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To Commit or Conserve

A qualitative study of how firms navigate resource constraints in a frontier market

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Abstract

This thesis examines how post-revenue firms navigate the tension between committing scarce resources to new opportunities and conserving them, as well as conceptualising adapting as a consequence of resource constraints, which has escaped the attention in existing literature. It examines firms operating in Kenya, a frontier market with both structural constraints and a growing ecosystem of many successful businesses. The study is informed by the resource based view, draws on effectuation and bricolage as theories of action under constraint, and derives four analytical tensions from the literature on competing demands to study mechanisms at organizational level. Four mechanisms are identified: Assessing is where firms judge, at minimal cost, whether opportunities are viable under constraints. Mobilising covers activities that build the customer's understanding and trust that the environment does not supply. Leveraging involves structuring partnerships and solution architectures that the firm's resource base can carry. Learning-based adapting captures how firms learn in-between mechanisms and after decisions. Additionally, the thesis introduces the novel concept of constraint-based adapting, where firms adapt not to fit external market changes, but as a retreat from an attempted commitment whose resource cost exceeds what is available. The thesis contributes to literature on resource constraints, effectuation and bricolage by specifying the organizational activities through which constrained firms navigate competing demands, opportunity by opportunity. A central finding is that trust is perceived as a scarce relational resource that firms need to accumulate before larger commitments become viable. As such, the thesis presents a discontinuous commitment process: firms conserve and iterate until they have reached an adequate trust level, and a larger commitment becomes viable. A further finding is that firms exploit the lag between developed markets and their own, reading proven solutions from abroad to economise scarce discovery resources.

Keywords: Resource constraints, Strategic tensions, Effectuation, Bricolage, Frontier markets, Constraint-based adapting

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Definitions

Term	Definition
Resource constrained environment	An environment where resource constraints are prominent, characterized by constraints as e.g. low income levels or limited access to financial systems and infrastructure (Satolli, 2024)
Strategic tension	Conditions that decide when and how to choose between competing alternatives, which then creates a strategic tension between the two options (Smith & Lewis, 2011)
Learning-based adapting	How firms convert the resources expended in each initiative into knowledge, both while an initiative is underway and after decisions have been made
Constraint-based adapting	A retreat from an attempted commitment, the consequence of when firms decide to conserve resources instead of committing them further
Temporal arbitrage	How firms exploit the lag between developed markets and their own, reading proven solutions from abroad to economise scarce discovery resources

Abbreviations

RBV = Resource Based View

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1. Introduction

1.1 Background and Research Gaps

It is difficult to understand today's business environment without considering the broader pressures shaping global markets. The past years have been marked by climate stress, geopolitical uncertainty, rising inequalities, fragile supply chains and uneven economic development (World Economic Forum, 2024; World Bank, 2024; Oxfam, 2023). These global pressures land unevenly. In frontier markets they interact with long-standing structural constraints such as limited infrastructure, thin financial systems, and uneven access to public goods (Satolli, 2024). At the same time, such markets are home to a growing wave of entrepreneurship and innovation directed at exactly these gaps (World Economic Forum, 2024; George et al., 2012). Where core institutions fail to deliver, firms often carry a greater responsibility to fill the void (Mayer, 2018; Mair & Martí, 2009). As one of the interviewees puts it:

> *"When core infrastructure is still lacking, it is left up to the private sector to figure out how to build the infrastructure for daily living"* (C2)

This condition is particularly illustrated in Kenya. The country combines significant structural constraints (external financing pressures, exposure to corruption, and infrastructural gaps) with one of Africa's most developed entrepreneurial and technology ecosystems, earning Nairobi the label "Silicon Savannah" (S&P Global Ratings, 2025; Transparency International, 2026; Startup Genome, 2025; McCandless Farmer, 2025). In this study, we aim to uncover the decision-process that entrepreneurs and small scale enterprises (SMEs) navigate when making strategic decisions whether to commit resources or conserve them for other opportunities.

