insists on producing quality products. The firm is cognisant of the customers' constraints and it responds by allowing them to make partial payments on their orders. It now has several customers and is respected in its local community.

Chapter 5: Musa Body Machinery- Firm 2

5.1 Situation and context

Musa Body Machinery is a second-generation family business that was started in 1957. It is located in downtown central Kampala, which is a hub for informal activity. In Katwe, the majority of businesses use manual technologies, employ youthful labourers, and operate in temporary shelters or open spaces. This particular company occupies basic premises even though it is considered superior by others in the neighbourhood.

The front office doubles as a show room and administration office. On the right-hand side of the room is a small space of about 150 square feet, where two desks are aligned to adjacent walls. The owner and manager use this space. The two walls in that space are decorated with the company certificate of registration, a company calendar with pictures of their products, a portrait of the President of Uganda, and of the Kabaka (king) of Buganda. Memorabilia are neatly hung up at different corners of this well utilised small space. The gallery includes meritorious accolades and trophies from the Uganda Manufacturers' Association and photos of the proprietor shaking hands with the president of Uganda, and the current owner receiving a Young Achiever's Award.



Figure 5: A section of the office, where accolades, memorabilia and awards are displayed. Photo by candidate

The showroom has ample space for a generous display of the variety of machines and equipment for sale. Heavy duty agro-processing machinery is at the entrance and fills up much of the space, while the light-duty machinery, typically home appliances such as dough mixers, nut grinders, and pop-corn makers, are scattered between these displays or placed on shelves bordering the office space.

The machines vary from manual to electronic. The equipment is not packed in boxes or containers and no user manuals or machine specifications are attached to the products. Instructions are recited by the sales person. Therefore, a potential customer will spend approximately 45 minutes getting operational instructions on how to use the product they have purchased.

The machines are neatly branded with stickers that specify ‘Musa Body Machinery’. This is more advanced than what is ordinarily seen and expected of fabricators in Uganda.

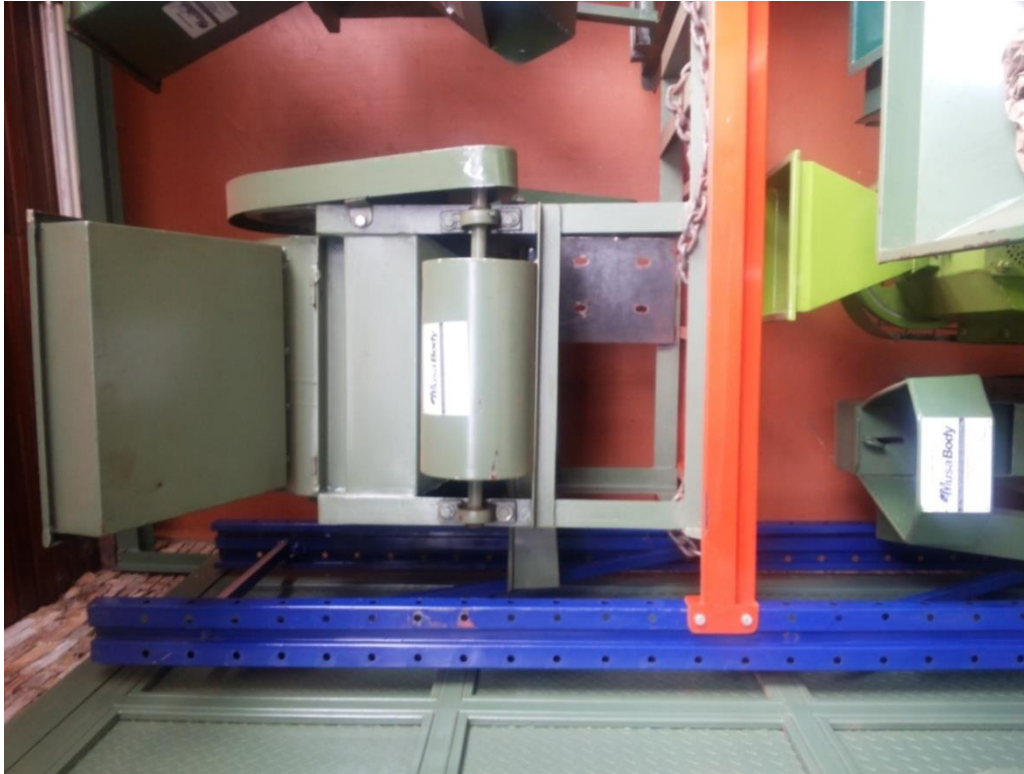


Figure 6: A neatly painted and sticker labelled maize huller made by Musa Body Machinery on display in the show room. The green paint identifies locally made products. Photo by candidate

The fabrication work takes place in the back office. The workshop is basic and only differs from other workshops in the area because of the high technology machines that are being used. The employees work with minimal safety or hazard protection gear. They loudly chat to each other and show little recognition of anyone who walks into the premises.



Figure 7: A high technology bending machine that was purchased by Musa Body Machinery. The machine is used to bend metal into different shapes and designs. Photo by candidate

5.2 The entrepreneur's bricolage strategies

Hadad was very close to his late father Haji Musa Wakiibi. He boasts of being the child with whom their father spent the most time. He paints a flowery image of how that exposed him to entrepreneurship and hard work early in life.

... I am the only kid who grew up with our father. My mother left me when I was 3 or 4 years so I had no mother up to age 6 years when he got another wife. None of my brothers or sisters grew up with my father. He was not an easy man, he was tough while you were with him. You would be working very hard. So, when your mother left our father you would prefer staying with your mother because you would feel more comfortable. I grew up knowing my father's character and his needs. P4: Case 2 Entrepreneur.rtf - 4:61

Conversely, he narrates the pain and torture he experienced during that stage in his life when one of his father's many wives attempted to poison him.

Hadad and his brothers were trained by their father. They learnt fabrication during school holidays and long vacations. Hadad accumulated savings from that apprenticeship experience. It is then that he set up his own business, Hadad Services Limited, a firm that installs telecommunication masts. From then on, he started several other businesses including a hotel.

Shortly after that, his father died and his business began collapsing. Hadad, with permission from his siblings, took over the leadership of the family business. He boasts that his leadership and ownership of the company was predestined by God. It is very evident that Hadad is religious. He was observed several times displaying religious acts such as greeting his callers with “sallum alek”, rushing to the mosque to pray and explaining to those waiting to see him that he was still praying.

As the new owner of the business, Hadad still uses his family as a support system even though he feels that the family has been a big distraction to the business. His various male siblings are all working near the company as independent small-scale fabricators. Although they are part owners of Musa Body Machinery, they are not part of the management because they failed to meet the company’s new requirements such as depositing all cash to the company cashier.

However, there is an implicit partnership. The siblings trade with the company name, sometimes they bring institutional customers to the company, and therefore co-finance an order. Moreover, when the need arises, the company subcontracts the brothers to work on pending assignments.

5.3 The firm's development and bricolage behaviour

The company stagnated in a start-up phase for almost three decades before it progressed to surviving phase and eventually leaped to growth. During this journey, both tangible and intangible resources were important. The company uses diverse strategies to gather and organise resources.

Location is a pivotal resource of Musa Body Machinery. It resides in a well-known fabrication community and adopts more sophisticated technologies than others. Musa Body is an iconic brand of Katwe, to many it is a local brand that displays the intelligence of the indigenous Ugandan.

This gives it a competitive edge. Throughout the different phases that this company has been through, scrap and other material has been re-moulded or recombined to make products, with many of the products produced in the company being made by recombining different parts.

Further still, the company has a thick network of customers and suppliers. There is a complex friendship underlying these relationships. It is highly informal, nurtured by regular interaction.

What helps me in this business is one. There is nothing I need especially if it is in a small quantity - not big quantity stuff - that I can fail to get. It's always just a phone call away. As Musa Body I ask them to supply and they will bring what I have asked for. Suppliers of materials are the same. I can talk to them, even those Chinese who bring Engines.P4: Case 2 Entrepreneur.rtf - 4:45

The close relationship with customers has helped improve products and services. As the needs of the customers vary, Hadad uses customers as an avenue to learn about improving his trade.

In the earlier years the company got a loan facility to finance the purchase of machines. Unfortunately, the machines did not work as anticipated. The firm defaulted on the loan and almost collapsed.

...the machines worked for only one year and then broke down. He wrote to the bank complaining about the machines and they told him, their records showed that he had signed for the machines and the rest was not their problem. Clearly, this is a man who was not helped and there was no honesty in the deal, he was also ignorant P4: Case 2 Entrepreneur.rtf - 4:95

When the company was secure once again after the setback, Hadad changed the staff recruitment policy, and relieved the permanent staff of their duties. He now hires them with no written commitments, as they are contracted to work on specific tasks and are paid thereafter.

The way we operate is In past years we had permanent workers, which is not the case now - why? We don't usually get business for fabrication but when we do get business for fabrication, we get contract people we pay on a piece work basis. We call them only when we have job orders. P1: Case 2 Employee1.doc - 1:48

Previously, the company survived by recruiting inexperienced youths from the family to work as apprentices in the workshop. They all learnt fabrication on the job. After a recent purchase of modern equipment, the company now recruits competent and skilled apprentices. This has increased efficiency and reduced spoilage.

The challenge was most of these machines you have seen on the other side are modernised and there was no one in the family who knew how to operate them because we all were seeing them for the first time. I even tried to take one of my brothers to where I had bought them so that they can train him, but by the time he came back, he had forgotten what he had learnt. You know some of them are not educated. There is a very good training institution, called Nakawa Vocational Training Institute, the Japanese gave this institution machines similar to those ones you saw. The students there are trained on how to use such machines. So, I brought them. Those are the ones that you have seen and are not family members, I got them from this Institute. P4: Case 2 Entrepreneur.rtf - 4:22

The entrepreneur owns a portfolio of businesses. When resources are needed urgently, the company gets financed from the entrepreneur's other businesses. The operation is such that funds from all the other businesses are pooled together and managed by one manager. The administrative manager of Musa Body Machinery is the "The Manager" who co-ordinates the activities of the different enterprises.

I solve it with Twins Investment but it affects Twins Investment because it has its own work and here you are diverting its capital to do Musa Body work, at the end of the day you are disorganising it. For example, right now you found me telling Esther to call the other companies to lend us UGX 20M to work on an order from NAADs. They made a huge order that we need to supply even though we know they have their own activities. We are struggling to see how we can solve it” P4: Case 2 Entrepreneur.rtf - 4:33

5. 4 Response to environmental changes

Musa Body Machinery has grown. It has institutional customers that pay more money for their products and increase the sales turnover. In the past, monthly sales ranged from UGX 3 to 4 million and today they range from UGX 40 -42 Million. It has international customers. Moreover, it is now using more modern technologies to make its products, with an increase in the stock of equipment. It also imports some of these products and re-moulds them to suit its customers' demands. It currently employs up to five permanent employees and hires up to 15 part-time employees depending on the work load.

In 2013, the company was registered. The company has benefited from registration because it can now engage with larger corporations that often buy in bulk and pay higher prices than the locals.

It is because he could not handle it. This company had a lot of opportunity before they incorporated it. Many people used to come to bring job orders but these guys were missing all the opportunities. That's how Hadad got the idea of registering the company. Even foreigners had come to partner with this business at one time, but they lost all the chances because the company was not incorporated. P1: Case 2 Employee1.doc - 1:43

Hadad says the company faces hardships working in the Ugandan business environment, citing weak policies such as tax exemption to foreign firms and high energy charges that escalate production costs and expose his company to unfair competition. Despite this being a deterrent to many local companies, he has forged strategic alliances with other players in the market. He now

uses some of their products to finish his. He even has a trade credit facility with them so that operations are less interrupted by a lack of cash.

In most cases we bring them when they are not complete. We import parts because some of these parts, if they are made from here they will be poor quality. For example, there is that machine that mixes dough for cakes etc. The pan made here will not have a good finishing, but the Chinese pan will have a good finishing so we import the pan and its handles, then join it. P1: Case 2 Employee1.doc - 1:12

As Hadad grows the company, he adopts a creative or innovative business model to retain customers. This is clearly an outcome of his experiences when he studied abroad, having been exposed to settings where customers had a higher standard of expectations.

The company is actively seeking recognition in society. It participated in the 2014 Uganda Manufacturers' Association Trade Exhibition and was awarded a trophy for best display in the fabrication sector. The owner was awarded the 2012 Young Achiever's award, an award given to young entrepreneurs who are making a difference in society. He interacts closely with the youth in the community. He makes a continuous effort to contribute to this community and he plans to start a vocational training institute in future. The company is respected in the community.

...my father had an interest in training youth since this is a "ghetto area". He wanted to train young people so that he could give them a skill. P4: Case 2 Entrepreneur.rtf - 4:68

The company is gradually internationalising. It now has customers living outside Uganda, especially in the Democratic Republic of Congo and South Sudan. When Musa Body Machinery realised that the local market was getting saturated or could not afford to pay more for the products, it changed focus to tap into other markets.

Yes, there is a lot of potential in the business. I now even have customers from outside the country like Sudan and Congo. These days there are few from Sudan because of the war but I have some from Congo and when they give me job orders,

it may not be many pieces but I earn a big profit from them because they are willing to pay more than the Ugandan customers. P 4: Case 2 Entrepreneur.rtf - 4:72

5. 5 Summary of Musa Body Machinery

Musa Body is a second-generation family business that was started in 1957. It is located in a largely informal neighbourhood. Unlike many of its neighbours, it displays a sophistication that is exhibited by its well branded agro machinery.

Musa Body's entrepreneurial journey is rather odd because it seems to have stayed in the start-up phase for several years and gradually transitioned into the survival phase before a quick leap to the growth phase.

The most useful resources are location, material (scrap) and the other business. Bricolage behaviour in Musa body is exhibited through making do, by locating its activities in Katwe, using resources at hand, by using funds from the other business, and recombining resources, by using scrap metal to improve new products.

Musa Body machinery has increased institutional and international customers. As the competition in the market increased, the company decided to change its product by giving it a fancier look. It further reduced its production costs by cheaply importing some of the machine parts. The firm engages with its local community and therefore tends to be innovative in its operations and products. Since these innovations are embedded in the community needs and demands, they are easily commercialised.

Chapter 6: Godi's Workshop- Firm 3

6.1 Situation and context

Godi's Workshop is a micro firm. It is located in Kisenyi, a suburb of Kampala hosting a multitude of micro businesses. Kisenyi is chaotic in form, since it is a market-place which displays a mix of fresh food, clothing, metal and other dry goods stalls.

Walking through this suburb is cumbersome. Many micro businesses manned by anxious entrepreneurs are littered in the pathways and roadsides amidst dense and omni-directional high velocity traffic of people, cars, bicycles, and motorcycles. This is exacerbated by noise pollution, a blend of desperate hawkers randomly calling out for customers, impatient touts persuading potential pedestrians to hop on their commuter taxis and the echoes of clangorous metals. Moreover, a stench lingers in the air, it is a fusion of cooking food aromas, rotten fruits, burnt food, and sewerage from a few open drainage channels.

Micro business owners trading in related or similar products scramble for roadside space to display their products to the large crowds that visit the market each day. Godi's Workshop is in the scramble. The workshop specialises in car mechanics, making and repairing mufflers and other car parts. This firm fabricates mufflers, although they refer to them as exhaust pipes. The muffler is the silencer box that quiets the explosions that are created in the combustion process. The muffler is connected to the exhaust pipe which carries the gas through to the tail pipe.

The business economically uses about 500square feet of roadside space, with a display stall at the front, a mechanical section in the middle and a metal kiosk for storing resource troves at the back.

Work is done under the scorching sun the employees have no protective gear apart from wearing eye shades.

The display stall is a long narrow pipe welded to several other short pipes at acute angles. It imitates a tree with many branches, with a base supported by metallic tables on which mufflers are laid. Fifteen pieces of locally fabricated mufflers combined with a limited variety of imported second-hand ones are hung on the branches. The locally fabricated mufflers are painted with a shiny black coating to differentiate them from the imported second-hand ones.

A few feet behind the display is the mechanics section where the mufflers are fixed onto the cars. The section is cleverly made out of two non-uniform thin but sturdy metallic stands about three feet long. These are bolted to old cart wheels that are the remains of a tyre from a 4x4 car. The cart wheels have a dual role of elevating the stands and reinforcing them. An old iron sheet that stretches to the ground is welded to the poles at a 45degree angle to the ground. This wedge-like setting provides the platform for the cars to drive up, allowing the welders to lie on their backs on the murrum space below as they fix the cars. The inclination is narrow and steep.



Figure 8: Godi's working space that is located by the roadside in Kisenyi. Photo by candidate

A few feet from the mechanical section is a 20-square foot kiosk that separates the workshop's working space from neighbouring businesses. The kiosk/ container is a pale yellow colour with traces of the MTN logo on it and no other label to identify the business. This kiosk stores all their working equipment and tonnes of scrap metal, which is haphazardly piled into the kiosk. A few pieces of newly fabricated mufflers are randomly put on top of this clutter. The movement of the kiosk's door is hampered by the weight of the numerous mufflers hanging on it.



Figure 9: Godi and one of his partners seated in their metallic kiosk. Photo by candidate

6.2 The entrepreneur's bricolage strategies

Godi, a middle-aged man, owns this business. He started working in the fabrication sector upon the passing of his parents. As a school dropout he worked with a friend for two years. He first worked as an apprentice and eventually was employed as a specialist in gas welding. He desired to be self-employed and so worked hard to accumulate enough savings to buy a machine. Even as he gained skills for the business, he looked out for more learning that would allow him set out on his own.

I got more knowledge, because when I started I only learnt how to make exhaust pipes but now I also make metallic cages for cars which knowledge I didn't have so I added more knowledge. P11: Case 3 Entrepreneur.rtf - 11:6

By 1989, he was self-employed. Godi continues to save and he believes this habit has helped him to have a good relationship with money lenders and other financial institutions.

What has helped me is saving. It is the first thing and borrowing - small loans that I am able to pay back easily. P11: Case 3 Entrepreneur.rtf - 11:12

He watches other fabricators as they work and crudely tries out what he has seen. His fabrication expertise has been gained through incremental learning from his peers and a lot of tinkering, especially in making the mufflers.

We broke the old ones, got the old exhaust pipes from the cars. Those days there were no spares so whenever they would bring the cars we would remove the old and spoilt exhaust, break it and have a look at the inner parts and see how it was made. From then we also started making them - looking at the old one, how it was made, then we made the similar one using measurements of the old one, then you make the shape depending on the type of car. P11: Case 3 Entrepreneur.rtf - 11:39

6.3 The firm's development and bricolage behaviour

Godi's Workshop has been in existence for 25 years. The venture is owned by three partners with Godi as the majority share- holder. Their partnership is verbal with no written agreement or documentation.

The partnership in this business is cemented by trust. Although they are not entirely honest with each other, they have instituted a certain level of trust to permit smooth operation. They have agreed to simple rules of the game.

The most important thing is trust. I trust them but again it does not mean that they are perfect because someone might sell when you are not around and he is in need of money then uses it for his own needs because you cannot count them every day. It's hard. The most important thing is trust. P11: Case 3 Entrepreneur.rtf - 11:79

In this firm's entrepreneurial journey, both tangible and intangible resources have been important in varying sequences. The firm acquires resources in cheap, crude, and highly informal ways. For

example, any pieces of metal found lying along the street side will be picked up for storage and future use, even with limited understanding of what they can do.

The most crucial resource in Godi's Workshop is location. In order to attract customers, the owner opted to set up shop in an illegal location for which he pays an exorbitant fee of UGX 400,000/=. He argues that without this location his business won't survive.

...with this fabrication and welding work, you need to be by the roadside, if you are not by the roadside it will be hard for any customer to find you. P11: Case 3 Entrepreneur.rtf - 11:129

The business does not re-invest money for future development, rather it expands by investing in other businesses, such as poultry rearing and car hire. Godi stresses that it is the uncertainty in the fabrication business that pushes him to diversify. The other businesses support him when the fabrication business is facing hardship.

...but as you can see the way things are moving we are here today, tomorrow we might not be here that is why you see I moved into the car business anytime we can get out of here. P11: Case 3 Entrepreneur.rtf - 11:125

He uses funds from the business to pay for his children's education and maintain his household. It is hard to distinguish between the funds he uses for himself, his household and any of the three ventures that he owns. Having three businesses reduces the amount of time he spends at Godi's Workshop.

.. I would like to leave the fabrication business and do other things like poultry farming or farming or any other thing. Because moving from place to place you do not gain a thing. If only an investor came like you see that building they built, he says let me set up a building so all fabricators can come and work there. He builds an arcade and charges all fabricators. I know he will make money. He can say that the middle section is for welders and fabricators, he will be getting the money. Otherwise the rest of us welders we cannot get a place unless the government gets us a place and the customers get to know that they will find us there if they need anything to do with fabrication. P11: Case 3 Entrepreneur.rtf - 11:87

Interestingly, the other businesses have also been beneficial to the firm in terms of accessing external funds. The firm managed to get a bank loan by presenting Godi's poultry business.