The study is informed by the resource-based view (RBV). RBV explains value creation through resource possession and orchestration (Penrose, 1959; Barney, 1991; Sirmon et al., 2011), but largely assumes that firms have good access to manageable resources, leaving its connection to resource scarcity underdeveloped (Zahra, 2021). However, effectuation and bricolage show that small scale entrepreneurs can create value from limited means and that

constraints can be generative as well as limiting (Baker & Nelson, 2005; Sarasvathy, 2001; Witell et al., 2017).

Together, these streams leave several gaps. The literature on competing demands has largely developed against an assumption of resource sufficiency, taking for granted that firms can pursue competing alternatives simultaneously (O'Reilly & Tushman, 2008), and rarely examines what happens when that slack is absent. Effectuation and bricolage describe general action logics under scarcity, but the concrete decision processes through which these logics are enacted remain underspecified, particularly regarding how post-revenue firms evaluate, commit to, and retreat from specific opportunities. Empirically, the streams, including RBV's own limited engagement with scarcity, remain anchored in developed markets, despite frontier markets being where constraints bind hardest (George et al., 2012; Rawat & Singh, 2025).

This thesis addresses these gaps by studying how post-revenue Kenyan firms navigate the tensions that severe resource constraints create around every significant commitment. When the cost of tying up time, money and relationships is highly visible (Khanna & Palepu, 1997; Mair & Martí, 2009), firms must be selective with the means at hand (Baker & Nelson, 2005). It is this ongoing weighing of whether to commit or conserve that our empirical material captures, and that this thesis sets out to theorise.

1.2 Purpose and Research Question

The purpose of this thesis is to illustrate and understand how firms navigate strategic tensions that arise under severe resource constraints, at the level of organizational decisions about specific opportunities. Rather than treating scarcity as a background condition, the study places it at the centre of the analysis: constraints are what make each commitment consequential, and the activities through which firms handle this consequence are the study's object. To achieve this, the thesis draws on a multiple case study of 11 post-revenue Kenyan firms.

The research question guiding the study is:

How do post-revenue SMEs in a frontier market navigate the tension between committing scarce resources to new opportunities and conserving them?

Two orienting sub-questions structure the inquiry.

- First, through what activities do firms decide whether, when, and how far to commit resources under severe constraints?
- Second, how do constraints simultaneously restrict and enable these decisions?

1.3 Expected contribution

First, the study aims to advance the understanding of decision-making under resource constraints by identifying the organizational-level mechanisms through which firms navigate the commit/conserve tension. The thesis is informed by the resource-based view, examining how value creation depends on the linkage and orchestration of strategic resources (Penrose, 1959; Barney, 1991; Sirmon et al., 2011), and mobilises bricolage and effectuation to theorise how such orchestration proceeds when the resource base is thin (Baker & Nelson, 2005; Sarasvathy, 2001; Witell et al., 2017). By deriving four clear analytical tension categories from the literature on competing demands and strategic tensions, commit versus conserve, now versus later, build versus borrow, and novelty versus absorbability (see Table 1), the study answers calls (e.g. Witell et al., 2017) to examine how competing demands are handled in settings where the assumption of resource sufficiency does not hold.

Second, the study contributes context. Research on constraint navigation in frontier markets remains scarce despite the theoretical importance of such settings (Rawat & Singh, 2025; George et al., 2012). By grounding the analysis in Kenya, a market whose "Silicon Savannah" paradox combines binding constraints with vibrant entrepreneurship, the thesis shows how the specific institutional gaps of a frontier market shape which tensions firms face and which navigation strategies are available to them.

Third, at a practical level, the thesis aims to equip managers operating under scarcity with a structured way of thinking about when to commit, how to prepare commitments, and how to retreat without waste. In resource-constrained environments, these decisions carry existential weight.

1.4 Delimitations

Several delimitations have been made. First, our interest is in how individual firms navigate constraint-induced tensions. We therefore study decisions from the focal firm's perspective, to understand the logic behind managers' choices, and delimit the study from analysing how constraint navigation unfolds as a collective or ecosystem-level effort.