Given the nature of training they received, it is common that each fabricator specializes in a skill/task. Therefore, their specialisation is in fact peculiar because it does not yield to a finished product or service. They form partnerships or networks as a way of joining forces to be used in making a single final product. In terms of how they divide their contribution to the firm, the different partners in Godi's Workshop operate like workers at different sections of the production line. Unlike other fabricators who partner with others at different locations, this firm uses within-firm specialisation to gain resources. It does not have thick networks beyond the firm.

Employees in this firm earn based on the work done. The owner buys scrap metal that he makes available to the other two partners. The partners will determine the price of their service to the customer and only pay the owner the price of the scrap.

Everyone wakes up with their own chance because each of them has got his own customers. They come for me. What I did, I purchased these "flexibles" and make exhaust pipes - that is how I earn. Even when I am not around, if someone sells one of them, I know I will get my profits from that sale. Otherwise when someone has done his work, he is the one who knows how he earns according to the negotiations he makes with the customer. Yes, as long as you put some of my parts I don't care, it's all up to you, how you charge is your business as long as I know that I you have used my "flexible" and it costs UGX 40,000/= When I come back, I find my UGX 40,000/= then you deal with your labour and pay for the electiricty.P11: Case 3 Entrepreneur.rtf - 11:76-77

Godi would like to train others so that they could work for him. He believes that apprenticeship training is an ideal method to train others. He has been training his friends and other young people in the trade. Apprentices are a cheap source of labour but are also unreliable, since as soon as they learn the trade, they leave and look for greener pastures, as he laments:

..it is me who trained them but most of the young people have left for Sudan. When the Sudan craze came, they all left. They left for Sudan they are welding but not making exhaust pipes, they left this particular trade. P11: Case 3 Entrepreneur.rtf - 11:45

The operations of Godi's workshop are highly informal. They have no permanent supplier but rather buy material (scrap) from whoever is offering it cheaply. Moreover, there are no standard sizes of scrap; what is on offer determines their bid price and thereafter the price is set via bargaining. Moreover, they cannot predict how many mufflers can be made from each piece of scrap.

The problem with this business I cannot tell you that I am selling it for this amount or it is worth this amount because the things we make do not have a specific price. You can sell an item at UGX 20,000/=, UGX 25,000/= or UGX 30,000/= .It is hard to calculate.P11: Case 3 Entrepreneur.rtf - 11:61

6. 4 Response to environmental changes

Godi's Workshop is not growing. The firm's sales are low, customers are random and the rent costs continue to escalate. Godi's Workshop is unregistered and most of the activity is informal. Although the partners claim to have plans to register it, their actions imply otherwise. Currently, Godi is planning to exit the fabrication business. He explains that the uncertainty is so high and the future is gloomy. He is saving money from the fabrication business and will use the savings in poultry farming and the car hire business. He has resigned himself to closing the business.

But in your plan you know. With the plan you work while saving knowing that any time I am leaving the business given the way things are moving on in the city. P11: Case 3 Entrepreneur.rtf - 11:110

When the market was liberalised and foreign firms were permitted to export metal machinery to Uganda, the firm was destabilised since their product was no longer as marketable. The customers

prefer second hand mufflers even though they are more expensive than those Godi makes. In the earlier years, the firm had customers from around the country. This has now changed.

Cheap yes, but people treasure original things. One might say they will not put things that are not original onto their cars since they might not work. But they work because we have used them for quite some time. But again, with cars, since there are a lot of spares, you find that our exhaust pipes are not being bought the way they used to buy them in the past. We used to make more profits in the past but these days not that much P11: Case 3 Entrepreneur.rtf - 11:35

When the rent costs escalated, Godi asked two of his former employees to become partners. This decision was meant to reduce his rent burden. He invited these two to contribute to half of the rent in the ratio of 2:1 with the longer serving one paying more. Besides the sharing of the rent costs, the partnership is complemented by skills sharing, in the sense that the three have various skills and together, they produce their final product.

In the past, when the enforcement of rules was lax, they benefitted from this manipulation and were able to move from the starting phase to the surviving phase. Unfortunately for them, the enforcement of rules in the city has increased and therefore, their transition to the growth phase may not be possible.

6.5 Summary of Godi's Workshop

Godi owns a muffler making firm that has been in existence for 25 years, even though it now has plans to shut down. Godi's firm has been in the surviving stage, where it merely meets everyday expenses with limited or no profitability, for a long time. It is now in the exit phase. The firm's entrepreneurial journey has been faced with setbacks that have seen it oscillate between the starting and the surviving phases.

Godi's firm uses mainly tangible resources such as savings, apprenticeships, networks, funds from other businesses and scrap. In this firm, bricolage behaviour is exhibited through making do, where it utilises meagre savings and unskilled apprentices, using resources at hand, by engaging other fabricators and using funds from other businesses, and recombining resources, by reworking scrap metal to make mufflers.

When competition in the sector burgeoned and the regulatory regime became more active, the firm was challenged. It struggled with these changes and did not re-adjust its technologies or products to accommodate the seemingly hostile environment. Moreover, the micro firm has continued to be excessively informal in its processes. Although it has a thick network bond amongst partners, it has thin links with other stakeholders in the community. The firm is deteriorating.

Chapter 7: Manoti and Sons Ltd- Firm 4

7.1 Situation and context

Manoti and Sons Ltd is a micro firm located in Kisenyi. Jonan Sserubiri, the owner, sits at a stall dressed in his overall watching out for any opportunity that might come his way. He is a young man. His laid-back character deviates from the common aggressive nature of other business owners in Kisenyi.

Kisenyi hosts a multitude of micro and small businesses. The variety of businesses is wide and could explain the chaos that characterises the town: clanging metal; scents of fresh market produce; smells of second hand clothing; and of cooking food.

Manoti and Sons is strategically located at the top of the steep road into Kisenyi. Customers walking or driving to that neighbourhood will not miss the beautiful display of second hand home equipment which Manoti and Sons sells after repairing or remoulding and cleaning them. The products are displayed in a narrow walkway. Pedestrians walking into that neighbourhood are left to walk in the road, competing with cars and other speeding vehicles. Potential customers are forced to stand in the galley that separates the road reserve from the road. It is a drainage channel, easy to stand in on dry days but impassable on wet days. The prices are set by haggling.

There's a wide variety of the products on display - all washed and polished, looking clean and new from a distance. A closer look at the products reveals dents and stains.

Jonan moves about his display to push some products forward as a way of making them more visible. He seems to be proud of his achievement. The conditions of operation are harsh. He works as a welder and does not have any protective gear to save him from the wild sparks of the welding

metal. Jonan does not view this as a challenge; he comments that to survive in the fabrication, you need to accept that conditions are hard.



Figure 10: Jonan setting up his display. Photo by candidate



Figure 11: A perfume making boiler being made by Jonan. Photo by candidate

7.2 The entrepreneur's bricolage strategies

As a young uneducated man, Jonan did not have many employment options. He was hired by his aunt to work in her poultry farm where he was earning meagre resources of about UGX

40,000/=per month. Jonan saved up money because he had a dream to make a chicken roasting oven/grill and eventually change jobs to chicken roasting.

My late aunt brought me from the village in Masaka. She had been rearing poultry at her place and I started working for her. I spent one year and eight months with her. Every month I would get UGX 40,000/= so that is what I kept on saving then I came to my uncle to make me this machine so that I could start working.” P15: Case 4 Entrepreneur.rtf - 15:6

When Jonan’s uncle misused his savings, the chicken roasting plans became futile. His uncle then invited him to learn fabrication from his workshop. He worked briefly under his uncle’s guidance. Along the way he made friends with other fabricators. They introduced him to customers and within two months he had enough money to rent his own place.

Jonan believes that being a welder was God’s plan for him because from the time he was introduced to making coils, things started moving fast. He now uses the name Manoti and Sons because he believes that the name brings good luck. He adopted it from his maternal grandfather of whom he speaks with admiration as being a rich man.

However, at a certain point, his young business was not sustaining him as he had anticipated and he quit for formal employment, working with AZAM as a fabricator. The temporary exit was motivated by the city authority’s demolition of his premises.

Jonan is comfortable with the knowledge he has from his apprenticeship training. He believes that his natural aptitude for welding is very high and is proud that his employers never required him to submit formal education or training documents.

7.3 The firm's development and bricolage behaviour

Manoti and Sons' entrepreneurial journey has been relatively short. After Jonan's temporary spell in formal employment, he re-started the business with a partner. Soon after this, one of the founders fell sick. Despite this setback, Jonan persevered and the business is now in the surviving phase. Tangible and intangible resources were used in this journey, and their importance and sequence varies. Resources used in Manoti and Sons are acquired in a variety of ways. The company uses cheap and sometimes crude strategies to gather and organise its resources. While some of the strategies are similar to others in the market, some are unique to this firm as shown below.

The roadside location is important for Jonan because it is his first marketing point. However, the city authorities have asked him to move, and he is worried that his firm's performance will deteriorate.

This is at the road side it is not easy to get a place like this one in Kampala. All I need is...Ok you might get a place around here but all of them are not going to be here tomorrow. For me, it does not make sense getting a place for 2 months and they chase me away because carrying this container to a new place you need like UGX 1 million you will have to use this money, paying rent for the new place, carrying the container, carrying things I will shift over there and they will again chase us. P15: Case 4 Entrepreneur.rtf - 15:82

When he moved to Kisenyi, he hired a container and bought a machine and was ready to start working. He purchased a few second-hand gadgets and started fabricating. It was an ideal location because it was a market for a variety of second hand and written-off machines.

He describes his business model as one based on saving. He has a piggy bank in his workshop that he uses to save little amounts each day. After the daily savings have accumulated, usually after

five months, he then uses the savings for a personal or business asset. It is rather difficult to understand the system he employs in utilising savings.

There is that little money I get and I do not really value it then I save in the piggy bank. After five months I will check if I have, like let's say 1 million shillings. I will ask myself what to do with this money? I will go and buy something, then I will know that I have bought something out of this money. It is not part of the business, it is money to solve my problems. If someone buys at 1.5 million shillings I will not put back the 500,000/= into the business. When I want something at home, I will get from this money. Then I will get back the 1 million, if I can, to put it back in the business. I can decide to put it back in the business - it has bought for me something - so all in all saving is the most important thing. I do not over spend" P15: Case 4 Entrepreneur.rtf - 15:73

Jonan has good knowledge of the area around his workplace and knows who to contact when he needs something. This has been an opportunity for him to make some easy money.

Here in Kisenyi you do not work on one job order. When a customer comes, they may order for a fan, and I do not have a fan, I do not tell them that I do not have a fan, I will go and look for it from somewhere else. I will know that I'm working for a profit of UGX 30,000/=. So, such small amounts of profit are also useful to the business. You invest them in the business and keep it going. In fact, that money is good because it is effortless. There are such small monies that we people in this fabrication business get, not all the income comes from fabrication. Some money finds you." P15: Case 4 Entrepreneur.rtf - 15:173

He has no permanent suppliers. His trade is to look out for anyone who has something to sell.

I do not have a permanent supplier, I buy from anyone, and even if it is you, if you have a household appliance I will buy it. You sell it to me. I move to different places to pick these items. You just tell me I have this and I come to you. In some cases, a supplier tells you they have equipment and you tell them to bring it because they might be far, or when they are trying to explain to you what you do not understand and it may not be worth moving, he brings it, and you negotiate and you pay. P15: Case 4 Entrepreneur.rtf - 15:122

Jonan has a good relationship with another fabricator whose workshop is a few feet from his. Often, Jonan refers orders to him. They have built a relationship that is not common amongst competitors. Jonan explains that because customer demands are varied, he is comfortable referring customers to his competitor in situations where he does not have what they demand. He adds that

because the competitor openly asks for advice that makes him feel that there is no fierce competition.

Yeah, but he is no longer my enemy because right now I take him as a brother. What I want from him is that he is a good competitor. He learns from you and openly asks for ideas. He does not have a bad heart, he will copy what you have done and tell you he copied it from you. That behaviour showed me that we could work together because when I started here they only knew one thing: you buy a second-hand appliance, put it there and wait till the customer comes and think of what to make out of it. For me, I introduced a new method. I buy a second-hand appliance, I make something out of it, put it on display and then when the customer comes, he can find a usable fryer. Not a customer coming and asking whether I can make a fryer from that second-hand appliance. P15: Case 4 Entrepreneur.rtf - 15:145-146

Together they have opened up a joint account into which their savings are deposited. Jonan says he works with his competitor because they share ideas and also when he realised that his big dream of importing was not very achievable as an individual, he convinced his competitor about the idea and now they have coherent plans that they are working towards.

Manoti and Sons tinkers with old equipment and transforms it into totally new products that have a different function to what was originally intended. He however confesses that sometimes all he has seen is a photo of the machine. The process of translating a photo into a working machine is long and tedious. There is a lot of time spent in the tinkering and the mistakes are numerous. He only employs one person in his firm. This employee is not skilled in fabrication. He is a distant relative who was recommended to him by his relatives. He seems content with his employee's inability to do fabrication work which could be because he does not spend so much money remunerating him.

He failed to learn the fabrication job...Yes. If you ask him to bring for you something that is what he can manage but telling him to do something beyond, no. We tried but it looks like he failed to learn. P15: Case 4 Entrepreneur.rtf - 15:99

Whenever he has big job orders, he invites another fabricator to help him. He remunerates them based on their contribution.

If it is necessary there are times I am busy here and there. When I am up and down there's someone I call to help me. Someone I trust who can do what I would have done. P15: Case 4 Entrepreneur.rtf - 15:113

He has no loan financing from financial institutions. He believes that external loans create stress that he cannot tolerate. In situations where he is hard up in the business, he gets support from his girlfriend; she however is not a part owner of the business. He takes short term loans from her and refunds her. Their operation is based on their personal relationship and there is no documentation when a loan is issued.

I have a girlfriend. Only she is the one who helps me. At times she lends me money. I might get something when I need 2 million, she will give me 500,000/=. I use it then refund it. P15: Case 4 Entrepreneur.rtf - 15:84

7.4 Response to environmental changes

With the threat of being chased away from this location by the city authorities, Jonan's plan is to find another place out of the city where he can get a roadside location and put up his display. He speaks about this with reluctance, saying he is not going to check for a new location soon.

The plan is, I will not waste my time by getting a place around here. All these people will soon leave. I will step out like for a month as I look for a place at my own pace because if I approach now, whoever has space knows that we have been chased. So, they will charge highly. My plan is to first hold it off and take time while searching. Then with time I will get what I want. P15: Case 4 Entrepreneur.rtf - 15:79

He explains that his business is growing and he narrates this by listing personal achievements and the stock of his business, which he values at UGX 30 million. Even though it sounds like he has a lot of stock, he argues that most of his stock does not convert into cash easily and therefore he sometimes has money demands that he cannot satisfy from his business.

I have a car, sleep well and I have everything that a youth would need... What makes me happy is when I look at the business, I count that I have something. Although I do not have money now, I can eat and I can stand on my own without relying on anyone. When I stand out there in front of my business, I count and see that I have UGX 30 million. This makes me happy P15: Case 4 Entrepreneur.rtf - 15:134

The business is not registered. Jonan argues that he still needs to grow it before he can register it.

The business is in an illegal location by the roadside. They got permission from a local primary school to set up their structure, and they were paying rent for the space. However, since the school has been sold off by Kampala City Council Authority (KCCA) and will be relocated, Manoti and Sons has to relocate as well. In the meantime, he is no longer paying rent.

They wanted us to pay but we refused because we are going to shift. P15: Case 4 Entrepreneur.rtf - 15:162

7.5 Summary of Manoti and Sons' Ltd

Manoti and Sons Ltd is a micro firm that sells second hand home appliances after repairing or remoulding and cleaning them. It is an unregistered eight-year-old business that suffered an early exit because it lost its roadside location. After the early forced exit, the owner saved money from employment and used the savings to revive his business.

The important resources for Manoti and sons Ltd, are savings, knowledge, networks and scrap metal. It displays bricolage behaviour by making do, in which case it experiments in making and repairing gadgets and minimises operations based on available savings. Additionally, it uses resources at hand, where it gains advice from other fabricators in the network and recombining resources where it to forges new machines based on joining new and old technologies.

Manoti and Sons is now in the exit phase and will soon stop fabrication. It could be argued that when the regulatory regime became more active, the firm was challenged. It has struggled with these changes and now assumes that switching from fabrication to importation may be a better decision. The firm is not engaged with its local community and therefore operates in isolation much of the time. It sells its products to any walk-by customers.

Chapter 8: Millennium Wood and Metal Workshop - Firm 5

8.1 Situation and context

MWMW is located in Kibuye, a few metres before one of Kampala's busiest traffic junctions. A small billboard with the name Millennium Wood and Metal Workshop is hung on a Mvule tree and is obstructed by the thick and leafy branches of the tree. The activities of the workshop are visible to anyone using the road. The work in progress is displayed at the roadside and other work is housed in a carpentry workshop. Young employees are working outside the workshop whilst engaged in conversation. They do not wear any protective gear save for a few of them who have shades that prevent the welding rays from getting into their eyes.

The working area is relatively large and does not seem to have a purposeful arrangement. The youthful employees engage in their day's tasks by moving materials and equipment to areas/ sections they deem comfortable. They bend down to the floor to measure windows, doors, and gates. Pencils rest at the back of their ears when welding equipment such as cutters are shared. This leaves a lot of time for conversation as they wait to share machines.



Figure 12: A shared kiosk at Millennium Wood and Metal Workshop. Photo by candidate

Customers casually walk to the workplace asking for services or getting updates on their orders. The majority seem to know with which young man they want to deal and do not hesitate to call him out. The customer variety is wide, from those with small short-term requests such as welding car parts and other metal repairs to others seeking windows and doors for their new homes. There is no central collection point for the work orders. Cash is received by each employee and is pocketed as soon as it is received. There are no receipts exchanged and both parties seem comfortable with how things are done. Two small benches are placed under the tree in the shade. It is where many of the employees sit during their lunch breaks.

The space is rapidly changing. Two weeks after our first visit, we no longer recognised the workshop. The containers had been moved and the wooden structure demolished. The apprentices were working under the scorching sun. There were no more displays of the work in progress.

8.2 The entrepreneur's bricolage strategies

Frederick Kagimu is the owner of Millennium Wood and Metal Workshop. He is a soft-spoken man with a rather curious view of my study. As a young man just finished his O'levels, his sister advised him to get into employment since he did not have any skills and therefore his options for work were limited. The sister introduced him to a friend who owned a hardware shop. The friend then introduced him to his customer who owned a fabrication business. He was taken on as an apprentice and when he gained knowledge in welding, he was hired by a fabrication firm that was making hospital equipment.

He worked there for a short time and during the next years he moved to a number of workshops, many of them next to each other. In this time, he learnt to make hospital equipment, windows, doors, and other home equipment.

I worked there for a very short time, then I went to a big workshop next door called Viva at that stage my knowledge was in clinic equipment. It is from there that I learnt how to make windows, doors. P21: Case 5 Entrepreneur.rtf - 21:9

However, because his employers did not allow him to handle big job orders, this pushed him to desire his own venture. He realised that he needed to buy his own welding machine. He used his savings to buy his first welding machine. As he continued working, he bought another machine - the grinder - and that is when he continued with his self-employment dream. He slowly started increasing his machine stock.

I first learnt then I started working employed by others. From being employed, I first got one machine. Later on, I got another one and I realized that I was able to start on my own. P21: Case 5 Entrepreneur.rtf - 21:2

He argues that switching employment became easier. He soon realised that all he needed was a venue in which he could do his work. He then joined other artisans in the neighbourhood who were carpenters, negotiated with them and was able to start his welding work.

Ok, when I started, when I got the welding machine I managed to add a grinder because those are the two major machines needed to start a workshop. With that grinder you can work and get money. I worked and got money and managed to get other machines slowly by slowly till today. P21: Case 5 Entrepreneur.rtf - 21:25

8.3 The firm's development and bricolage behaviour

Millennium Wood and Metal Workshop's strategies to gather and organise its resources are highly informal. It has transformed in form and structure over the years, from the starting phase to the current surviving phase. Its existence has been supported by both tangible and intangible resources in varying sequences. Location has been a crucial resource for this firm. Its roadside location on a busy road was the initial avenue for the firm to get customers.

The firm displays bricolage behaviour in many ways. It hires young unskilled apprentices to provide cheap labour. In addition, the proprietor runs an apprenticeship training programme in which he invites young men to be trained at a fee. This has been a stream of income for his business and he confesses to having used the resources to support the business operations and personal activities. Although he has several apprentices, each is paid only for tasks accomplished. They are even allowed to do their own work provided they pay for machine hire and electricity. Moreover, the income collected on each job order is treated as a one-off activity. This means he cannot determine which period in the life of his business is less profitable

Those at times are my friends or old customers referring them and sometimes just passersby. They come and ask me to assist their children and I tell them do this, this and that, they give me between UGX 300,000/= and UGX 400,000/=. If a child is keen, they can learn in as short as 6 months and at that point he can ably measure and cut material. And if he does it well he can start getting paid, because the one who cuts material is not the one who welds it. P21: Case 5 Entrepreneur.rtf - 21:55

In the surviving phase, Kagimu started a transportation business. He hoped that he would eventually switch to the car transportation business. Unfortunately, the new business was not as

lucrative as he had anticipated. The taxi had persistent mechanical problems that forced him to use funds from the fabrication business to maintain it. This eroded his working capital and he started falling behind on his assignments and was making late deliveries to his customers. Moreover, he did not even have money to finish up their work. The fabrication business deteriorated almost to the point of collapse. He eventually decided to dispose of the taxi, by which time he was heavily indebted and had to sell personal assets to recover from the business slump.

There is a time I changed the nature of business and changed to public transport. I had a taxi. The time I bought it someone told me that someone wanted a car to transport kids to school. When I bought it I did not want it as a taxi but to transport children but in the end I had to use it as a taxi and..P21: Case 5 Entrepreneur.rtf - 21:114

He now owns a hardware shop, which he claims is profitable. It has a steady stream of income that supplements the operations of the fabrication business. The hardware business complements his fabrication work because he purchases materials for the business and uses it to fabricate windows, doors, and gates. He operates both businesses as one. For example, when he applied for a loan request for the workshop he used the funds to capitalise his hardware shop.

When I borrow for the workshop I just bring the materials and put them in the hardware store. They will be there so when I get a job order, I use the materials. But also, those who buy in small amounts come and buy from this very material that I have purchased. But when I go to the bank, I use information for the workshop. P21: Case 5 Entrepreneur.rtf - 21:40

The firm also uses networks of friends by extensively engaging in bricolage behaviour in many of its operations. For example, it shares premises with a carpentry workshop, from that rent and other registration costs are markedly reduced. Additionally, sometimes the work needs a wooden component, or alternatively, the carpenters need metal, in which case they share resources. When Kagimu merged his premises with the carpenters, he only paid for half the rent and license fees.

However, recently the authorities stopped him from this practice and now he meets his full obligation.

8.4 Response to environmental changes

This micro business is registered. However, it is not growing and the owner has plans to exit fabrication. The lack of growth is discussed in comparison to competition and others he trained. He compares himself to them and he thinks that they are better than him. The operations are informal and funds from personal savings and the business are mixed up. It does not have audited accounts but has receipt books and invoices.

There are changes in the environment that are creating stagnation in the business. The entrepreneur is distraught and sceptical about the future. Although the business has four machines, these are not always in use and in fact he is currently earning from hiring out his equipment.

I do not know what is coming ahead but right now there is deterioration in growth, the reason being whenever they stop us from putting a display outside, there will be no job orders apart from what I told you, I was planning on doing. P21: Case 5 Entrepreneur.rtf - 21:84

Although he has been doing most of his work outside, the recent city reforms have pushed him to rent a double room near the workshop. It is this room that he has now converted into the hardware shop. It is about 500 meters from the workshop. This means that the roadside location is no longer a competitive advantage. The customer base has reduced tremendously. He plans on moving the workshop to another place, but he has no concrete plans yet.

Yes. I will be changing location but while changing I can first leave the hardware here. It is the workshop that is hard because I can get someone here. P21: Case 5 Entrepreneur.rtf - 21:97

Currently, there's an increase in competition. The price of the materials is increasing and so is the lead time between when customers order and when they pay. Many customers pay piece meal which makes it hard for him to complete their orders early.

The problems I have faced are changes in prices of materials. This is the major one because you might have quoted a job order, for example a gadget like this one is UGX 15,000/=. The customer might give you a job order and not pay for it immediately or only gives you a small deposit and you will find that at times you do not have money to add to that particular order so you have to use that little money he has given you and wait for the next payment to continue. But every time you wait, the price of the material might have gone up - remember in the past years prices for materials have been increasing daily...By the time you finish, the prices of material have gone up and all your profit has been eroded. P21: Case 5 Entrepreneur.rtf - 21:132

The firm's growth has been impeded because the costs of the trading license, power, and materials have increased. Further still, it struggles with debts from the previous periods. The owner was unable to get out of the credit cycle from his customers, so he opted to get a loan from a financial institution. The loan unfortunately does not match the patterns of the business.

They say we can no longer pay for a joint license as wood and metal together. We cannot add metal and wood together since they are both workshops. They asked us to pay for each one of them separately and issued us a different license. So, they decided to pay for wood and I paid for metal. P21: Case 5 Entrepreneur.rtf - 21:76.

8.5 Summary of Millenium Wood and Metal Workshop

Millenium Wood and Metal and Workshop is a registered micro enterprise that is in the survival phase of development. It has been in existence for the past 14 years and has suffered a few setbacks in its entrepreneurial journey. The proprietor of the company, Frederick Kagimu learnt most of his fabrication skill from his work or employment experiences.

The business uses many resources, including forging networks to reduce costs, starting up several other small businesses, hiring apprentices and delaying delivery of products to his customers to

make the business function. Bricolage behaviour in this firm is exhibited through making do, where unskilled apprentices are hired to support activity, and using resources at hand, through using funds from other business as well as networks in the business.

With an increase in competition and operating costs, this firm is struggling and will soon exit fabrication. Moreover, a decision to add a transport business to his many activities almost caused the collapse of his business. Although he recovered from that tough experience by disposing of some of his personal assets and property, he still faces a major new risk. The environment is more turbulent because there is a renewed quest by city authorities to enforce adherence to business operational reforms. Currently, his involvement with and support for the community is limited, but he maintains a good relationship with other fabricators that have originally worked with him.

Chapter 9: Treeshade 2000- Firm 6

9.1 Situation and context

Treeshade 2000 is in Kisenyi. The workshop is spacious with office space, a show room and a workspace. The sections are not explicitly marked as such but an observer gets a sense of defined spaces as you enter. The workspace area has many huge machines and evidence of a lot of work in progress. It is only the sound of operating machines that pollutes the work environment. Despite the untidy heavy-duty machines and rough floor, it is an impressive setup.

Specifically, the safety warnings and blackboards with scientific calculations give the firm a formal look.



Figure 13: Inside the Treeshade 2000 workshop. Photo by candidate

Despite the extremely high temperatures outside, the environment inside Treeshade 2000 is cool. The natural coolness is provided by the huge tree under which the workshop is located. The proprietor confesses that it was a big motivation for the name of the workshop. It has a roadside

location, but noise from the chaotic Kisenyi area is blocked off when inside the workshop. The proprietor, the elderly Kaweesi Kigongo is a disciplined man, with much interest in fabrication. His is a formal operation and he does not allow anything to interrupt his work. We visited the premises twice before he granted an official appointment. The interview took place on a day when there was no power supply.

It is the only workshop with a female employee. She is wearing gumboots and a head gear for protection. She operates the machines with ease and carries heavy loads by herself.



Figure 14: A female employee reviewing a machine she has made. Photo by candidate

9.2: The entrepreneur's bricolage strategies

Although Kigongo's father never owned his own fabrication firm, he would invite him to the workshop to learn. It was then that he got interested in the trade and decided to study more about fabrication. With this knowledge, he got employed in a fabrication business. After a while, with some support from his father, he bought the machines and set out at his home in Kawempe. He worked from home at the start because he did not want to have any rent costs. However, since

many of his products were bought by people in the middle of Kampala city, he spent a lot of money on transport. He worked at home for two years before he decided to relocate to the city centre.

When it comes to this kind of business you start gradually. You don't wake up one day and buy a machine. You start small until you get funding. I first worked from Kawempe at home in 2000 and when I came here people told me it's a business center and it could work in terms of business. I also used to come this side to buy machines which helped me to get familiar with the place and enabled me to get a place here because of the people I used to sell machines to. I also realized that I could save on transport by working from here. It was even hard for my customers to come the other side. P24: Case 6 Entrepreneur.rtf - 24:15.

He started with meagre resources. He was able to increase his knowledge base by studying abroad, where he visited prototype development centres. He learnt how to dismantle machines, study their technology and then make cheaper models or versions.

When you attend such things that is ... I told you I got knowledge and even the determination that anything can be done. P24: Case 6 Entrepreneur.rtf - 24:44

He explains that his ability is underscored by experience and persistence. He spends time and funds to ensure that he is successful in everything he does. Moreover, he learns by copying from other second hand or spoilt machines that are in the market.

I combine three things, that is: experience, but sometimes I might make it and I fail but I don't give up. When you are going to do it, you inject in money so when you fail, it means you lose that money but I don't consider it as a total loss because I learn something from it to improve. And the other factor that helps me is when you look at things like in this area they bring machines that are written off, it helps you a lot when you look at it and you know how it was constructed. It helps you to apply that knowledge. P24: Case 6 Entrepreneur.rtf - 24:33

He has ensured that he passes on the skill to his children, although none of them works with him now, they all know how to fabricate. He has daughters, now living abroad, but before they moved, they used to fabricate with him. His wife also knows fabrication. He trained her and in the early years of the business, she worked actively in it. Today, she will only work in the business if he is

not well. He believes his family can take over the business comfortably if he dies, although he does say that his personal touch is his uniqueness.

I also have daughters whom I trained but at the same time they went to school, I also took them to Nakawa for studies, in fact I fabricated that machine with some of them. After their studies they went abroadand did something different but still they have the knowledge of this sector.... I don't work with her (my wife) but I have worked with her for a very long-time and she used to do this work... but in case there is a need or I am sick she can work and she works with that lady sometimes.....My family can do it, the only challenge I see is that this work has a personal touch. P24: Case 6 Entrepreneur.rtf - 24:82

9.3 The firm's development and bricolage behaviour

The shift of the business from home to town was gradual. Moving into the current location was exposing his business to fierce competition, but Kigongo was not worried because his skill was unique.

When you start on something, I had already got the plan for working from here but because the other place was already established and I couldn't move the equipment at once I decided to move slowly. P24: Case 6 Entrepreneur.rtf - 24:22

He speaks convincingly that one can make some money from fabrication, by concentrating on doing good work. He has managed to advance his business because he actually makes many of the machines he uses. He explains how, when he goes for shows, he spends a lot of time learning how machines work. It is when he learns how the machine operates that he teaches himself to make his own machine and thus foregoes the high capital costs of buying the machine.

...I go for shows, like I went to a show in Birmingham and it was very expensive. When I see a machine and how it works, I copy the way it works instead of copying the machine itself. If I get to know the operating mechanism, I can fabricate that machine. Sometimes they give you a voucher showing the technical specifications and they tell you it has a mortal of this power and it runs at this speed so you can manipulate all those things if you have the technicality of making a machine. P24: Case 6 Entrepreneur.rtf - 24:26

Treeshade 2000 exhibits bricolage through networks. The business has benefitted from support from vocational training institutions. The proprietor works with interns from universities and

colleges. He believes this experience has been good to his firm because challenges are solved easily when he engages the educated interns. In turn, he boasts of the hands-on experience his firm has accorded the interns. He sometimes earns from lazy interns because they cannot finish their projects, so he ends up doing the projects and they pay for his labour.

When it comes to training I think we would have gotten people from those colleges, but when they come they are good at the theory part of it but when you put them in the workshop to design, still you need someone on ground whom you are supposed to start with. The only good thing with somebody who is educated is they learn very fast and they can interpret things very fast and advise you as well. When I work with students from Kyambogo during their internship I realise that I benefit from them as they benefit from me, so it's a two-way thing with them. P24: Case 6 Entrepreneur.rtf - 24:53

Earlier on he started another business to supplement his income. It was a soda kiosk. It did not take off as he had anticipated and he therefore transferred the employee to work for the fabrication business.

...first I employed her to work in the kiosk but the kiosk had a low turn up and we could sell a few sodas because there were few people in this area. Actually I was among the first people to work in this area. So, I told her to start assisting me with this work and then I encouraged her to pick up the interest so I started training her, she learnt and now she knows what she is doing. P24: Case 6 Entrepreneur.rtf - 24:68

He has no permanent employees except for that female employee that originally worked in the kiosk. He says she is more stable than male employees and gives him less distress. When orders are placed with his firm, he gives his customers an indication of the duration it will take to finish and he sticks to his schedule.

It has always remained a challenge and I don't have permanent workers. I have a lady here I am working with. She is really very good and I am the one who trained her but she has stayed with me and yet we are not even related. She has interest in her job, I can even admit that she does certain things better than me like operating that machine that bends iron sheets. We are the ones who fabricated it but you find that she can work or operate it in a way that I myself cannot and even when the customers come, I tell them to see her. She is the only one who is permanent at the moment.... I should do something within my capacity and not even lie to my clients that I will be able to finish their work within a certain period of time and yet I can't

and even you want to finish very fast you might even harm your health. P24: Case 6 Entrepreneur.rtf - 24:51

When the need arises, he contractually hires others to do the work for him. He has specific fabricators with whom he works; they are people whose training he approves of and he likes the quality of their work.

Although the competition in the sector is fierce, Kigongo has managed to benefit from his competitors because he is more skilful than many of them. He says he thinks a lot and tries various versions before he finds a working solution, an experience he asserts is not easy because it requires intellectual capacity. He now makes machines for his competitors. He has created cheap versions of otherwise expensive and scarce machines for the market.

On top of that I also fabricate machinery for people. I make machines that process food, I can make machines that help in a workshop for instance if you have many machines. I have made machines that make machines and those that make wood straight. All that - I even have folders, you will see them. P24: Case 6 Entrepreneur.rtf - 24:28

He has reservations about getting loan funding, fearing that it would eat up his assets and give him unnecessary stress. So, he works with the resources he has on hand to finish all his job assignments.

So that is the difference and even if you wanted to get a loan to uplift yourself the loan could even bring you more stress. You might fail to pay and yet the bank needs the money, even when you get work to do it's better to first look at your capacity instead of just getting a loan to buy material because you might buy the materials and then fail to get people to use the material and yet you have to pay the interest. P24: Case 6 Entrepreneur.rtf - 24:50

Although he has a major supplier in the market, he complements his supplies by picking materials off old machines so that he can make new machines. These second-hand pieces are a good alternative because they are cheap and of good quality. He adjusts and tinkers with scrap to create his invention. He asserts that he will fidget with the piece until he converts it.

It's all about creativity because there is no supplier but we buy them from decaying material, all of these machines are scrap.... Yes, especially these ones where you have to be creative you might find something like this when it's new it costs like 500,000sh yet a used one is UGX 100,000/= and more readily available than the new ones. You are better off and secondly you might not get the specific material in the market for new things. P24: Case 6 Entrepreneur.rtf - 24:93

9.4 Response to environmental changes

The business is growing. It is respected in the community. It has more equipment than others and sales have increased. After having been in the business for a while, the owner recently registered his business, as he explains that his customers demanded that he register the business and he decided to follow suit. However, he does not write his books of account as stipulated.

In recent times the environment has changed and he complains about high power costs, since he alleges that the power company is unscrupulous in their pricing of power. Amidst these changes, he actively uses known research organisations or institutions to improve the technology he uses in his workshop. He proudly displays some of the machines he has made in the company that were supported by other experts or people. He even displays some of his work in trade shows and associations.

... we were still with Uganda Small Scale Industry Development. The people I have in that area are of Uganda Investment Authority, Uganda Industry Research Institute and UNBS...also those ones from Makerere University there is food science they also recommend people to me because I deal with them, I also fabricated this with them. P24: Case 6 Entrepreneur.rtf - 24:103-4

Additionally, he engages with the young people in his home neighbourhood. He believes the changes will affect them most, so desires to teach them the skill of fabrication, so that they have something to do or something they can fall back to in case they have no jobs.

9.5 Summary of Treeshade 2000

Treeshade 2000 is a registered mid-sized fabrication company located in Kisenyi. It is in the growing phase of its entrepreneurial journey. It has been in existence for the past 15 years and has

advanced slowly. It is owned by Kaweesi Kigongo an elderly man who began his fabrication career after being trained by his father. Although his firm only employs one permanent staff member, it has a high level of investment with many machines. He is passionate about fabrication and has accumulated experience over the past 20 years. During this time, he has ensured that his family is involved in his fabrication business.

In the earlier years, he tried to include a soda business in his portfolio, but realised that it only strained his fabrication business, so he chose to concentrate on fabrication. Having been trained on a number of courses abroad, he can fabricate versions of useful machines that would ordinarily be expensive to procure. By regularly scavenging from the scrap or second-hand market, he copies mechanics and designs cheaper and workable versions.

The firm uses knowledge and skills, material (scrap) and networks as important resources for operation. Bricolage behaviour in this firm is displayed through making do, where scrap metal is reused to make new products, using resources at hand where he relies on family and other fabricator networks to support him in his activities and recombining resources where new machines are made based on a combination of both local and foreign knowledge.

This firm is growing and the proprietor is a respected fabricator who is highly consulted by others. Even with the high costs of operation and increased competition the entrepreneur devises means to remain profitable. He argues that his business has advanced because he is creative and insists on making high quality products for his customers.

Chapter 10: John Lugendo and Sons Ltd - Firm 7

10.1 Situation and context

John Lugendo and Sons is a second-generation family business located in Ndeeba- towards the Southwest of Kampala. This medium sized firm is 55years old. It specialises in agricultural machinery and other household equipment.

The firm sits on about two acres of land and has several buildings that host the various activities, including a wooden art studio owned by the managing director's sister. There is a display of various agricultural machines that have been made by the company. They all have a grass green colour representative of the agricultural sector.

The administrative block is an old building that rests in the middle of the property. The receptionist receives us happily before inviting us to the managing director's office. The reception area has portraits of the founder and the current manager, a calendar of the company and one featuring the king of Buganda and the president of Uganda. Also on display is a list of debtors going back five years and a blackboard with assignments and targets. A large number of employees can be seen in the different departments but the noise is only from working machines. All the 28 employees are dressed in clean blue overalls and gumboots or heavy shoes. Many of them seem to be young, save for one elderly man. The employees take their tea breaks in intervals.

To the back of the company is a scrap yard that is guarded by two dogs. There is a wide variety of metal in the scrap yard. Different suppliers sell scrap to the company. The foundry where most of the scrap is smelted is right next to the scrap yard. The old man in-charge of the foundry spends

most of his time in the scrap yard, picking out different varieties of metal and shapes that he will use. The smell of burning metal also lingers on.

The managing director, David Bukalamy, is revered by his staff. His office is a standalone building. It is spacious and displays various awards the company has received over the years. There is a notice board with newspaper cut outs about the company.



Figure 15: John Lugendo scrap yard Photo by candidate



Figure 16: A government minister donating a coffee huller made by John Lugendo to a local community. Photo by candidate

10.2 The entrepreneur's bricolage strategies

David wanted to be a pilot but his father would not hear of it. His grandfather tried to convince him to join fabrication but it all fell on deaf ears. It was in 1975 when he finished his O'levels, after a discussion with his less advantaged classmates, that he realized that working in his family business was worthwhile.

when they were talking about jobs, I told them that my father can employ them... I knew it that for me my father has a workshop, my cousins are working there I think, and they told me they were going to look for jobs in the factory. P28: Case 7 Entrepreneur.rtf - 28:54

He made the decision to work for his father but remained curious about the requirements for being an employee at the firm. His father was not convinced that he wanted to be an apprentice at the workshop and therefore did not guide him much on what to do.

...I did not wait to tell him I knew it was automatic I was going to work with him. ...because the man (his father) used to tell us that we shall work with him. When I finished, a week before, I told him that I want to start working and he asked me where and I told him in your workshop in Ndeeba. Then he said okay but he still thought it was excitement or what, but what I did I went ahead and came to know

the requirements but he did not tell me the requirements what I needed as a person clothes to wear at work and what...P28: Case 7 Entrepreneur.rtf - 28:57

After a few days, the father instructed him to go into the foundry department. It was extremely hot and smelly and disliked by employees. He however enjoyed the experience because he could apply knowledge from school.

He worked diligently in the foundry department and it is then that the father picked up interest in his work ethic and asked him to stay and work as a permanent employee. This decision created a rift between his parents, because his mother wanted him to further his education and not stay in the business. The father was now more insistent on him becoming a fabricator. He loved his mother and felt that her desire for him to study further was achievable, so he embarked on taking on short courses at every opportunity he found.

He continued working in the workshop but was also sent to a few vocational schools to study metal machining, welding, and fabrication. He continued to train in the same specialisation in Turkey, India, and Pakistan where he learnt press tools and designing skills and took other management courses. He also benefitted from other development partner programmes from GIZ and boasts of having gained a lot of knowledge from all that foreign experience.

...what you have heard that I studied infact I studied it was not that the job was sending me or I wanted a lot, I had an assignment to fulfil ...to make sure that my mother I had ...made her happy what I remember which is bad is that one of the last courses I did that was in Pakistan ...that is when she told me aha now I am satisfied the rest of the courses you study will be for you.P28: Case 7 Entrepreneur.rtf - 28:77.

He speaks highly of his training experience; the work he did in factories and the different universities that he was affiliated to. All those were useful to increase his understanding and capacity around metal works.

Moreover, he explains that sometimes the scholarships did not come in easy, he had to be persistent. He kept on tracking those who had applied and ensured that if they changed their minds about the opportunity, he was available to replace them.