Second, the thesis focuses on organizational-level decisions. We examine the non-routine decisions where managers explicitly consider committing strategic resources towards a specific opportunity. Routine operational choices, minor adjustments, and informal ideas that are neither systematically evaluated nor linked to concrete resource commitments are excluded. We do not analyse micro-level individual cognition, nor do we take entire markets or ecosystems as our primary unit of analysis; environmental conditions are treated as contextual features that influence, and are influenced by, organizational-level decisions.

Third, the study is limited to post-revenue firms that primarily operate in Kenya. We excluded firms deemed too immature to show a clear pattern of commitment decisions, and firms so global that Kenya constitutes only a marginal share of their operations.

Finally, the thesis does not evaluate whether each commitment or retreat was successful in financial or market terms. The focus is on the process through which firms make these decisions under constraint.

2. Literature Review

Section 2.1 establishes the resource-based view as the study's foundation and identifies its limited treatment of scarcity. The following sections, 2.2-2.5 introduce a literature review on the tensions SMEs experience when navigating decisions between committing and conserving resources under constraints. 2.6 synthesises the literature review into four distinct analytical tension categories.

2.1 The Resource-Based View and the Problem of Scarcity

In this study, we are informed by a resource-based view (RBV). This allows us to study value creation based on how resources are linked, not only possessed (Penrose, 1959; Bingham & Eisenhardt, 2008). Value emerges when complementary resources are combined in novel configurations (Penrose, 1959). Resources are considered valuable if they are rare, inimitable and non-substitutable, where their possession leads to a firm's sustained competitive advantage (Barney, 1991). Strategic resources may be both tangible and intangible, such as brand, organizational culture or knowledge (Helfat et al., 2023; Barney, 1991). Strategic resources also expand beyond firm boundaries, as a business network or stakeholder relations can also be a foundation for competitive advantage (Dyer & Singh, 1998). Additionally, interrelations between a company and market actors, such as trust or reputation, are also important intangible resources (Clulow et al., 2007).

Possession alone, however, does not create value. A key to competitive advantage is how efficiently managers orchestrate a firm's resource bundle: structuring the portfolio, bundling resources into capabilities, and leveraging those capabilities against market opportunities (Sirmon et al., 2011). It is at the level of these orchestration decisions that this study operates.

RBV aligns with the study’s purpose for several reasons; RBV assumes value arises in the linkage and combination of resources rather than simply possessing them (Penrose, 1959). RBV also treats intangible and relational assets, such as knowledge, reputation and trust as strategic and important resources, on par with tangible ones (Barney, 1991; Clulow et al., 2007; Dyer & Singh, 1998). This allows for a combined analysis of internal capabilities and external relationships, something the empirical setting demands.

However, literature on RBV and resource orchestration implicitly tries to explain how firms can create value in environments where resources are abundant. Even if RBV is suggested as particularly relevant to study how resource constraints affect firms (Zahra, 2021), little connection is made between RBV and resource scarcity. Instead, constraints are implicitly mentioned in RBV, as lack of strategic resources decreases a firm's competitive advantage (Barney, 1991). To understand how orchestration proceeds when the resource base is thin, we therefore turn to literatures that treat scarcity as their explicit starting point.

2.2 Resource Constraints and Frontier Markets

Resource constraints can arise from a vast amount of factors (Witell et al., 2017). Constraints may come from internal scarcities such as lack of personnel, low degree of knowledge, or outdated capabilities (Cunha et al., 2014). They can also arise from inter-firm factors, such as limited access to key stakeholders and business networks, or from scarce access to customers, financial capital, or physical material (Aldrich & Auster, 1986; Beck & Demirgüç-Kunt, 2006; Hallen & Eisenhardt, 2012; Stam, Arzlanian, & Elfring, 2014). Cunha et al. (2014) further distinguish scarcity of time, of material resources, and of affluent customers as particularly important in an innovative context, and note that the innovation literature has tended to assume resource sufficiency rather than treat scarcity as a systematic condition.