10.3 The firm's development and bricolage behaviour

The company was then incorporated in 1979 as a limited liability company and David was registered as one of the shareholders of the company. He speaks with pride as he recollects the events. Since then, the firm draws resources in various ways as described below. The most important resource in this company is knowledge. The managing director benefitted from several courses and has used the skills to boost his enterprise.

Through various networks, the firm has gathered crucial resources. John Lugendo and Sons Ltd benefitted from being part of the local branch of Uganda Small Scale Industries Association (USSIA). It was through this association that the current owner gained a number of scholarships.

...but like me in foundry I did well for Uganda and the Directors from USSIA said they have given Uganda a chance we shall not look at the capacity whether degree or what again if someone comes from Uganda when he is under foundry. P28: Case 7 Entrepreneur.rtf - 28:95

In addition, the firm engages universities for more knowledge. This is through hiring interns or directly engaging scholars when it is challenged with technologies. He comments that some interns have been lazy, but applauds a few who have brought new knowledge in the company.

All of them, but mainly mechanical engineering, production engineering and electrical - then we go to MUBS they are very few. Most of them are my relatives...but when they come what they need in their line will be here. Like with Makerere University I have got Doctor Byaruhanga, he usually selects his students when he wants them to be what they are supposed to be. P28: Case 7 Entrepreneur.rtf - 28:336

The company also relies on the family network, where employees and interns can be children of close relatives who have an understanding of the science of fabrication. Through the various fraternities such as Rotary, he has made customers, advisers and friends with whom he shares his business ideas.

In addition to the local networks, his study abroad gave him the opportunity to create other networks abroad and the company has been engaged in research projects with some of them.

I stayed with their contacts and we did some research with them... We were using sodium chloride abroad for inoculate in aluminium... but when I used it here, it gave us negative results... but when they tried it, it failed but Britain discovered it was geographical-our atmosphere has high humidity. P28: Case 7 Entrepreneur.rtf - 28:109

In the early years, the firm hired unskilled labour who they trained on the job. The firm was too small to afford qualified employees and it thus worked with unskilled people to reduce the costs of hiring. These people were trained for a while before they qualified to be on the pay roll. Today it has permanent employees.

Given that many metal ores are not readily available in Uganda, this company smelts scrap metal to filter out components that it needs. The company boasts of being different from other fabricators who simply fix machines, it concentrates on designing machines and creating the machine after the designs. Their strength is in their ability to study the appropriate material for the machine and therefore create the machine with more knowledge. It focuses on making quality products. This has created a spiral of satisfied customers who continually refer other customers.

The others are fixing and doing but for us you need to be with the art of making something from the start. In that component you need to study the materials very much and understand them. P28: Case 7 Entrepreneur.rtf - 28:175

He devised a model that now helps him to minimise the losses due to partial payments by customers. He prefers to make standardised machines that can be easily sold to other customers if the original customer fails to return to pay for the machine.

Because the order you will have placed, it is not unique. Someone else will come and buy, but since we used your money (part payment) so you will be the one losing
P27: Case 7 Employee 1.rtf - 27:22

10.4 Response to environmental changes

This company is registered and it is growing with 25 permanent employees, increased assets, and sales. The managing director of John Lugendo has spent time advocating for the development of the sector and has been involved in many efforts to make the fabrication sector significant in Uganda's economy. He says, however, it is not easy to get there, since many of the plans are wrongly executed and eventually, the sector is side-lined.

... we have exhibitions for Jua kali (term used to define those who work under hard conditions/ fabricators) but when Uganda goes to those exhibitions, there are no fabricators apart from art and crafts, but there is no machinery. We went for an exhibition in Kenya when we reached to go for the exhibition authorities said everyone should meet their obligations, but this is jua kali at a small scale how can they transport the machinery? Other governments transport - Kenya might send lots of cars and you wonder.... Tanzania sends semi-trailers and people see them and they would be impressed by the things made in Uganda. P28: Case 7 Entrepreneur.rtf - 28:316

The sector is hit with a lot of substandard work, too much copying and fake products. The entrepreneur says that he spends so much time now protecting his work while ensuring that the work makes sense to the customer and does not ruin his reputation. Although there are price wars amongst the competitors he confidently says most of the really cheap products are of substandard quality. In addition, the firm protects itself by producing innovations that cannot be easily imitated. Their production unit is under strict supervision and is restricted to external people. It has therefore minimised the hiring of subcontractors, who often steal ideas and innovations. The company has

a large employee base that is trained to make standardised products, so that the quality of the work is not compromised.

Quality and production - much as you contract everyone knows a person who welds from Katwe has his own ways, the one who welds from Najjanakumbi has his own ... every time you contract him he will steal your ideas. P28: Case 7 Entrepreneur.rtf - 28:217

The firm aspires to get a steel foundry to improve the quality of its work, even though it envisions that the financial challenges associated with establishing such a big project will be enormous.

But the problem I have found, building a steel foundry in Uganda presents a problem: first of all, the things to establish it are not here and we have not got the knowledge yet. Most of the time we find a way of making a plan, we can get local alternatives. When it comes to electricity, I need to have my transformers which I separate into small quota. P28: Case 7 Entrepreneur.rtf - 28:294

Unfortunately, due to changes in the climate, their projections about agricultural activity have become less accurate. However, they have continued to be keen on satisfying the market demand. For instance, they are now producing machines to process non-traditional crops such as the moringa crusher, the falganizer that stores up forage for cows in dry seasons. They have also produced for the export market even though they experience institutional barriers such as high tax regimes for exporting firms.

...Uganda as a country has not promoted us. Exporting is like you have just stolen something. But when other countries open up, they are also like ours. They are very restricted. Can you imagine taking a machine to Tanzania - you have to dismantle it to show that it is like old ones that you are taking back. A new machine, someone would prefer bringing it from abroad - I mean I would rather get it from Europe than getting it from East Africa. P28: Case 7 Entrepreneur.rtf - 28:315

Although they have proper books of account, David says it is such a big struggle. The taxes seem to be more punitive for small firms. In fact, sometimes they downplay their achievements because they know that every time they make an achievement, the tax authorities will be at their door to demand a number of things.

10.5 Summary of John Lugendo and Sons Ltd

John Lugendo and Sons Ltd is a second-generation family business that was started in 1960 and incorporated in 1979. It is located in Ndeeba, in a largely informal neighbourhood on a relatively spacious facility. Specifically, evident is a large scrap yard where a variety of metal types are junked before reuse. This firm produces agro machinery and household equipment.

The firm mainly uses knowledge and skills, material (scrap), heavy machinery, a youthful employee cohort and a thick family network as resources. It displays bricolage behaviour by making do, when it chooses to use scrap metal as the main raw material for its machines. It smelts old metal to access metal components that are not readily available. Further still, it uses resources at hand by employing family members and utilising the unique knowledge and skills to make high quality products that lock out competition. By mixing old and new material to make machines, the firm is displaying the recombining of resources aspect of bricolage.

John Lugendo and Sons Ltd has advanced, as a result of deliberate mechanisms such as legitimation, where the current owner used his position as the chairperson of the USSIA to lobby for training opportunities. Moreover, he is able to understand the sector better and therefore has used this information to create products that suit the needs of society. He is involved in a number of social, political and technical circles that all together boost his legitimacy in the sector. The firm has grown with increased sales, labour, and equipment.

Chapter 11: Kakumba the blacksmith- Firm 8

11.1 Situation and context

Kakumba the blacksmith is a middle-aged man who has been in the fabrication trade for the past 27 years. His firm is micro and is located in Owino-Kisenyi, towards central Kampala. This Owino-Kisenyi area is being transformed by city authorities and a number of stalls have been demolished. Huge graders are paraded on the streets- an indication that there is still more demolition going on. When we arrived in the neighbourhood, we were treated with suspicion, until we confirmed that we were not working for the city authorities.

Kakumba was chatting with other charcoal stove-making fabricators. The types of charcoal stoves being made are varied and Kakumba's version seems to be the least sophisticated of them all. The fabricators work in open spaces and carry out loud conversations only interrupted by the metal they are hitting or welding. Kakumba claims to have trained many of the others and explains that this is the reason why they all have respect for him and feel obliged to give him updates on what is going on in the neighbourhood.

Kakumba takes us to his workshop, a small dark room made of mud and wattle. Inside there is just an old railway rod and two chisels, a hammer and stone with a pile of old iron sheets. He explains that the sheets were part of an old car. It is a very poor setting.



Figure 17: Kakumba making a charcoal stove in his workshop. Photo by candidate

He uses the palm of his hands to take measurements of the distances between different parts of the stove. He bends the cut metal with the iron rod. His rough hands seem to have done this for a very long time.

Outside Kakumba's workshop is a mammoth area of fabricators all operating small foundries littered in the pathways. Women manually power the foundries to earn UGX 5,000/= per day.



Figure 18: A locally moulded foundry outside Kakumba's workshop. Photo by candidate

11.2 The entrepreneur's bricolage strategies

Kakumba's family was famous for fabrication. Many of his forefathers were blacksmiths and as a family, they prided themselves in transferring the skill to their young men as a way of equipping them for the hard-adult life. At age 17, Kakumba and his cousins were trained by his uncle and grandfather. Within a week, he could comfortably make a charcoal stove.

As was practice in his family, when the mentor felt that the mentee had learnt, he would provide the mentee with the tools so that he could set out on his own. Kakumba was given a chisel and scrap sheets, as he recalls they were off-cuts of an old car. He then set off with just the old iron sheets, a chisel and a rail that had been meant for the railway. It was time for him to eke out a living.

Although his mentor could make saucepans, kettles, and charcoal stoves, he is not able to make this variety. He explains that the training required that he learnt how to make all those things but

he chose to specialise in making charcoal stoves because, he argues, it is the key to making other items.

Aaaa you can only learn one skill something which is like a key. P108: Case 8 Entrepreneur.rtf - 108:31

11.3 The firm's development and bricolage behaviour

Kakumba started his firm with the tools given to him by his uncle. He has not looked back since then. His remains a one-man business and when he needs extra hands, he takes his work to another fabricator to weld at a fee. He uses scrap or written-off metal to make between 12 and 20 stoves a day, depending on the availability of the iron sheets. Interestingly, he believes that he has survived because he carries luck. Kakumba's most important resource is this belief. This and other resources are attained in frugal ways as described below.

The scarcity in Kakumba's workshop is unmistakable. His operations are manual and the main material used is scrap metal. When he goes to different scrap yards to buy the old iron-sheets he usually buys the cheapest – the thinnest sheets that will withstand the welding heat. His justification for making the lowest quality stove is that it takes less time and allows him enough time to do other things such as walking to his out-of-town home early enough.

I make them once in a while when you see that the irons sheets can be welded. This one can also be welded and this can be longer lasting than the other, but someone buys because the other one has bars and it is welded, then he buys it expensively.
P108: Case 8 Entrepreneur.rtf - 108:85

He pays an exorbitant fee of UGX 50,000/=per month to rent this small makeshift structure. Kakumba made the tough decision to rent the space alone because of a previous experience when he rented with others and they failed to make their contribution, leaving him with a huge debt burden.

I pay 50,000/=...What can you do? It is the place where you are working from.
P108: Case 8 Entrepreneur.rtf - 108:70

Previously, Kakumba made charcoal stoves and waited for buyers to show up at his workshop. Currently he sells to a wholesale shop. Although Kakumba is quick to recommend us to his biggest customer, when we meet up with the customer, we realize that he does not know Kakumba personally. The customer argues that he deals with several other small businesses and he only knows those who are more active in supplying him.

I realised that there were many fabricators in Kisenyi, but most of them did not have somewhere to sell their products and even those that had used to sell them at a slow pace. They were very poor people who needed money urgently and were losing courage in the trade. But I also knew that what they were producing was needed in many households. P110: Case 8 Customer.rtf - 110:8

Besides doing fabrication, Kakumba is a traditional healer. He uses some of the funds from his traditional healing business to advance his fabrication business. He also trains acquaintances or distant relatives in fabrication at no cost.

They will come as a friend, or like I told you that, that is my grand parent or my young brother you teach him then he will also teach another one...The fact that you will be training a person you know it will be hard to charge him because you have to give back. P108: Case 8 Entrepreneur.rtf - 108:59

11.4 Response to environmental changes

Kakumba has not registered his business and does not intend to register it, because he does not think there are any advantages to registration. The equipment for this business has not increased or improved. He operates with no plan but handles situations as they occur. He has no growth aspirations and is comfortable that the business can sustain him. The business is simply surviving. He views fabrication as a stepping stone for bigger and better businesses. He describes his current circumstance as being tough. He believes that authorities are punishing fabricators. The current changes in the city have left him very pessimistic about the survival of his business. He argues that

now there are no returns and so plans on exiting it. He however does not have concrete plans of what to do next.

Me, I can still do it, as I have told you. I can plan and leave the other place, but you have to first rest as you think of what else to do. As I told you, things are not moving on well yet, so it is hard to get the good things. P108: Case 8 Entrepreneur.rtf - 108:67

Over the years, the price of scrap has increased and there's an increase in competition. Although he has trained many of the other fabricators, he has no control over their activities when they leave his firm. The market is saturated and yet he sees no reason to create strategies to get more customers. He has a laid-back attitude that disrespects aggression in marketing. He says that a particular customer is meant for a particular fabricator, therefore aggression is useless.

if a customer comes, when he is meant to be yours, he will be yours P108: Case 8 Entrepreneur.rtf - 108:58

As the business has been transitioning, he has maintained the same number of stoves he makes. However, he has changed his supply model. He used to hawk his stoves to various potential customers, but now he sells them to one person who buys the stoves at a wholesale price, which he finds acceptable.

11.5 Summary of Kakumba the blacksmith

Kakumba the blacksmith owns a micro fabrication business. After having been trained by his uncle and grandfather, he was handed basic tools to eke out a living. Now 27 years later, he is still using the same tools to make charcoal stoves. He is skilled in making one type of charcoal stoves, even though the product is basic and not appealing to the eye.

His entrepreneurial journey is very slow, using rudimentary tools with no new technologies except for a slight change in his supply model.

This one-man firm has a few resources which include myths and beliefs, material (scrap) and knowledge. It has survived on the myth or belief that the owner bears charms that make people wealthier. In a typical bricolage behaviour, he makes do by using scrap metal to make charcoal stoves and uses resources at hand by holding onto his myths and beliefs of better future and using the minimal knowledge to make stoves.

The venture is stagnated at the survival phase. The sales are minimal. While Kakumba boasts of having trained many people in the neighbourhood, he does not co-operate with them. In fact, Kakumba has plans of exiting the fabrication business because it is no longer profitable

11.7 Conclusion of Part 2

This part presented the cases, describing the status of the firms in the sample and how they display bricolage behaviour throughout the entrepreneurship process. It exposes the environmental context in which firms operate and how that context influences or determines their bricolage behaviour. It illuminates the character of the entrepreneur and how it fits in the environment. It further highlights the crucial resources used in each firm and further shows how they are accessed through bricolage behaviour. Additionally, it exhibits the relative performance of the firm. Generally, the firms use bricolage and complement it with other strategies like adaptive persistence and community embeddedness as described in the themes presented in Chapter 12.

Part 3

Chapter 12: Cross-case Analysis and Discussion

12.0 Introduction

This chapter is based on data derived from the case analysis. It presents the cross-case analysis, which highlights the similarities and differences between cases based on themes derived from the data and then relates the findings to existing literature. The chapter is arranged in four sections, the first section summarises the cases and displays how bricolage was portrayed with in the study. The next section illustrates the abstraction process followed by an elaboration of the themes and finally a chapter summary.

12.1 Summary of cases

The cases in the study are summarised in Table 8. This table extracts information from the within-case analysis and portrays the environmental context in which the firms engage in bricolage throughout the entrepreneurship process. It shows the nature of the enterprises and the bricolage behaviours of the entrepreneurs and firms, and how the firms respond to the turbulence in the external environment.

Table 9 presents illustrations of how firms in the studied displayed bricolage behaviour of making do, using resources at hand and recombining resources.

Table 8: Summary of bricolage strategies used by the firms

	Cases							
	1	2	3	4	5	6	7	8
Situation/Context	Unregistered. Established 23 years ago Windows & doors welder. Home based. One owner. Five full time employees. Permanent structures	Registered. Established 50 years ago. Imports and makes home and agro machinery. Strong family ties. Seven fulltime employees. Permanent structures	Unregistered. Established 14 years ago. Muffler maker and welder. Three owner managers and no employees. Roadside location. Temporary structures	Unregistered. Established 4 years ago Welding repair of home appliances. One employee. Roadside location. Temporary structures	Registered. Established 19 years ago. Windows & doors welder. Roadside location. One owner and six part-time employees. Permanent structures	Registered. Established 14 years ago. Machinist. One owner and one permanent employee. Temporary structures	Registered. Established 40 year ago Family business. Fabricates home and agro machinery. 28 permanent employees	Unregistered. Established 27 years ago Charcoal stove maker. One owner, No permanent employees. Temporary structures
Entrepreneur's resources	11 years of formal education. Apprenticeship training. Foreign exposure. Work experience and other business owner	11 years of formal education. Apprenticeship training from family. Foreign exposure. Other business owner	12 years of formal education. Apprenticeship training. Work experience and other business owner	No formal education. Apprenticeship training from family and work experience	11 years of formal education. Apprenticeship training. Work experience and other business owner	11 years of formal education. Professional training. Foreign exposure and other business owner	11 years of formal education. Professional training. Apprenticeship training from family. Foreign exposure	No formal education. Apprenticeship training from family. Other business owner
Firm's development and bricolage strategies	Bricolage through Apprenticeships and Networking and Community embeddedness.	Bricolage through Apprenticeships, Internships, Networking and Community embeddedness.	Bricolage through Apprenticeships and Networking.	Bricolage through Networking.	Bricolage through Apprenticeships and Networking.	Bricolage through Internships, Apprenticeships Networking and Community Embeddedness	Bricolage through Internships, Apprenticeships Community embeddedness. Networking.	Bricolage through Community embeddedness, Networking.
Response to Environmental changes	Re-organising resources and persistent adaptation.	Re-organising resources and persistent adaptation.	Exit plans	Exit plans	Exit plans	Re-organising resources and persistent adaptation	Re-organising resources and persistent adaptation	Exit plans

Table 8 highlights the context of the firms under study. These established firms had an average age of 23 years. Only half of them were registered. Firm 8 had the highest number of employees (28) while Firms 3 and 8 had no permanent employees. In regard to the entrepreneur's resources, Firms 8 and 4 had no formal education and others had an average of 11 years of formal education. They were mostly self-trained fabricators, but Firms 1, 2, 6 and 7 had foreign exposure while learning fabrication. These firms commonly bricolage through labour, i.e. apprenticeships and internships, networking, and community embeddedness. These firms operate in a highly volatile environment and only those who persistently adapt to changes are advancing (Firms 1, 2, 6 and 7) while others (Firms 3, 4, 5 and 8) plan to exit.

Table 9: Illustrative quotes showing the Characteristics of Bricolage from the study

Illustrative quotes from cases	Bricolage Dimension
<ul style="list-style-type: none"> • First I worked as a car mechanic, by then there were no silencers so I thought of starting to make silencers and I put it in mind that the person who made a silencer is a person like me I looked at the car which had an old silencer removed it, then I started making a new one looking at the old one that's how I started. • Some of them are not even spoilt. But because the business has failed, they want to dispose of the assets, so they come to someone to give them money. I then buy them, wash them and repair them and sell them again. • But with the ironsheets we buy from this area they break old cars into scrap and we pick out those that are in good condition and buy them then fold them to make exhaust pipes. • So we started our own business with the knowledge I had got, I bought a machine and started doing what we are doing now, windows and stuff. • 	<p>Making do: an active bias towards problem solving and opportunity exploitation as opposed to questioning whether a workable outcome is possible with the limited resources.</p>
<ul style="list-style-type: none"> • Yes but normally when it comes to the mortal of the machine you don't make it yourself you buy it because a mortal has very many functions. You buy it and then you use it as you want as long as you know that this machine needs this size of a mortal and also know the gear box you are supposed to buy. • When I started I was alone only working with the help of my wife. • For the stock am still stocking the good thing the job I am doing is for metal, metal never rots, it will always be there. • I bought them myself and it was a very special way of beginning. I started with the basic ones like a tool box, welding machine. • We go to the hardware and buy pipes that you see here. We get iron sheets from people with old cars. We put iron sheets and pipes to make them. 	<p>Using resources at hand: accumulating odds and ends that are assumed to come in handy.</p>
<ul style="list-style-type: none"> • I buy the machines I can afford and the other important thing is I fabricate my machinery like that one I fabricated it myself. • I use old iron sheets to make the charcoal stoves. The material is hard enough. • I go to the scrap yard and order a car body, if I get a large piece I can make up to four exhaust pipes from it. • I make machines that process food, I can make machines that help in a workshop for instance if you have many machines. • I have made machines that straighten wood I simply take measurements, find old bush bearings that fit the specifications and transform them into what I want to make. • We use ironsheets as you can see them, fold them, buy pipes and then weld to make something but the major problem in this is the electricity to sustain this business. 	<p>Recombination of resources for new purposes: combining and reusing resources for different purposes than those for which they were originally intended.</p>

12.2 Development of Themes

Thematic data analysis was adopted (Thomas, 2011). Systematically, 1st order codes and 2nd order themes were developed before the aggregate dimensions. The 1st order thematic analysis is based on respondent-centric terms while the 2nd order analysis is based on researcher-centric concepts, dimensions and themes. Therefore, the analysis institutes a joint reporting of both the respondent and researcher voices. It thus allows for high level insight and consequently, provides a link between data and new concepts. The emerging themes were further distilled into aggregate dimensions, which provided the basis for the data structure as presented in Figure 19.

The aggregate dimensions constituted theoretical representations of bricolage behaviour of firms operating in constrained environments. Figure 19, displays how bricolage behaviour is manifest in firms operating in poor settings, by portraying how bricolage includes other sub-processes of bricolage- scavenging, buttressing and refining. It further highlights how firms sustain bricolage behaviour through adaptive persistence.

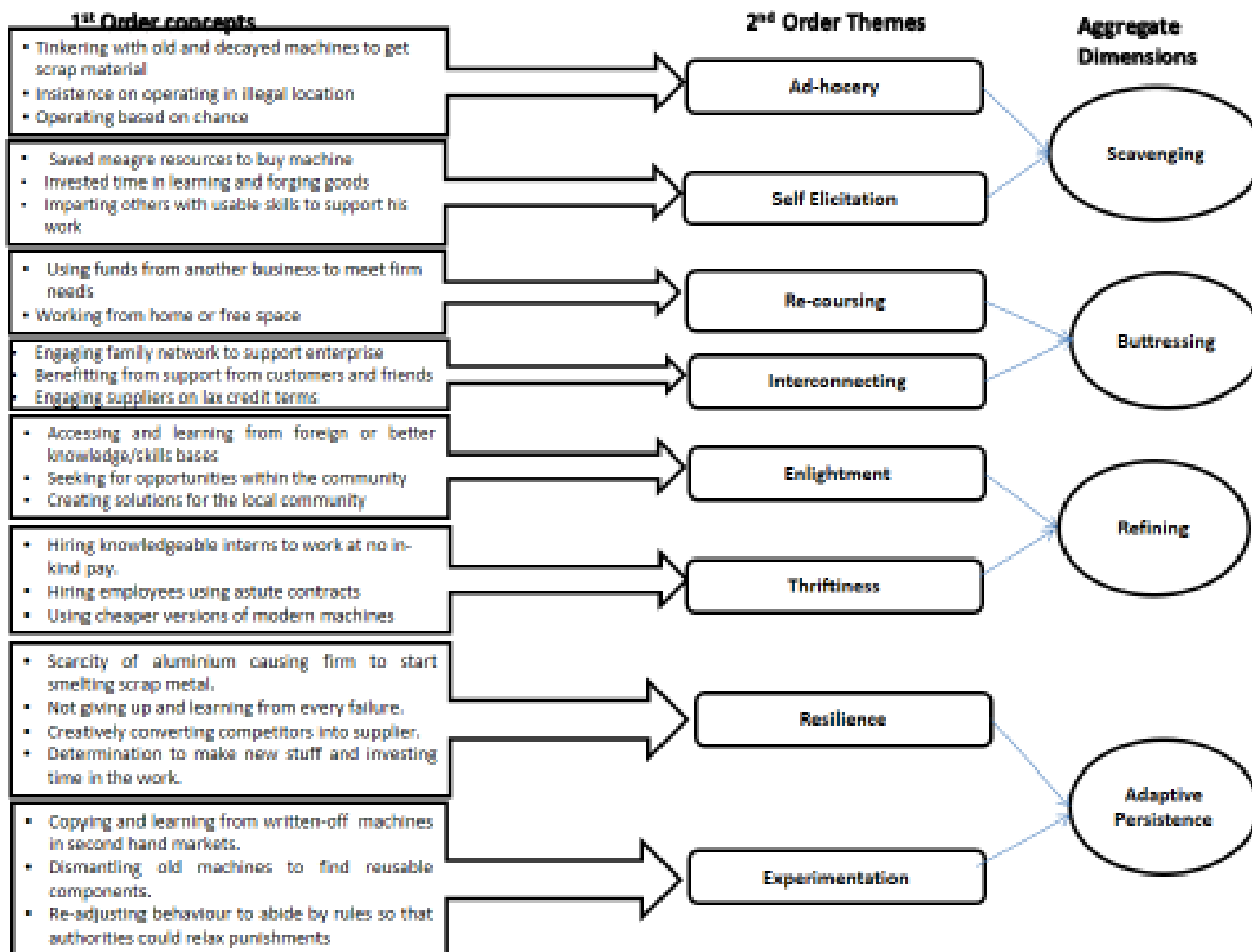


Figure 19: Progression from codes to themes

Bricolage behaviour is elaborated by scavenging, buttressing and Refining. Scavenging is demonstrated by ad-hocery and self-elicitation. The volatility in the environment instigates ad-hoc methods of finding resources. Firms sporadically apply any available resources and are quick to switch them as the environment changes. On the other hand, through self-elicitation, firms select from within their local domains and purposefully avoid expensive resources. They prefer to delve into their local or primitive capacities or capabilities. Scavenging is the common initial reaction to scarcity in the environment. It typifies how firms forge value by using available inefficiencies or defaults. Therefore, the scavenging behaviour aids firms to create often frugal resources that eventually become useful for their activities.

Buttressing is the firm's ability to create what it perceives as a stable resource base. This behaviour is enabled by re-coursing and interconnecting. Through re-coursing, firms use other funds available to them to extend, expand or diversify their activities. Equally, through interconnecting, firms use networks in the community, family or customers as support mechanisms. Therefore, buttressing behaviour is when firms ensure that the meagre and unstable resources at hand gain some form of stability.

As the firms perceive that their resource base is more stable, they refine the resources at hand.

Refining behaviour is when firms continuously improve or hone existing resources and technologies. Refining is espoused through enlightenment and thriftiness. Enlightenment is depicted in the form of enhancing knowledge and skills and is enabled by access to new knowledge and technologies. Alternatively, thriftiness is engaging astute management practices. It is when firms make more savvy management decisions especially by reducing costs.

Bricolage behaviour in established small businesses is enabled when firms persistently adapt to changes in the environment. This behaviour was synthesised from data as depicted in Figure 19. It thus, portrays the behaviour of adaptive persistence, which corresponds to the research question on how does the extremely constrained external context enable bricolage behaviour?

The study shows that adaptive persistence enables bricolage behaviour in extremely poor environments. Adaptive persistence is compounded by resilience and experimentation. Due to the high levels of volatility in their operational domain, firms need a high level of resilience to respond to the rapidly changing exogenous conditions rather than trying to transfer or create exogenous opportunities. Additionally, through experimentation, when the new solution is insufficient to solve the targeted problems they create an alternative workable solution. Adaptive persistence is therefore, adopted as an active and dynamic experimentation to meet challenges with the aim of finally solving them.

The research question on how bricolage unfolds in the entrepreneurship process is explained that bricolage is a process that varies throughout the entrepreneurship process. It is an elaborate activity that involves, scavenging, making do, buttressing, using resources at hand, refining and recombining resources. Making do was portrayed an active bias towards problem solving and opportunity exploitation as opposed to questioning whether a workable outcome is possible with the limited resources. Using resources at hand was depicted though accumulating odds and ends that are assumed to come in handy and recombining resources was highlighted through combining and reusing resources for different purposes than those for which they were originally intended.

12.3 Themes of the Study

The findings are arranged in 4 themes. The first three themes expose the nuances in bricolage behaviour of firms operating in extremely constrained environments. The last theme highlights how turbulence in the environment interacts with bricolage behaviour.

These themes provide insights of convergent and divergent patterns in the data (Eisenhardt, 1989a; Gioia, Corley, & Hamilton, 2012; Langley, 1999). The convergent themes portray common behaviour in all the cases and the divergent themes portray behaviour that may not be common to all cases but were at least similar in four cases. They are arranged as follows:(a) theme title;(b) explanation and meaning of the theme;(c) evidence and manifestation of the theme in the data;(d) highlighting areas of convergence and divergence within extant literature; and (e) conclusion. It is on the basis of these themes that the theoretical framework in Chapter 13 is developed.

12.4. Bricolage is a made up of sub-processes of scavenging, buttressing and refining

12.4.1 Meaning of the theme

Bricolage as a process is not just about making do, recombining resources or using resources at hand. It has other underlying processes of scavenging, buttressing and refining, which, albeit in a subtle manner, facilitate it.

12.4.2 Manifestation of the theme in the data

In the initial stages of firm development, due to excessive limitation in resources such as ideas knowledge, skills, tools and networks, the firms mobilise resources by scavenging. Scavenging is a desperate search for resources. Firm 8's owner found a piece from a railroad to act as a bender and Firm 3's owner learned welding by hanging around other welders. It is an informal activity that ushers firms into making do. So, the firms make do with the scavenged resources and as these

resources improve or increase, the firms start to buttress them, by creating some form of stability. Stability is ensured through activities such as starting another business (Firms 1, 2, 3, 5 and 6), copying skills from others in the sector (Firms 2, 3, and 4) and training labour to improve production (Firms 5, 6, and 7). It is then that the firm starts to intently use the resources at hand. The resources at hand will gradually be refined through activities such as more training (Firms 2, 6, and 7), conformance to regulatory requirements (Firms 2, 6, and 7) and better arrangements within networks, especially engaging with suppliers, customer and the community (Firms 2, 6, and 7). It is only at this point that intense recombination of the resources to meet new opportunities and problems, begins.

12.4.3 Comparison of the theme with literature

Much of the research on bricolage up to now has adopted the formative constructs of making do, using resources at hand and recombining resources as were presented in Baker and Nelson's (2005) seminal work. Although Perkmann and Spicer (2014) teased out imprinting as another construct that facilitates organisational bricolage, there is still limited understanding of what bricolage is beyond these underlying constructs. This work exposes that scavenging, buttressing, and refining are sub-processes of bricolage. These sub processes are useful because they link the previously known constructs of bricolage. While Davidsson et al (2017) posit that reference to bricolage behaviour should only be made when there is evidence that all the previously known dimensions of bricolage are in play, they don't highlight how this happens. This work sheds more light on bricolage behaviour by showing that scavenging, buttressing and refining interlink making do, using resources at hand and recombining resources respectively. It therefore addresses how are all underlying constructs can be experienced together.

12.4.4 Conclusion of the theme

Therefore, scavenging, buttressing and refining are sub-processes of bricolage in firms operating in poor environments. The work extends the bricolage theory by exposing its underlying sub processes. It shows how the sub-processes connect the already known constructs to culminate into a process.

12.5 Every resource can be used for bricolage

12.5.1 Meaning of the theme

This theme explains that the range of resources used by firms operating in poor contexts is wide, including ordinarily under estimated or unwanted resources.

12.5.2 Manifestation of the theme in the data

The entrepreneurs under study imbued originally undervalued or worthless resources with value by continuously inventing processes and products that improved the usability of the resource on hand such as picking parts from rotten machines. Therefore, the firms have a multiplicity of resources spanning from intangible resources such as myths and beliefs, their family members, customers, competitors, suppliers, and the community. Many of these resources are simple, rudimentary and often doubted to have the potential to create value. Table 8 describes the scope of resources in poor contexts that are used during bricolage. It portrays and implies that firms manipulate or convert every available resource for their development.

Table 10: Additional Environmental Domains Used in Bricolage in poor settings

Resource Domain	Description	Thematic motivation
Inputs		
Labour	Using different forms of labour engagement and skill sets varyingly throughout the entrepreneurship process.	The more the firm develops, the more it will change its labour bricolage engagements
Family	Relying on family resources and actively seeking their moral, physical and financial support regardless of their abilities or competences.	The more the firm continually embeds in the family network in bricolage the more likely it will develop.
Beliefs	Ignoring the environmental circumstances and persevering, imbued with a belief of entrepreneurial success or destiny.	Entrepreneurs who use myths and beliefs for bricolage are more likely to persevere through the early stages of firm development
Other business activity	Absorbing shocks (such as financial distress, low uptake of products) and providing shared resource support to the firm.	The more firms advance through bricolage, the more likely they will use another business to support its primary venture.
Competition	Encouraging the sharing of ideas, customers and equipment to create access to what would otherwise be unavailable.	Firms which co-operate with competition for bricolage are more likely to persevere in the earlier stages of development
Community Embeddedness	Working with the local community by devising processes and products that suit their form and interests.	The more a firm embeds in a variety of social networks, the more likely it will develop
Adaptability	Consistently repositioning the firm in the regulatory and institutional environment to address new and abrupt challenges	The more persistently an entrepreneur adapts to changes in the environment, the more likely they will productively use bricolage to advance their enterprise.

Owners of firm 1, 2, 3, 4, 6, and 8 attested to having a supernatural force that either encouraged or sustained them into fabrication. Their religious or cultural beliefs motivated their behaviour to start, a business. Firms 1, 2, 5, 6 and 7 expressed how their activities were boosted by the customer or supplier networks. Firms 1, 2, 3, 4 and 8 also reported how family and relatives provided moral, knowledge and financial support in the starting phases. The firms depended on their customers as marketing agents and their suppliers were willing to extend credit for them to continue with their operations. Additionally, firms 1, 2, 6, 7 and 8 showed how their close link to the community was

a useful resource for them, since they were guaranteed of both customers and advocates for their goods.

12.5.3 Comparison of the theme with literature

While Baker and Nelson (2005) highlighted physical inputs, skills, labour, customers and regulatory and institutional resources as the resource domains in entrepreneurial bricolage, this work finds that the resource domain in poor contexts is wider, including both the tangible (labour, family relationships, other business activity and competitors) and the intangible (myths and beliefs, community embeddedness and persistent adaptability).

Adaptability is an active and dynamic experimentation to meet challenges with the aim of finally solving them (Klarner & Raisch, 2013). Through adaptive persistence, firms address environment volatilities by adjusting their activities through increased recombining of resources at hand to meet new challenges (Hoang & Gimeno, 2010). While it may be argued that adaptability is a skill, previous studies have not emphasised its critical role in bricolage.

Additionally, community embeddedness in this study is revealed as an important aspect for bricolage. While previous studies may have indicated the importance of the local community in entrepreneurship in Africa (Kuada, 2010; 2015), this work portrays how community embeddedness, supports bricolage behaviour.

This study provides evidence that sometimes when bricolage persists, it can lead to resources being used creatively. The finding highlights that when bricolage behaviour continues during firm development it can transform from necessity to innovation based. This work contradicts the view that suggests that resources needed by entrepreneurial firms are often controlled by others external

to the firm (Katila et al., 2008) and therefore highlights the importance of internal resources in firm advancement.

It has been argued that firms engage in bricolage out of necessity and in order to ensure the affordability of needed resources (Desa & Basu, 2013). It thus contradicts the notion that if a firm adopts “mutually reinforcing patterns... a firm identity and community of practice that cements firms into the practice of parallel bricolage and stalled growth” (Baker & Nelson, 2005, p.354).

Resource constraints serve as sources of creativity and innovation (Fisher, 2012) but this creativity in resource-poor firms is only temporary. Sonenshein (2014) argues that firms tend to become more creative so that they can survive as new ventures, but as they grow their creativity reduces because they have access to more resources. This study disagrees with Sonenshein (2014) and highlights how firms in extremely constrained environments creatively utilise their resources even when they are advancing in the entrepreneurial journey. The work exhibits that entrepreneurs improve their ventures when they continuously rearrange their meagre resources.

12.5.4 Conclusion

Therefore, firms that creatively utilise any resource under their control are better positioned to advance their ventures. The work extends bricolage literature by highlighting that firms which creatively transform their meagre resources tend to advance more along the entrepreneurship process.

12.6 Bricolage is a process that evolves during the entrepreneurship process

12.6.1 Meaning of the theme

In resource-constrained environments, bricolage behaviours are not one-off activities; they are used by firms throughout their entrepreneurship process.

12.6.2 Manifestation of the theme in the data

This study showed how bricolage behaviour was manifested throughout the entrepreneurship process. Its manifestation however, was varied. All firms were making do in the starting phase. As they progressed in the surviving phase, they began to use resources at hand, by using resources from another business, employing former apprentices and surrounding themselves with a close network of customers (Firms, 3, 4,5, and 8). In the growing phase, they were combining technologies, machine components and networks to address new challenges (Firms2, 6, and 7,).

12.6.3 Comparison of the theme with literature

In previous literature, bricolage was portrayed as an event (Baker & Nelson, 2005; Kwong et al 2016). In extremely poor contexts, bricolage evolves, and is continuous process in the development of the firm. Baker and Nelson (2005) defined bricolage as making do with resources at hand and recombining them for new purposes. Bricolage has further been referred to as a formative theory (Senyard et al., 2009), which encompasses these three constructs of making do, using resources at hand and recombining resources (Baker et al., 2003; Baker & Nelson, 2005). Most studies on bricolage have focused on it being a formative construct (Senyard et al, 2009; 2014) and have evaluated it in cross-sectional settings. When bricolage is evaluated as a formative construct- a set of other constructs- it blurs the fact that the constituent constructs are linked. This study confirms the underlying constructs of bricolage. It however reveals that bricolage is a process that evolves throughout the entrepreneurship process. There is varied intensity with which the underlying constructs of bricolage are expressed during firm development. In the starting phases, the firm does more making do than using resources at hand or recombining resources. As the firm transitions into the surviving phase, then using resources at hand is more predominant than making do or recombining resources. When the firm is in the growing phase, it engages more in recombining resources and less in making do or using resources at hand.

This evidence contradicts the notion of any selective - event based bricolage or parallel bricolage-practice of continuous bricolage (Baker & Nelson,2005; Kwong et al, 2016)) because it describes that while bricolage may be continuous, its form changes throughout the development process. This means there are nuanced versions of bricolage behaviour that can be evaluated at any point within the entrepreneurship process.

12.6.4 Conclusion of the theme

Therefore, bricolage is an on ongoing process of resource mobilisation in the entrepreneurial process of firms in resource poor contexts. This work extends the bricolage theory by exposing it as a process and not alone off event in the entrepreneurial process.

12.7 Bricolage behaviour is enabled by adaptive persistence when there's volatility in the environment.

12.7.1 Meaning of the theme

This theme means that when the external environment is continuously volatile, it is the firms that persist in adapting to change that are likely to flourish from bricolage behaviour.

12.7.2 Manifestation of the theme in the data

In the study, it was revealed that firms operated in a very volatile environment. The firms which were more dynamic in terms of experimenting for solutions whenever the environment changed advanced more than others. Firms 3, 4, 5 and 8 were operating without persistently adapting to changes in the environment and were either not growing or planning to exit. On the other hand, Firms 1, 2, 6, and 7 continuously responded to the rapidly changing exogenous conditions and in turn created opportunities that led to firm development. This is exhibited by Firm 1 becoming home-based when chased off the street, Firm 2 recombining imported goods with local ones to

reduce production costs and taxation, and Firms 6 and 7 making their own machines when they were unable to afford high tech machines.

12.7.3 Comparison of the theme with literature

Amidst resource scarcity, entrepreneurs create varying permutations of their social and economic resources at hand to manage changing regimes. A large portion of the entrepreneurship literature approves bricolage as a strategy to counteract resource scarcity in penurious environments (Stinchfield Nelson and Wood, 2013, Baker and Nelson, 2005, Kwong et al, 2016). Studies have highlighted the importance of both internally and externally collaborations in bricolage behaviour (Kwong et al, 2016; Vanevenhoven, Winkel, Malewicki, Dougan and Bronson, 2012). However, most of them concentrate on the internal mechanisms of bricolage and ignore the how volatility in the external environment influences bricolage behaviour. This work facilitates this discussion by aiming at bricolage behaviour when there is volatility in an extremely constrained environment.

The study shows that adaptive persistence reinforces the existence of successful bricolage in a firm. The study describes adaptive persistence amidst extreme resource scarcity. It displays that small firms with the capacity to absorb shocks tend to maintain functionality. The firms have a dynamic adaptability which sustains and develops with change. It therefore extends this the concept of adaptive persistence to bricolage literature, by arguing that in cases of vulnerability, firms tend to do new things and redesign their activities to sustain functionality.

12.7.4 Conclusion

Therefore, the more persistently a firm adapts to the changes in the environment the more it facilitates bricolage behaviour. The study extends literature on bricolage by highlighting that in extremely constrained contexts, bricolage is only successful if firms persistently adapt to changes in the environment.

12.8 Chapter summary

The preceding themes explain how bricolage behaviour unfolds in extreme resource-constrained environments. They describe how firms engage in bricolage at the different phases of the entrepreneurship process and expose the sub-processes of bricolage.

This study presents how bricolage behaviour among firms in resource-constrained environments varies in the different phases of the entrepreneurship process. It depicts ad-hoc and short-term strategies deployed by firms when utilising resources. It also portrays how these behaviours change depending on the firm's stage of development. The work illuminates the importance of context in understanding bricolage behaviour, because it explains how firms that are socially embedded in their local communities and are keen to adapt to changes within the environment develop. Further still, this work adds to bricolage theory by exposing that it is a process and not an event. It sheds more light on some of the salient features of bricolage-scavenging, buttressing, and refining-and how these interact with the known composite construct of making do, using resources at hand, and recombining resources.

This chapter has discussed the findings of the study by presenting data driven themes that illuminate bricolage behaviour of established firms operating in extremely resource constrained environments. The next chapter presents the emerging theoretical framework based on the themes presented in this chapter.

Chapter 13: Theoretical Contribution

13.0 Introduction

The discussion that follows describes a theoretical framework that has emerged from the study to explain bricolage behaviour of established firms in poor contexts. The chapter is arranged in three sections: the emerging theoretical framework, the propositions that emerge from the framework and the summary.

The framework shows how each of the themes in Chapter 12 is linked to the theoretical insights. It exposes how the study abstracts from stories which contain rich data (Pratt, 2009) to showing theoretical insights (Gioia et al., 2012) that are crucial for new theory development.

13.1 The emerging theoretical framework

Theory is a coherent set of general propositions used to explain relationships between observed phenomena (Zikmund, Carr, Griffin, & Fuller-Jacobsen, 2010). The emerging theoretical framework establishes the dynamic relationships among themes (Gioia et al., 2012; Whetten, 1989) and provides insight into bricolage in extremely poor contexts. It shows how within poor contexts resources are perceived and utilised for value. In addition, it explains how bricolage in extremely poor contexts is an ongoing process that evolves during the entrepreneurship process. Further still, it highlights that the bricolage process involves other sub-processes.

Figure 20 portrays how bricolage manifests in poor contexts as a never-ending process, made up of sub-processes of scavenging, buttressing and refining. It shows that the entrepreneurship process as demarcated by the starting, surviving, and growing phases influences bricolage behaviour.

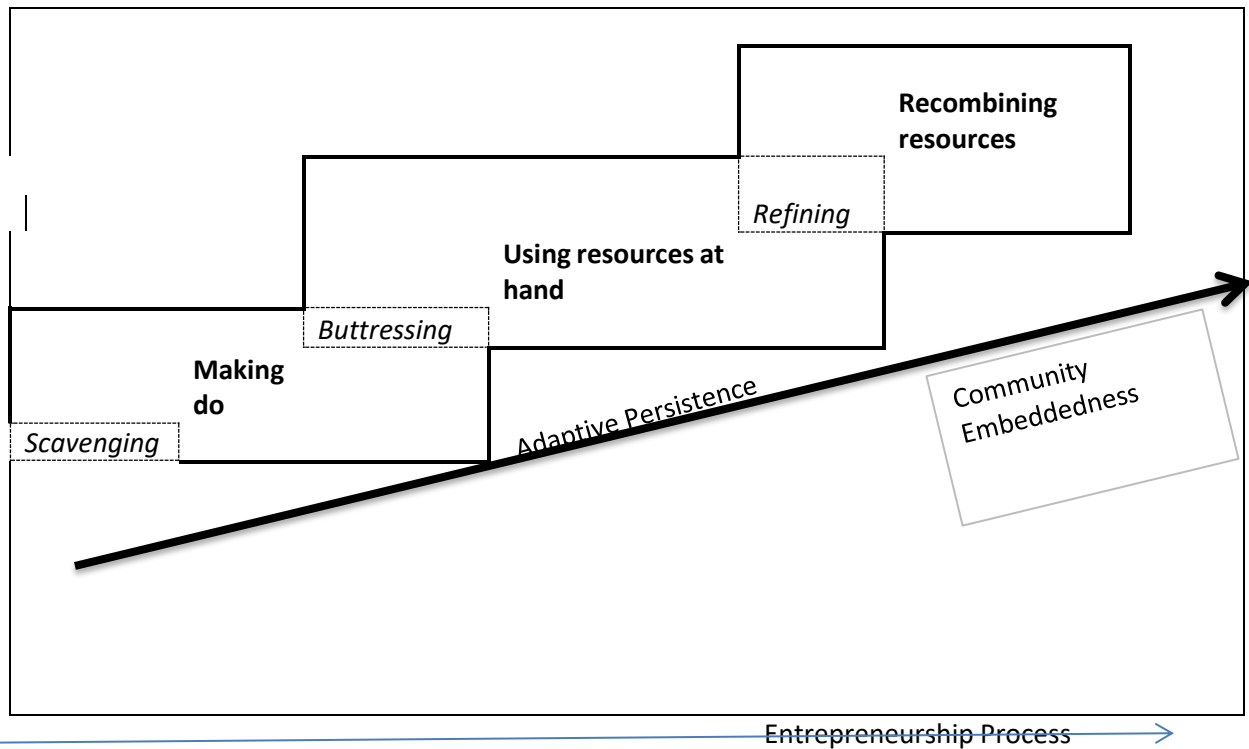


Figure 20: Theoretical Framework for Entrepreneurial Bricolage in extremely poor contexts

In the starting phase, firms are highly informal and are very poor so they mobilise resources through scavenging. Then they start making do with the scavenged resources. In order to create a level of stability, firms begin to buttress the resources that are available to them. They consolidate what they have gathered and use the resources at hand to survive in the entrepreneurship process. If firms manage to survive, and have mastered how to use available resources, they begin to refine them so that they can be more competitive. Refining resources exposes them to more recombining of resources and consequently development. As firms develop, they reduce their informalisation but do not totally get rid of it and in later phases, some of the informality becomes legitimised by the community. Thus, firms that are deeply embedded in their local community advance more. Because the environment is highly volatile, it is only firms that persistently adapt that advance.

13.1.1 Explanation of the Theoretical Framework

The underlying constructs of bricolage are interlinked by sub-processes of scavenging, buttressing and refining. In the initial stages of the entrepreneurial process, due to excessive limitations in resources such as ideas knowledge, skills, tools and networks, the firms mobilise resources by scavenging. They are in a scavenging mode because they latch onto everything they believe can be transformed into a useful resource. They search around their communities for any possible resource, including myths and ideas and family labour to get started. This is a predominantly informal exercise. The scavenging then leads them into creating often frugal resources that eventually become useful for their activities: for example, picking up rail road scrap to support metal bending, using home compound space as a workshop and asking unskilled household members to contribute to labour. When the firm has managed to scavenge a certain number of resources, then it will make do with what is available.

Since the firms are generally extremely poor in the starting phase, they strive to create some form of stability in terms of balancing resources used in their enterprises. They are now transitioning into the surviving phase. From making do, firms begin to buttress resources. This is when the firm consolidates the available resource varieties and organises them into a usable resource base. Activities in this phase tend to be highly informal. It is after the buttressing that the firm is able to use resources at hand.

With a certain level of stability in the available resources, the firms will consider refining their resources so that they can stay ahead of the fierce competition. Resource refining is used to improve the quality of available resources. It is manifest in activities such as training, registration and networking. After refining the firm is able to recombine resources. Recombination is possible

because the firm's activities are more formal - reducing the time it spends on circumventing regulations. Moreover, it is more involved in the local community, which becomes both an active advocate and a customer for new combinations.

The firm's ability to advance from one phase to another is dependent on its adaptive persistence. Adaptive persistence is an active and dynamic experimentation to meet challenges with the aim of finally resolving them. When the external environment is highly volatile, firms which persistently adapt to newer means of pursuing resources enjoy a higher probability of future development.

Additionally, the firms that are embedded in the community in which they are located have a higher chance of legitimating their activities and are more likely to develop. Their deep involvement in everyday community activities cements their norms and behaviours and further boosts their popularity.

In sum, bricolage behaviour is continuous throughout the entrepreneurship process of firms in poor contexts. It involves sub-processes of scavenging, buttressing and refining that link the bricolage process as it transitions in the different phases of firm development

13.2 Propositions emerging from bricolage theoretical framework

The emerging framework clarifies that bricolage is a process that incorporates other sub-processes. In this section, the relationships of the study are displayed using meta-conjectures (Weick,1989) by looking for what is unexplained (Lewis & Grimes,1999) in the theory of bricolage. The study provided insights and explanations that address the variances or tensions (Poole & Van De Ven, 1989) of temporal and spatial facets of bricolage.

By articulating the similarities, differences, and interrelations of bricolage theory, the study produced a “contextualised purview” (Lewis & Grimes, 1999) of the partial truth. This is seen particularly in sections 13.2.1, 13.2.2 and 13.2.3. It further introduced new terms to resolve the paradox (Poole & Ven, 1989), which broadens bricolage theory by exposing nuances that have the potential to accommodate diverse representations (Gioia & Pitre, 1990), as is shown in sections 13.2.1, 13.2.2 and 13.2.3. Therefore, its contribution is to demonstrate how an “addition of a new variable significantly alters our understanding of a phenomenon by reorganizing our causal maps” (Whetten, 1989, p. 493). Moreover, the insights created are meant to offer “a novel approach to integrating prior thought and research into some model or framework that constitute a different way of understanding some phenomenon”(Corley & Gioia, 2011,p. 19). In this study, the inclusion of new variables- adaptive persistence and community embeddedness, the explanation of how bricolage manifests and highlighting how using or connecting with “worthless” or “undervalued” resources such as myths and beliefs determine behaviour are exhibits of a theoretical contribution.

This work provides a revelatory insight (Corley & Gioia, 2011) by exposing the theoretical boundaries (Bansal & Corley, 2012) of bricolage- which are; bricolage is made up of sub processes, every available resource can be used for bricolage and bricolage is a process that evolves throughout the entrepreneurship process as is seen in sections 13.2.1, 13.2.2 and 13.2.3 respectively. Further still, this work resonates with the prescience argument (Corley & Gioia, 2011) that demands providing insights into phenomena by advancing knowledge in a purposeful way.

The study also provides propositions (Eisenhardt, 1989a) which are ingredients of a robust theory. Propositions represent statements about the framework that highlight relationships among the dimensions (Eisenhardt & Graebner, 2007) and logically express causality in the relationships (Whetten, 1989). The propositions are derived from comparing emerging theory with literature.

Firms tend to develop when they involve the family network (Anderson & Jack, 2002; McKeever, Jack, & Anderson, 2015). This study highlights how family provides moral, financial, and technical support, to boost firm advancement. Moreover, it clarifies that family involvement is beneficial to the firm regardless of the socio-economic standing of the family. The study thus proposes that:

Proposition 1: The more the firm continually embeds in the family network in bricolage, the more likely it will develop.

It has been recognised that beliefs shape entrepreneurs' behaviours. Adhering to beliefs tends to blind or seal off information outside one's belief system (Mcgrath, Macmillan, Yang, & Tsai, 1992). Moreover, when social and cultural beliefs are overlooked, efforts of building inclusive markets may be stifled (Mair, Marti, & Ventresca, 2012). This work depicts how myths and beliefs fuel persistence in the early phases of the entrepreneurship process. The study therefore proposes that:

Proposition 2: Entrepreneurs who use myths and beliefs for bricolage are more likely to persevere through the early stages of firm development.

In an African setting, entrepreneurs tend to use resources from their enterprises to start other economic activity as a way of protecting themselves from the highly volatile environment (Langevang et al.2012; Rosa et al., 2006). In other settings, similar behaviour is referred to as portfolio entrepreneurship (Sarasvathy et al., 2013). This study revealed that during the survival phase of the entrepreneurial process, firms started other business activity and consequently used these resources to develop their ventures. It thus proposes that:

Proposition 3: The more firms advance through bricolage, the more likely they will use another business to support their primary venture.

Entrepreneurial firms create strategic alliances based on needs and social opportunities (Eisenhardt & Schoonhoven, 1996) even though they are reluctant to partner with powerful players (Katila & Chen, 2008; Katila et al., 2008). In this study the partnerships with the competitors was crucial for firms especially during the early phases of development. However, as the firm advanced the co-operation with competition reduced. The study proposes that:

Proposition 4: Firms which co-operate with competition for bricolage are more likely to persevere in earlier stages of development.

There are sub-processes that link the existing constructs of bricolage. Scavenging one of the sub processes and it is characterised as a desperate search for resources. The study reveals that in penurious environments, there are no obvious resources available for entrepreneurs, rather entrepreneurs, scavenge for resources. Then the firms will use the scavenged resources to make do so that available opportunities are exploited.

Therefore the study proposes that:

Proposition 5: The more a firm scavenges in the early phases of the firm development, the more likely it will manage to make do.

The second sub-processes that links making do and using resources at hand is buttressing, which is characterised by organising available resources to create stability. The study explains that in penurious environments, firms can only use resources at hand after they have accumulated enough resources. Accumulating and organising the scant resources to a stable form is buttressing.

Therefore the study proposes that:

Proposition 6: The more the firm buttresses resources, the more likely it will use resources at hand for bricolage

Firms that are socially embedded tend to have increased performance (McKeever et al., 2015). Having social networks is an avenue for creating and renewing positive identities that are consequently translated into usable resources (Duymedjian and Rüling, 2010). McKague and Oliver (2016) highlight that network bricolage is important for reconciling African informal indigenous institutions with foreign formal institutions. This study, conducted in Africa extends the concept of network bricolage by showing how relationships with a multiplicity of actors enables easy access to cheap resources. Having the cheap resource option protected the firm's expensive external sources and thus facilitated development. The study thus proposes that:

Proposition 7: The more a firm embeds in the community, the more likely it will develop

Organisations are malleable and can realign their activities with evolving conditions (Henry Mintzberg, 1990). Moreover, adaptation can occur at varying paces within the organisation (Brown

& Eisenhardt, 1997; Eisenhardt & Tabrizi, 1995; Eisenhardt, 1989a). This study introduces the concept of adaptive persistence, which is an active and dynamic experimentation to meet challenges with the aim of finally solving them. This concept captures the meaning relevant to people living the experience and yet it is adequate for scientific theorising about the experience (Steyaert, 2002). The study found that firms which persistently adapted to environmental upheavals tend to develop faster than those that did not. It thus proposes that:

Proposition 8: The more persistently an entrepreneur adapts to the changes in the environment the more likely they will productively use bricolage to advance their enterprise.

Bricolage theory posits that entrepreneurs create opportunities and markets by making do with resources at hand (Baker & Nelson, 2005). Bricolage behaviour through recombining resources explains innovativeness in new firms (Senyard, Baker, Steffens, Davidsson, 2014). In this study, it was revealed that bricolage behaviour varies along the entrepreneurship process. When bricolage behaviour becomes sophisticated, innovation in the firm increases and consequently the firm develops. Therefore the study proposes that:

Proposition 9: The more firms increase sophistication in their bricolage behaviour the more likely they will develop.

The work contends that bricolage is a process that evolves along the entrepreneurship process. This view departs from conceptualising bricolage as either a one-off behaviour that is manifested by having all the constituent constructs (making do, using resources at hand and recombining resources) involved at the same time in the same intensity (Baker et al., 2003; Senyard et al., 2009).

For example, when bricolage is defined as a bias towards action and active engagement with problems and opportunities, to combine and reuse resources for different applications than those for which they were originally intended or used (Baker & Nelson, 2005 p.334) then it is fairly hard for the wider audience to understand (Waldron et al., 2015) and interpret what is meant by bricolage.

However, it may get more understandable when bricolage is described as the continuous and creative assembling of resources at hand to exploit opportunities by persistently adapting means to mitigate emerging challenges while actively embedding activities to suit the local community needs. Although this description is less abstract, it is useful for theorising because it incorporates interactions at various levels and connects behaviour and context. Linking behaviour to the context could aid in making the theory more accessible to practitioners. It argues for bricolage as an evolving process, that changes within the entrepreneurial process and that the intensity of the constituent constructs varies as the firm develops. The study proposes that:

Proposition 10: The more a firm develops along the entrepreneurship process the more likely its bricolage behaviour will evolve.

This work brings the concepts of scavenging, buttressing, and refining as important sub-processes that link the bricolage construct. Refining is characterised by improving the available resources. It illuminates the bricolage theory by explaining some of the sub-processes involved in knitting together its constituent constructs. It integrates these sub-processes into the bricolage theory to explain how a firm with a bricolage identity can develop. The study portrays that refining links using resources at hand to recombining resources. It therefore proposes that:

Proposition 11: The more a firm refines its resources the more likely it will recombine resources for bricolage.

13.3 Chapter Summary

Over the past decade, the entrepreneurship field has benefitted from nuanced theories such as bricolage. As we seek to advance the field of entrepreneurship, it is crucial to transpose such emerging theories to various settings so that we can understand them better. This study extends the bricolage theory by highlighting that bricolage is made up of sub processes of scavenging, buttressing, and refining. It further elaborates that poor contexts, every resource can be used for bricolage. It also exposes that bricolage is a process that evolves throughout the entrepreneurship process. This study, therefore contributes to the understanding of how entrepreneurs behave (Bird & Schjoedt, 2009) by revealing that firms are more likely to develop when they are embedded in their communities by persistently adapting to the turbulent changes in the environment. This therefore adds to the understanding of entrepreneurial bricolage especially when firms are operating in extremely poor external settings.

The study therefore provides ten propositions that highlight the nuances of bricolage behaviour in extremely poor contexts. They include how unlikely resources like myths and beliefs, family networks aid in advance bricolage behaviour. They also exhibit how bricolage evolves along the entrepreneurship process and how firms that embed in their communities and persistently adapt to environmental turbulence benefit more from bricolage behaviour.

The next chapter concludes the study with an evaluation of the extent to which the study has answered the research questions, a summary of its contributions as well as limitations and suggestions for further study.

Chapter 14: Conclusions, Contributions and Recommendations

14.0 Introduction

The study set out to extend our understanding of bricolage behaviour for small firms operating in extremely constrained environments. It took as a point of departure bricolage theory as described in Chapters 1 and 2. The evidence as described in Chapters 4 to 12 shows that in poor contexts, bricolage is an ongoing process in which resources are utilised to varying degrees. Therefore, bricolage incorporates the sub-processes of scavenging, buttressing and refining that link the previously known constructs of making do, using resources at hand, and recombining resources. Additionally, in such settings everything is a resource that can be bricolaged. In Chapter 13, an emerging theoretical framework of how bricolage manifests in firms operating in poor contexts is described. This chapter concludes the study by highlighting the answers to the underlying research questions and highlights how these make distinct contributions to the body of knowledge (Corley & Gioia, 2011; Bergh, 2003; Rynes, 2002; Whetten, 1989). Implications, limitations, and suggestions for further studies are also included.

The chapter is arranged into four sections. The first section is a summary of the main conclusions in relation to the subsidiary research questions. The second section explains the study's implications and recommendations for stakeholders. The third and fourth sections describe the study's limitations and suggested areas for further research.

14.1 Summary of the main conclusions

In this section, the research questions are answered by linking the literature, findings, discussion and framework presented in the previous chapter. The logic of how elements of the theoretical

framework and propositions outlined in the previous chapter link to the research questions is as follows Propositions 7, 8 and 13 respond to Research Question 1. Research Question 2 is answered by propositions 2, 3, 4, 5, 6, 9 and 10 While Research Question 3 is answered by propositions 11 and 12. Each research question is discussed in turn in the following pages.

14.1.1 How is bricolage behaviour manifest in firms operating in extremely poor environments?

In resource poor contexts, bricolage behaviour involves sub-processes of scavenging, buttressing, and refining. Firms develop through bricolage. They scavenge or hunt for starting resources before they can make do with them; when they make do, then they have to buttress the resources to ensure that there is some form of stock they can sustainably use. Eventually, the stock of resources is refined, and it is then that the resources are recombined.

Davidsson, Baker, & Senyard (2017) recently covered the more salient aspects of entrepreneurial bricolage and considered making do with resources at hand, recombining resources for new purposes, refusal to enact limitations, and bias for action as measures of entrepreneurial bricolage. They argued that bricolage is holistic and should not be conceptualised as not only doing more of one aspect in total absence of others. This study resonates with this view, but highlights that before we confirm only the mentioned dimensions, other dimensions, including scavenging, buttressing and refining, need to be incorporated so that we can capture the entirety of the practice of bricolage in the theory.

14.1.2 How does the extremely constrained external context enable bricolage?

In extremely poor environments, every available resource can be used for bricolage. In such settings, value is forged out of every resource regardless of its form or sustainability. The work is set in the resource-constrained context of a developing country. It depicts entrepreneurship in a

difficult setting by exposing how entrepreneurs who are embedded in poverty push themselves to higher echelons by lurching onto every available resource.

The important resources are skills, labour, family, myths and beliefs, competition, and other business activity. While labour and skills are resources that have been previously highlighted in bricolage theory (Baker & Nelson, 2005; Davidsson, Baker & Senyard, 2017), resources such as embeddedness in the community, family and competition, myths and beliefs, and other businesses have not been included in the bricolage resource domains prior to this study.

Recently, Mckague & Oliver (2016) introduced the term network bricolage to highlight a process of how network actors' interest align and interact with other relational governance structures. They argued that network bricolage has important implications for entrepreneurship in Africa. This study contributes to their work by highlighting the variety of networks and their importance in the bricolage behaviour of firms in poorer settings. The networks facilitate bricolage because they are more accessible in these settings. Additionally, through persistent adaption to changes in the environment, firms' bricolage behaviour evolves.

14.1.3 How does bricolage unfold in the entrepreneurship process?

This study suggests that in resource-poor contexts, bricolage is not a one-off event. It continues throughout the entrepreneurship process, evolving throughout firm development. In the starting phase, making do is more prevalent than using resources at hand or recombining resources. In the surviving phase, using resources at hand is more prevalent than others and in the growing phase, recombining resources is most prevalent. This work depicts that bricolage dimensions are used varying throughout the entrepreneurship process. Although Baker and Nelson (2005) mentioned that bricolage was a process, studies that followed portrayed it as an activity in new firms (de

Klerk, 2015; Desa & Basu, 2013; Salimath & Jones, 2011; Smith & Blundel, 2014; Valliere & Gegenhuber, 2014).

Vanevenhoven, Winkel, Maewicki, Dougan, & Bronson (2011) distinguished bricolage in two varieties, the first being about the entrepreneur' external resources - social relationships – that used in “instantiation operations” (initial operations) of a new firm. The second variety is about the entrepreneur's internal resources, experiences, knowledge and certification that is used in assembling, modifying and deploying a narrative about the entrepreneurship process. Their work indicates that both types of bricolage are important in successful venturing. This study complements their work by portraying that in resource constrained environments, there is no distinct separation of external and internal resources, and therefore the unfolding of bricolage continues as a process through firm establishment and development.

14.2 Contributions

In order to develop theory, scholars are required to contribute to new knowledge (Corley & Gioia, 2011; Whetten, 1989). This work responds to the challenge by making theoretical, empirical, methodological, and practical contributions. The study has extended bricolage theory by exploring its functioning in extremely poor settings. By exploring the experience of eight established firms operating in extremely poor external settings, the study provides rich thick descriptions (Ponterotto, 2006; Geertz, 1973) from which others can learn and understand behaviours and activities within a particular context.

Further still, it provides a methodological contribution, because it documents how to adhere to the reliability and validity rigour (Maxwell, 1992; Morse, 2004; Morse et al., 2002) required in

qualitative data collection and analysis. This work uses an extensive case study in an under researched context, and therefore gives a perspective that has been undocumented. It also makes a practical contribution by providing guidelines and information for understanding entrepreneurship in resource-poor contexts.

14.2.1 Theoretical contribution

Theoretical contributions should be valuable, imitable, interesting, and unexpected (Bergh, 2003; Corley & Gioia, 2011; Whetten, 1989). In light of the preceding requirements, the study provides insights into how bricolage unfolds in poor settings and therefore offers guidance on how it could be understood by future researchers.

The study extends bricolage theory by highlighting that previously acknowledged resources (Baker & Nelson, 2005) do not incorporate all resources used in poor settings, where everything in the enterprise's environment is used as a resource for bricolage. Moreover, in the past, scholars have viewed bricolage as a one-off event characteristic of the earliest stages of business development (Baker et al., 2003; Senyard et al., 2014; Senyard, Baker, & Davidsson, 2009). In this study, it is evident that bricolage is a process that evolves throughout the entrepreneurship process. The study further highlights that bricolage involves three additional sub-processes of scavenging, buttressing, and refining that link the previously studied constructs of making do with resources at hand and recombining resources for new purposes, refusal to enact limitation and bias for action.

Additionally, the study contributes to our understanding of entrepreneurship by exposing opportunity exploitation behaviour in an under researched context (Vermeire & Bruton, 2016; Welter et al., 2017). By focusing on an impoverished African setting where entrepreneurial behaviour is not limited only to new ventures, the discipline of entrepreneurship benefits from an

account of how actors behave and act amidst scarcity and volatility in the environment. Such accounts illuminate our understanding of entrepreneurship.

14.2.2 Methodological contribution

Multiple case studies provide a robust base for theory building (Yin, 2009) because they display emergent findings that are deeply rooted in empirical evidence across several cases (Eisenhardt & Graebner, 2007). Using multiple cases, this work improves insights into bricolage theory by incorporating contributions from divergent sources. This has not been used by other scholars. It thus provides more generalisable and testable theory than would a single case. Moreover, since the study adopted maximum variation as a sampling strategy, it illuminates patterns and relationships within the constructs of bricolage theory as well as clarifying the logic of the theory.

The study also adopted a multi-level analysis by reviewing experiences of the founders and their firms which provided the insights that bricolage is a process with three underlying sub processes of scavenging, buttressing and refining. Because systematic documentation of the data collection and theory development procedures is presented, the work provides an example of how researchers working with qualitative data can rigorously conduct such a study. In addition, qualitative data complemented the development of bricolage theory by highlighting nuanced sub-processes and behaviours that can easily be omitted in studies using quantitative data (Eisenhardt & Graebner, 2007).

14.2.3 Empirical contribution

There is scant empirical evidence of bricolage in developing contexts (Linna, 2013). Although bricolage has been explored in resource-constrained firms in the developed world (Baker & Nelson, 2005; Senyard et al., 2014), it has not been explored in extremely poor settings as evident in developing economies. Further still, how and why does bricolage occur in established firms?

This work addresses this puzzle by providing rich evidence from established firms operating in extremely resource-poor external settings.

Using multiple case studies provided rich empirical evidence of bricolage theory when conditions are extremely constrained. They provide patterns of relationships among constructs within and across cases and underlying arguments (Eisenhardt & Graebner, 2007). Through qualitative data, the work emphasizes the rich real world context (Ponterotto, 2006) and provides empirical evidence on how bricolage behaviour is manifest in established firms operating in poor settings.

14.2.4 Practical contribution

Theory must be useful to other researchers and practicing managers (Bergh, 2003; Corley & Gioia, 2011; Whetten, 1989). This study makes practical contributions to entrepreneurs and policymakers. While the findings are not generalisable to all settings, they highlight bricolage behaviour and actions that are likely to make a difference in entrepreneurial outcomes, especially in developing country contexts.

Entrepreneurship educators tend to concentrate on resource-seeking approaches as a tool to aid potential entrepreneurs. It is important to understand that in poor settings, many resource-seeking approaches may not be feasible or even possible. In fact, there is a likelihood that if the entrepreneurs followed those approaches, they would fail to accumulate the needed resources. Therefore, encouraging them to combine resources at hand creatively, will fast track their entrepreneurial action and advancement.

This study reinforces the importance of continuous improvement of resources at hand, in other words, refining. It shows that entrepreneurs who continuously and actively work to improve their

resources are more likely to advance their ventures. The work highlights that though adaptive persistence, firms are able to develop, even amidst environmental shocks. Entrepreneurs should be mindful of the antagonistic turbulence in certain environments and their implications for the firm's existence. Such turbulence may provide good reason for seeking external and often expensive resources or outright firm closure. Entrepreneurial firms may be better off adjusting their scant resources so that they can advance as opposed to resigning their efforts.

The study further suggests that being embedded in the local community increases the potential for legitimising the firm's activities and consequently growing the business. By working closely with the community, entrepreneurs are privy to their needs which can even generate ideas that help to re-engineer products and services. Moreover, the community voluntarily reciprocates the firm's participation by appointing itself as a marketer of the firm. Therefore, community embeddedness should be envisioned as a key process in resource mobilisation for firms especially in constrained external environments. Educators of entrepreneurship ought to highlight this in their programmes.

14.3 Limitations

The case study design is not without limitations (Yin, 2009). Qualitative case studies are often critiqued for non-generalisability, lack of rigour in data collection, construction and analysis (Eisenhardt, 1989a; Gioia et al., 2012; Onwuegbuzie & Leech, 2007; Reay, 2014; Roulston, 2010).

The researcher, being aware of the challenges and potential pitfalls, devised the following strategies to address limitations:

The first limitation is related to the sample of cases that are used in the analysis. It is not common to have a representative sample in an inductive and in-depth study (Yin, 1981; 2009) as the purpose

of the study is not to achieve generalisability (Eisenhardt, 1989a) but to explore theoretical explanations of behaviours (Eisenhardt & Graebner, 2007). In this research, cases were selected because they typically portrayed a community of practice that cements firms into the practice of bricolage even once the firm was older than three years, in other words, established firms. However, the sizes and ages of these firms varied.

The researcher maintained an audit trail to provide the credibility needed in qualitative research (Maxwell, 1992; Morse, 2004). This is shown in Appendix 5. Additionally procedural and analytical rigour was enhanced by inductive analysis and by maintaining detailed field notes (Elo & Kyngas, 2008). Data quality concerns were addressed through research and analytical strategies, for example the data structure shows how themes were developed from raw data (Gioia et al., 2012). The step-by-step description of how data were collected responds to the requirements of transparency within the data collection process (Chenail, 2011; Pratt, 2009).

The other limitation of the case study design is the view that bias and subjectivity can be introduced by the researcher and respondents (Maxwell, 2004). Because the data were recorded in interview narratives, there are chances of recall bias. While this argument may be valid, it is impossible to totally eliminate bias in both quantitative and qualitative research.

The researcher however minimised the bias by:(a) triangulating the findings from initial interviews to minimise the risk of recall bias and to add to the richness of the data; (b) explaining to the respondents that the study was purely for academic purposes and therefore their views would remain anonymous; and (c) remaining receptive to contrary findings (Yin, 2009). Moreover,

maintaining field notes and analytical memos helped to address the recall bias from the researcher (Creswell, 2009; Yin, 2009).

Accessing the relevant data, especially financial data, was difficult due to the informal nature of the firms, especially where there was no record keeping. In some cases, respondents feared that their records would be leaked to government departments, especially the tax authority. They were, however, assured of anonymity, confidentiality and strict adherence to ethical conduct. The researcher was able to access any other data that was available in the firm.

14.4 Opportunities for Future Research

This work instigated further research questions that future researchers can investigate and make a contribution to the field of entrepreneurship.

In case study research, there is often a risk of observed positive effects (Yin, 2009), which could be due to selection bias (where only cases where bricolage had a positive effect are selected). In this work, this risk was reduced by selecting the sample using maximum variation. It would however complete the picture if future studies reviewed why bricolage may go wrong in such settings.

The findings about bricolage behaviour in established firms are not generalisable to other settings. This work provides an opportunity for other scholars to test how bricolage is prevalent in a representative sample of established firms and whether the suggested combinations are related to firm development. Even though case studies that focus on single firms or similar firms fail to show patterns, or comparisons between cases respectively, they are beneficial (Yin, 2003). Researchers

who adopt such methods will gain detailed data from reporting the activities. It would be useful for future researchers to carry out deeper and rich analyses of single cases over time. This could be accomplished in a longitudinal study. In addition, it would be necessary to test the highlighted sub-processes and constructs on a large sample to confirm entrepreneurial dynamics in poor settings.

Inductive work on bricolage is still needed to address anomalies found in nuanced contexts such as adverse conditions like war and other crises. Such studies are important to clarify the theory so that better precision is gained before more deductive studies are done.

14.5 Conclusion

The entrepreneurship domain has relied on theoretical ideas borrowed for other domains. Over the past decade, the entrepreneurship field has benefitted from nuanced theories such as bricolage. As we seek to advance the field of entrepreneurship, it is crucial to transpose such emerging theories to various settings (Zahra, 2007) so that we can understand them better. Moreover it is useful to highlight the sub-process in the theories to understand how entrepreneurs behave (Bird & Schjoedt, 2009). This research used a multiple case study design (Yin, 2003; 1981) to provide insights in the bricolage theory when the external environment is extremely poor. The advantage of qualitative multiple case study methods is that they offer an opportunity to gather rich and comparable data. Instead of testing theories without clearly understanding how they unfold in a particular setting, it gives the opportunity to assess how theory relates to a setting. The analysis highlights that in poor settings, every available resource can be used for bricolage, and that bricolage is a process that evolves along the entrepreneurship process. It involves other sub-processes-scavenging, buttressing, and refining-that link the previously known constructs on making do, using resources

at hand and recombining resources. Moreover, when firms are embedded in their local communities and persistently adapt to environmental upheavals, they are more likely to advance. This therefore adds to the understanding of entrepreneurial bricolage, especially when firms are operating in extremely poor external settings.

The work confirms that bricolage is a useful theory to evaluate resource mobilisation in resource constrained firms. Moreover, the work re-adjusted that theory to incorporate the extremely poor settings that most entrepreneurship literature has neglected. This is important because such settings provide nuances to better explain theory.

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Appendices

Appendix 1: Consent Form

The Entrepreneurial Process: Resource mobilisation in resource constrained Environments

Introduction

I am conducting research on the entrepreneurial process, and am trying to find out more about resource mobilisation in a resource constrained environments Like Uganda. Our interview is expected to last about an hour and will help us understand how entrepreneurs in the fabrication sector mobilise resources for their business. **Your participation is voluntary and you can withdraw at any time without penalty.** Of course, all data will be kept confidential. If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher : Rebecca Namatovu

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Signature of the participant: _____

Date: _____

Signature of the researcher: _____

Date: _____

Appendix 2 : Interview Schedule

The Entrepreneurial Process: Resource mobilisation in resource constrained Environments

Resources in the Entrepreneurial Process

- Why and how did you start this business?
- Who did you engage with in starting your business?
- Are there any resources that you needed at the start that you do not need at this stage?
- If yes, which ones and why?

Resource Mobilisation

- How did you gather resources to start this business?
- Is your business growing? If yes, how do you mobilise resources to grow this business?
- What type of support have you obtained in getting resources?
- What major advantages/ opportunities have you had when accessing resources for this business?
- What challenges have you faced in mobilising resources for this business?
- Have you been able to overcome these challenges? If yes, how? If no, how are you coping?
- How do you access the resources you need to maintain this business?
- Is there anything different about this compared to your competitors?

Bricolage in a resource constrained environment

- Do you think your business operates in an environment with limited resources? If yes describe how
- How do you mitigate this / How do you cope?
- Do you think you can do this differently? If yes how

Appendix 3: Ethics Clearance



To Whom It May Concern

GIBS Research Ethics Committee (REC) Outcome: Rebecca Namatovu

This letter serves to confirm that on 21st July 2014 Ms Rebecca Namatovu was granted ethics approval by the REC to collect data according to her application.

Please contact me on + 27 771 4350 if you have any queries.

Yours sincerely

Vivienne Spooner
Senior Programme Manager: Doctoral Programme
21st July 2014

Appendix 4: Code List

	Name	Grounded	Density	Author	Created	Modified	Families
1	Adaptive Persistence: managing competition and volatile environment~	44	0	Super	1/20/2015 10:54	3/1/2015 12:18	ACTIVITIES FOR LEGITIMISATION OF THE BUSINESS, PROCESSES USED IN THE BUSINESS
2	Adaptive Persistence: Seeking and experimenting with new knowledge for improvement	76	0	Super	2/27/2015 8:34	2/27/2015 8:35	- n/a -
3	Adaptive Persistence: Resiliently adjusting to understand market behaviour and variations~	15	0	Super	1/21/2015 9:09	12/21/2015 22:59	SHOWING COMPETENT WAYS OF MANAGING THE BUSINESS
4	Adhocery: Event based activities and operation~	25	0	Super	1/9/2015 11:50	3/1/2015 12:36	PROCESSES USED IN THE BUSINESS
5	Adhocery: Gambling through activities and events as they happen~	44	0	Super	1/10/2015 9:27	2/24/2015 9:02	REORGANISATION AND REARRANGEMENT OF ACTIVITIES, SHOWING COMPETENT WAYS OF MANAGING THE BUSINESS
6	Adhocery: Tinkering through repairing and remolding~	28	0	Super	1/8/2015 9:14	3/9/2015 11:32	DEVisING INNOVATIVE PROCESSES AND PRODUCTS, RECOMBINATION OF RESOURCES
7	Adhocery: Using sector specific practices when dealing with customers~	58	0	Super	12/23/2014 16:39	4/7/2015 15:13	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN, POTRAYING WEAK INSTITUTIONS
8	Competition: Proud to challenge external competition~	19	0	Super	1/20/2015 21:38	12/21/2015 22:51	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, MANAGING COMPETITION
9	Competition: Using high and unfair price based competition~	31	0	Super	1/20/2015 14:57	4/7/2015 14:25	MANAGING COMPETITION, PROCESSES USED IN THE BUSINESS
10	Custom: exploiting weak institutions~	38	1	Super	1/21/2015 18:53	4/11/2015 0:58	MAKING DO, PROCESSES USED IN THE BUSINESS
11	Custom: setbacks and challenges~	34	0	Super	1/7/2015 11:08	2/27/2015 8:54	MANAGING COMPETITION

12	Custom: using ideas and networks to make new products and services~	10	0	Super	1/8/2015 11:09	2/24/2015 21:06	DEVisING INNOVATIVE PROCESSES AND PRODUCTS, USING KNOWLEDGE AS A RESOURCE, USING RESOURCES AT HAND
13	Embeddedness: devising means to become acceptable in the community~	10	0	Super	1/23/2015 14:23	2/26/2015 18:58	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS
14	Embeddedness: Faith in the supernatural~	20	0	Super	12/23/2014 17:55	4/26/2015 14:33	EMBEDDENESS, PROCESSES USED IN THE BUSINESS
15	Embeddedness: Known and respected in the market~	35	0	Super	12/23/2014 18:38	4/7/2015 14:28	EMBEDDENESS
16	Embeddedness: Actively involved and engaged in Community~	38	0	Super	1/5/2015 22:00	12/21/2015 23:00	EMBEDDENESS
17	Embeddedness: Having cultural inclination and reverences~	10	0	Super	1/21/2015 8:28	4/7/2015 14:29	EMBEDDENESS
18	Embeddedness: Using social and community recognition for validation~	33	0	Super	1/12/2015 18:52	4/7/2015 14:30	EMBEDDENESS
19	Enlightenment: Using unique and new methods to reach the market~	65	0	Super	12/23/2014 14:18	2/24/2015 21:34	DEVisING INNOVATIVE PROCESSES AND PRODUCTS
20	Enlightenent: Continuous learning~	14	0	Super	1/8/2015 8:57	2/24/2015 13:18	BUSINESS EXPERTISE, NATURE AND EXTENT OF TRAINING
21	Entrepreneurial Traits: Having skills knowledge and experience~	116	1	Super	1/8/2015 11:58	4/7/2015 14:40	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, REDEPLOYING OF RESOURCES
22	Entrepreneurial Traits: using positive fantasies as a motivation for Growth~	15	0	Super	1/20/2015 12:50	3/9/2015 11:40	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, REDEPLOYING OF RESOURCES
23	Entrepreneurial Trait: Displaying leadership and charisma in business and experience~	25	0	Super	1/21/2015 9:26	4/7/2015 14:21	BUSINESS EXPERTISE, CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS

24	Entrepreneurial Traits: having determination for entrepreneurship and self employment~	19	0	Super	1/5/2015 17:59	3/9/2015 11:37	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, REDEPLOYING OF RESOURCES
25	Entrepreneurial Traits: Having Genuine and decent behaviour~	13	0	Super	12/23/2014 18:51	4/7/2015 14:34	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, PROCESSES USED IN THE BUSINESS
26	Entrepreneurial Traits: using passion to work~	22	1	Super	12/23/2014 16:26	3/10/2015 11:08	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, REDEPLOYING OF RESOURCES
27	Entrepreneurial Traits: Using rough childhood experience as driver~	9	0	Super	12/23/2014 17:54	4/7/2015 14:35	CHARACTERISTICS AND BEHAVIOURS OF ENTREPRENEURS, REDEPLOYING OF RESOURCES
28	Environment: Depicting a poor society~	19	0	Super	12/23/2014 18:04	4/7/2015 14:50	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN, PROCESSES USED IN THE BUSINESS
29	Environment: Depicting hardships and risks within the environment~	119	0	Super	1/5/2015 18:02	12/21/2015 23:02	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
30	Environment: depicting high volatility~	60	0	Super	12/23/2014 18:40	3/1/2015 12:14	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
31	Environment: explaining country technology inferiority~	8	1	Super	1/20/2015 11:03	4/7/2015 14:20	BUSINESS EXPERTISE, MANAGING COMPETITION
32	Environment: Having optimism for future~	13	0	Super	12/23/2014 17:52	4/7/2015 14:52	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
33	Environment: Perceiving poor policy implementation~	20	0	Super	1/20/2015 11:27	12/21/2015 22:53	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
34	Environment: positive environmental change~	7	0	Super	1/5/2015 22:35	2/26/2015 21:22	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
35	Environment: expressing pessimism about future~	36	0	Super	12/23/2014 18:02	3/10/2015 10:25	EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN, GROWTH OF THE FIRM

36	Equip: using number of equipment change to explain growth~	18	0	Super	1/20/2015 11:46	3/10/2015 10:30	GROWTH OF THE FIRM, PROCESSES USED IN THE BUSINESS
37	Exiting stage	73	0	Super	2/27/2015 9:00	2/27/2015 9:01	- n/a -
38	Ext fund: Choosing to use other alternatives but not external financing~	47	0	Super	1/7/2015 12:23	4/7/2015 15:14	USING EXTERNAL FINANCING
39	family Engage: Using family background and setting to start or run the business~	7	0	Super	1/20/2015 12:36	3/9/2015 11:49	FAMILY INVOLVEMENT IN BUSINESS, REDEPLOYING OF RESOURCES
40	family Engagement: depicting family as distractive to business~	43	0	Super	12/23/2014 15:04	4/7/2015 15:25	FAMILY INVOLVEMENT IN BUSINESS
41	family Engagement: Showing active participation~	213	0	Super	12/23/2014 14:42	4/7/2015 15:25	FAMILY INVOLVEMENT IN BUSINESS
42	Foreign exposure: professional experiences abroad and using it to make equipment ~	31	0	Super	12/23/2014 15:43	2/27/2015 9:57	NATURE AND EXTENT OF TRAINING
43	Formalisation: regularising the firms operation~	21	0	Super	12/23/2014 14:45	2/24/2015 19:51	ESTABLISHING FORMAL MECHANISMS
44	Gradualness: using slow or elongated means to advance~	125	0	Super	1/15/2015 9:15	3/10/2015 10:37	GROWTH OF THE FIRM, PROCESSES USED IN THE BUSINESS
45	growing stage	75	0	Super	4/23/2015 8:23	4/23/2015 8:23	- n/a -
46	Informal: being disadvantaged because of operating against management principles~	9	0	Super	1/9/2015 12:33	2/24/2015 17:02	PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
47	Informal: getting benefits by operating against management principles~	11	0	Super	1/20/2015 22:19	2/24/2015 17:02	PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
48	Informalisation: Displaying limited appreciation and adherence for regularising~	93	0	Super	1/12/2015 15:13	4/7/2015 15:35	ESTABLISHING FORMAL MECHANISMS

49	Informalisation: Mixing business and personal activities~	43	0	Super	1/5/2015 19:13	2/27/2015 11:04	PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
50	Interconnecting: reorganisation based on changing market demands~	21	0	Super	12/23/2014 16:23	2/24/2015 17:43	REORGANISATION AND REARRANGEMENT OF ACTIVITIES
51	Interconnecting Using the other business funds or activities to support this business~	39	1	Super	12/23/2014 14:08	3/10/2015 11:08	REDEPLOYING OF RESOURCES
52	Interconnecting: Informally training others~	63	0	Super	1/5/2015 18:02	2/24/2015 13:18	NATURE AND EXTENT OF TRAINING, PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
53	Interconnecting: the other business mitigates potential risks~	27	0	Super	1/5/2015 19:05	4/26/2015 14:30	USING RESOURCES AT HAND
54	Knowledge: using technical, business and innate knowledge to run or start the business~	25	0	Super	1/9/2015 10:25	12/21/2015 22:48	PROCESSES USED IN THE BUSINESS, REDEPLOYING OF RESOURCES, USING KNOWLEDGE AS A RESOURCE
55	Labor: as a resource at hand and making do with its current state~	32	0	Super	1/5/2015 23:37	12/21/2015 22:49	LABOUR RESOURCE, RECOMBINATION OF RESOURCES
56	Labor: growing in number of employees~	15	6	Super	1/22/2015 11:46	12/21/2015 22:47	GROWTH OF THE FIRM, LABOUR RESOURCE
57	Labor: sector practices~	66	0	Super	1/20/2015 10:50	3/1/2015 11:54	LABOUR RESOURCE, PROCESSES USED IN THE BUSINESS
58	Labor: using readily available cheap labour~	21	0	Super	1/5/2015 20:17	12/28/2015 13:53	LABOUR RESOURCE, REDEPLOYING OF RESOURCES
59	Legitimation: exploiting the weak institutions~	26	1	Super	12/23/2014 14:57	3/10/2015 12:11	POTRAYING WEAK INSTITUTIONS, PROCESSES USED IN THE BUSINESS, REDEPLOYING OF RESOURCES
60	Legitimation: Perceiving social mis-judgements and lack of support~	44	0	Super	1/20/2015 22:13	4/7/2015 14:31	EMBEDDENESS, POTRAYING WEAK INSTITUTIONS
61	Legitimation: Doing things to gain acceptance in community~	26	0	Super	1/20/2015 13:33	12/21/2015 23:01	ACTIVITIES FOR LEGITIMISATION OF THE BUSINESS

62	Legitmisation: Resisting stipulations that are considered oppressive~	13	0	Super	1/20/2015 11:23	4/7/2015 14:45	ACTIVITIES FOR LEGITIMISATION OF THE BUSINESS, EXTERNAL ENVIRONMENT AND SECTORAL TERRAIN
63	Legitmisation: Working with technical institution to gain trust from the market~	19	0	Super	1/15/2015 22:19	12/21/2015 23:01	ACTIVITIES FOR LEGITIMISATION OF THE BUSINESS, OPERATING IN A WEB OF NETWORKS
64	Legitmistion: Doing things to fit within the legal framework~	22	0	Super	1/12/2015 15:13	2/26/2015 21:24	ACTIVITIES FOR LEGITIMISATION OF THE BUSINESS
65	Location: making do by taking up a convenient location~	40	1	Super	12/23/2014 14:37	4/11/2015 0:59	MAKING DO
66	Location: making do by working at home~	19	1	Super	1/12/2015 18:43	4/11/2015 0:57	MAKING DO
67	Making do: Fabricating equipment they lack~	24	1	Super	1/15/2015 7:45	4/11/2015 1:00	DEVisING INNOVATIVE PROCESSES AND PRODUCTS, MAKING DO
68	Making do: Reducing costs and increasing earning avenues~	56	2	Super	1/22/2015 14:03	4/11/2015 1:03	DEVisING INNOVATIVE PROCESSES AND PRODUCTS, MAKING DO
69	Making do: Using crude mechanisms~	24	2	Super	1/24/2015 0:19	4/11/2015 0:59	MAKING DO, PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
70	Manage competition: strict employee engagement for efficiency~	12	0	Super	1/20/2015 13:15	2/24/2015 21:52	SHOWING COMPETENT WAYS OF MANAGING THE BUSINESS
71	Material: Making do by using scrap as a cheap alternative to make products~	45	1	Super	1/16/2015 11:50	12/21/2015 22:58	MAKING DO
72	Network: benefits gained from customer network~	51	0	Super	12/23/2014 19:13	2/27/2015 11:38	OPERATING IN A WEB OF NETWORKS
73	Network: Creating links with competition~	14	0	Super	12/23/2014 17:15	2/26/2015 18:07	MANAGING COMPETITION, OPERATING IN A WEB OF NETWORKS

74	Network: Engaging in strategic alliances and involvements with others~	80	0	Super	1/22/2015 13:19	4/7/2015 15:36	ESTABLISHING FORMAL MECHANISMS
75	Network: highly networked with employees~	31	0	Super	1/5/2015 20:14	2/24/2015 19:00	EMBEDDENESS, LABOUR RESOURCE
76	Network: purchasing from the supplier on friendly terms~	11	0	Super	1/22/2015 11:44	3/9/2015 11:58	REDEPLOYING OF RESOURCES
77	Network: reflecting and sharing challenges with others~	23	0	Super	12/23/2014 17:43	2/27/2015 12:06	OPERATING IN A WEB OF NETWORKS
78	Network: unmaintained relationships~	16	0	Super	1/7/2015 12:29	2/27/2015 12:06	OPERATING IN A WEB OF NETWORKS
79	Network: using friends to support the business~	28	0	Super	1/5/2015 17:59	3/9/2015 11:49	OPERATING IN A WEB OF NETWORKS, REDEPLOYING OF RESOURCES
80	Partnership: Informal engagements and relationships~	24	0	Super	1/8/2015 11:31	2/24/2015 8:41	PARTICIPATING IN INFORMAL PRACTICES AND ACTIVITIES
81	Recombining: Material to make products~	20	0	Super	1/5/2015 19:39	2/24/2015 17:30	RECOMBINATION OF RESOURCES
82	Recombining: Processes and technologies~	50	0	Super	1/12/2015 19:37	3/1/2015 12:48	RECOMBINATION OF RESOURCES
83	Recombining: recombining other knowledge or experience to current business~	44	0	Super	1/5/2015 18:21	3/1/2015 13:08	RECOMBINATION OF RESOURCES, USING KNOWLEDGE AS A RESOURCE, USING RESOURCES AT HAND
84	Re-coursing: Changing to mitigate risk~	35	0	Super	12/23/2014 14:40	2/24/2015 17:43	REORGANISATION AND REARRANGEMENT OF ACTIVITIES
85	Re-coursing: Prudent costing and accounting~	13	0	Super	1/21/2015 18:50	12/21/2015 22:58	BUSINESS EXPERTISE, SHOWING COMPETENT WAYS OF MANAGING THE BUSINESS
86	Refining: Engaging in continuous improvement of products and processes~	31	0	Super	12/23/2014 18:55	4/7/2015 15:41	DEVISING INNOVATIVE PROCESSES AND PRODUCTS
87	Resource: exploiting an already existing location~	36	1	Super	1/20/2015 12:33	3/10/2015 11:09	BUSINESS EXPERTISE, PROCESSES USED IN THE BUSINESS, REDEPLOYING OF RESOURCES

88	Resource: starting and growing the business by buying equipment~	10	0	Super	1/9/2015 10:27	3/9/2015 12:03	REDEPLOYING OF RESOURCES
89	Resource: using customers as a resource to spur the business~	64	1	Super	12/23/2014 14:16	3/10/2015 11:08	PROCESSES USED IN THE BUSINESS, REDEPLOYING OF RESOURCES
90	Riskiness: Facing challenges to commercialise innovations in the sector~	21	0	Super	1/20/2015 22:09	4/7/2015 15:41	DEVISING INNOVATIVE PROCESSES AND PRODUCTS
91	Self elicitation: using savings to start or grow a business~	20	0	Super	1/5/2015 18:02	4/26/2015 13:56	REDEPLOYING OF RESOURCES
92	Self elicitation: working with inferior products and using cheaper readily available material~	46	0	Super	1/5/2015 19:43	3/1/2015 11:59	PROCESSES USED IN THE BUSINESS
93	starting stage	29	0	Super	4/16/2015 14:57	4/16/2015 14:57	- n/a -
94	surviving stage	72	0	Super	4/16/2015 14:59	4/26/2015 14:59	- n/a -
95	Thriftiness: Internships and apprenticeships training~	48	0	Super	1/7/2015 11:30	2/27/2015 8:31	NATURE AND EXTENT OF TRAINING

Appendix 5: Sample field Notes

MUSA BODY MACHINERY

We are in Katwe, a suburb in Kampala that is well known for metal works and other informal businesses. When we get to Musa body machinery we are greeted by a neat display of machines, with labels of musa body machinery. It is more impressive than we thought.

We ask the first person (an elderly man) we see, operating a machine, that we want to speak with the proprietor. He points to another man working in the workshop. We greet him and ask him if he is the proprietor, he points us to another man seated behind an office desk. The desk is at the back and as we approach, we realize that it is a relatively well organised office space. We speak to the man, he is so much younger than the person we expect to be the proprietor. He however, confirms that he is the owner of the business.

He looks at us suspiciously, and he says he can't speak to us because he is so busy with his clients, but he asks us to speak to his employee. He calls on someone to take us to his employee. We walk for a few minutes before we get to a workshop. We are so confused with the setting. They seem to have two workshops. The second workshop has many high end machines. It is quiet of human noise but the machines are squeaking. There are about 4 men working.

The employee we speak with is so young, he too is very suspicious of us, he asks us to identify ourselves. After looking at our documents, he smiles and gives us seats. The interview is in English and the employee tries to explain the structure of the business to us. It is hard for us to understand it well. So we go over and over until we think we have understood.

We finish our interview and he encourages us to go back to his boss (also his brother). We get there and the boss asks his manager to speak with us. The lady was in the same secondary school with me, she notices me and tells the boss, I know Rebecca. I think, this is our perfect coincidence. I'm now relieved.

We speak with the manager, who seems to have so much power in the business. Our interview is interrupted by inquiries from the boss. I think her role is operation manager, accountant, marketer and human resource manager. She implies to me that she is a very needed resource in the business. She is not so technical, but has a deep understanding of the business operations and her boss. She recites the prices and explains what the different machines do so easily. She even specifies what they make and what they import.

She seems to know the family politics and carefully avoids it in her work. She also spends a lot of time, explaining to us the business structure, which clarifies a few things.

When we finish with her we ask her to fix an appointment for us to speak with her boss, she assures us that we shall be able to speak with him today. She asks us to wait for a few minutes and indeed we now shift to the boss' table.

The boss is an impressive young man. He talks of his late father with admiration. He explains how he wanted to carry on the father's dream and it is all believable. He seems like a smart business man. Our meeting is interrupted with phone calls, walk-ins, and relatives. He handles everyone and asks us to be understanding he has to run the business.

A man walks in complaining about a recent supply he made. He complains that the machine is not working well. He says bring more money and we shall try other techniques. I ask about that incident and he says the customer asked them to make a machine they had never seen, they tried it out based on the money he paid, but they can still think of other additions but all these cost money. So he is trying to convince the customer to pay more money before they spend time on getting new technology for his machine.

He gets a phone call, I think there is an urgency somewhere, he turns to his manger and asks her to look for 20 million from all the companies. He then turns to us and says that woman is a good manager, she has changed all these businesses.

A young man (20-25years) enters the premises, he speaks to him in street dialect, and confirms that he will call him up when they get a big order. He then tells me those are the young men, I want to mentor.

When customers walked in during our interview, he called out his staff to attend to them. If he sensed, the customer was about to walk out, he would intercept and speak with the customer. Other people come in, I think they are his friends, he is so free with them and they joke about a few things.

At this point in the interview he is relaxed and continues to speak about his business. He is passionate. He frowns when he talks about his family politics but he seems to have a purposed way of not conflicting with his step brothers.

We ask for financial documents and he says he is happy to give them to us, if we are not going to take them to the authorities, we confirm that we are using the work purely for academic purposes. He says we should speak to Esther.

Esther, the manager, cleverly refuses to give us the documents and says that all information was taken away.

As we are about to leave, he calls his elder brother, (the heir) and he introduces him to us. There seems to be mutual respect. The elder brother greets us, happily. He smells of booze.

We are excited about his passion for the business, how he fixes so many moving parts. We think he feared us when we first walked in, that's why he asked us to see his workshop in the back or talk to his manger first. It was a tactic to get other people to evaluate our authenticity. We think he was happy to narrate his story and he became more trusting as we interacted. However, the trust we achieved did not qualify us to review any financial information. We also know how businesses will do anything protect their financial information and are not offended by their decision not to give it to us.

Appendix 6: Sample of Secondary documents used



MANOTI AND SONS

We Fabricate: Catering Equipments, Food warmers, Cicken roasters,
Mixers, Deep fryers, Boilers, Ovens

Located @ Mwanga II Rd Near Nabagereka P/S
Tel: 0785 780972 / 0755 359598

M/S: MAK SEED LTD

RECEIPT
No. 020
Date:

QTY	PARTICULARS	RATE	AMOUNT
1	WORKING TABLE	1,000,000	1,000,000
1	SINK	800,000	800,000
1	Trolley	400,000	400,000
3 in 1	pressure boiler	550,000	550,000
	Boiler	750,000	750,000
	Dyest	500,000	
	balance	750,000	
E.&O.E		TOTAL	3,450,000

Thank you, please come again.
Amount: Seven million and four hundred fifty thousand

**SIGNATURE:
MANOTI AND SONS**

SOLE METAL WORKSHOP

SSEWANKAMBO RD. KIYANJA ZONE LC I MPERERWE
 P.O. Box 11564 Kampala
 Tel: 0772 904242, 0703 904242, 0753 904242

M/s ALBERTA KAMUKO
WAKISO SITE

PROFORMA INVOICE
 No. 020 Date 24-10-2013

QTY	PARTICULARS	RATE	AMOUNT
01	Front door (double) ⁶⁰ 60 x ⁷⁶ 76	650,000	650,000
01	Behind Door 93 x 36	300,000	300,000
03	Windows 72 x 60	380,000	1,140,000
01	window 48 x 60	300,000	300,000
02	windows 60 x 60	350,000	700,000
01	Window 30 x 60	200,000	200,000
02	Window 30 x 18	80,000	160,000
01	Window 30 x 24	100,000	100,000
TOTAL <u>3,550,000</u>			
DE	TOTAL		3,550,000

Appendix 8: Transcription evaluation



Network of Ugandan Researchers and Research Users (NURRU)

Anna Nantenza
Social Research Consultant
Network of Ugandan Researchers and Research Users
12th January, 2016

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: **TRANSCRIBING CONFIRMATION**

I reviewed the translations of both documents although some phrases were different, I am certain that the general meaning or content of the discussion was not changed at any point.

Yours faithfully,

ANNA

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Appendix 9: Peer Review of Coding Quality

The Entrepreneurial Process: Resource mobilisation in resource constrained Environments

Candidate: Rebecca Namatovu

30 June 2016

This report documents the results of a peer review of the coding quality of the above thesis. Differences in coding between researcher and reviewer are to be expected, in line with the interpretivist nature of qualitative research. Therefore, this paper evaluates coding quality process rather than content, according to a set of dimensions detailed in Table 1. Based on this framework, the peer reviewer assesses the quality of the coding process without presuming to comment on the idiosyncratic nature of coding content under an interpretivist paradigm. The review was carried out by examining the Atlas ti Hermeneutic Unit (HU) together with the Research Design and Methodology chapter of the thesis. The hermeneutic unit contains 98 primary documents organised by case. The data set contains field notes, photographs, in some cases secondary documents and interview transcripts comprising this research study.

Table 1: Dimensions of Coding Process Quality

Dimension	Definition	Comment
Size of quotations	Quotations should seek to capture a single ‘unit of meaning’ that can be understood out of context	The quotations are generally limited to a single unit of meaning. Longer quotations contain details relating to a single unit of meaning
Appropriateness of quotations	Quotations should be selected to directly reflect and explore the phenomenon of interest	Quotations were generally selected to focus on specific dimensions of the research questions
Number of quotations	The number of quotations should take into account the purpose of the coding as detailed in the research design and methodology	The HU contains 1371 quotations that were selected for analysis. This indicates a relatively fine grained data selection process.

Codes per quotation	Quotations are over-coded when codes impute meaning to data that is not present Quotations are under-coded when there is more meaning than is captured by the code	In general, a single code is allocated to a single unit of meaning, but where necessary, more than one is used to summarise the meaning of the quotation. There is therefore no evidence of under-coding or over-coding
Number of codes	The number of codes should take into account the purpose of the coding as detailed in the research design and methodology	There are 95 codes in the HU, which is appropriate for a study of this size.
Definitions per code	Each code should be clearly defined	All codes in the HU have been clearly defined
Codes mutually exclusive	Code definitions should not overlap in meaning, nor be too broad that they represent more than one meaning perspective	Each code is unique in meaning
Closeness of codes to data	Code labels should reflect the meaning of the quotation as closely possible, rather than abstracting or drawing conclusions	Codes appropriately summarise and represent the meaning of the quotations
Number of quotations per code	Generally, a normal distribution of quotations to codes can be expected	The quotations are relatively evenly spread across codes in a normal distribution.
Evidence of merging	Merged codes indicate that code rationalisation has taken place	There is evidence of code merging, indicating that the code list has been appropriately maintained throughout the coding process and that the analysis was iterative in nature.
Links between codes	Linked codes are one indication that the analyst has been rigorous in their search for patterns in the data	Code linking has been utilised in this HU.
Number of categories	The number of categories should take into account the purpose of the as coding as detailed in the research design and methodology	There are 61 code families/categories in the HU, which is appropriate for an HU of this size.

Codes per category	Generally, a normal distribution of codes to categories can be expected	Codes are evenly spread across the categories in a normal distribution. It should be noted that 5 categories/code families are not populated with codes
Definitions per category	Each category should be clearly defined and should reflect the collective of the codes in that category	All categories/code families are defined and consistent with the overall research design.
Exhaustiveness of category	Each category should be saturated, that is it should contain all possible variations of the categorical phenomenon	Although some categories are exhaustive, others are not. This could be an indication that categories could be combine to create a more consolidated view
Use of analytic memo's	Use of analytic memo's to make analytic decisions explicit improves replicability and demonstrates reflexivity.	Analytic memo's appear in the Atlas ti HU with up to 48 memos. These memo's demonstrate researcher reflexivity and contribute to replicability.

Summary and conclusion

On the basis of this assessment, it is clear that methodological coherence has been maintained throughout the study. Sampling procedures are detailed, saturation has been demonstrated and data triangulation appropriately utilised. The codes are systematically low in degree of inference and accurately represent the meaning of the data, indicating that findings are grounded in the data. There is no evidence of under-coding or cover-coding. The category structure is appropriate in that categories are explicitly defined, reflective of the literature and appropriately encapsulate the inductively derived codes. Methodological and analytical decisions are captured in detailed analytical memo's, demonstrating investigator responsiveness. It is therefore concluded that the data analysis appropriately represented the rigorous and that the findings of this research may be considered plausible and credible.

Fiona Mulira
PhD candidate and Lecturer MUBS