Additionally, on frontier markets these firm-level scarcities are compounded by environmental ones. Constraints may be driven by non-functional institutional market systems, resulting in weak legal systems and poor infrastructure, but also socio-economic factors such as illiteracy and corruption (Schuster & Holtbrügge, 2014; Satolli, 2024). Such scarcities are usually driven by institutional voids that arise when markets require supporting institutions to function, and such institutions are weak or absent, leading to participation in markets becoming difficult (Khanna & Palepu, 1997; Mair & Martí, 2009). Two features of this literature matter for the present study. First, institutional voids are not empty spaces: they are filled with alternative arrangements such as community norms and local intermediaries that firms must work with and through to function (Mair & Martí, 2009). This implies that resources that firms elsewhere take for granted, e.g. generalized trust or ready-made distribution channels, must in frontier markets be deliberately built or borrowed. Second, actors in such settings address voids through ongoing recombination and improvisation,

rather than resource-rich design (Mair & Martí, 2009), which foreshadows the theories of action reviewed next.

Given this wide range of factors that cause resource constraints, there exists much research on how firms deal with them (George, 2005), often on how firms navigate constraints to stay on top of competition (Rao & Drazin, 2002). However, the consequences are double-edged. On one side, constraints hinder firm performance and narrow the feasible set of options (Cunha et al., 2014). On the other side, a countering group of scholars argues that scarcity can trigger a more creative recombination of resources, leading to new forms of value creation (Cunha et al., 2014; Baker & Nelson, 2005). As such, which face of scarcity a firm experiences depends on how it acts under constraint, to answer such a question effectuation and bricolage serve as the most developed theories.

2.3 Acting Under Constraint: Effectuation and Bricolage

To understand more thoroughly how firms manage resources under scarce conditions, this study employs effectuation as its literature lens. Sarasvathy (2001) introduced effectuation as a distinct entrepreneurial logic, contrasted to causation, where a decision-maker takes an effect as given and selects between means to achieve it. With effectuation, the decision-maker takes a set of means as given and selects between the possible effects those means can create (Sarasvathy, 2001). As such, effectuation is an academic theory of entrepreneurial decision-making, that is, a formal logic describing how actors reason under uncertainty and constraint (Sarasvathy, 2001; Coudounaris & Arvidsson, 2022), rather than as a set of prescriptive rules for how firms ought to act in practice. Effectuation describes how managers at small-scale firms see constraints as creative boundaries rather than barriers, shifting focus from trying to acquire missing resources to leveraging existing means at the company (Sarasvathy, 2001). Effectuating actors begin from who they are, what they know, and whom they know; they commit only what they can afford to lose rather than what expected returns would justify; they build partnerships and pre-commitments to co-create opportunities rather than conducting exhaustive analysis; and they exploit contingencies as they arise rather than treating them as deviations from plan (Sarasvathy, 2001). Under this logic, limited means do not merely restrict the option set. They define the starting point from which effects are imagined, and they discipline the size of each commitment.

Closely related to effectuation, bricolage looks at how firms use what's at hand to create new resource bundles (Lévi-Strauss, 1966): to creatively use existing firm resources to create new client value, out of nothing (Baker & Nelson, 2005). Three elements of the definition carry analytical weight. Making do implies a bias toward action with existing means; resources at hand include cheap or idiosyncratically accumulated inputs that other firms would overlook; and recombination for new purposes is where value arises, since the value of a resource is not fixed but constructed (Baker & Nelson, 2005). Contrasting effectuation, bricolage can be applied both at an entrepreneurial, individual level and at an organizational level (Witell et al., 2017). Extending the perspective to service innovation, Witell et al. (2017) identify four bricolage capabilities that shape innovation outcomes in resource-constrained environments: actively addressing resource scarcity, making do with what is available, improvising when recombining resources, and networking with external partners. The explicit inclusion of networking is notable: under scarcity, the resources at hand include other actors' resources that can be accessed through relationships rather than owned (Dyer & Singh, 1998).

Taken together, effectuation and bricolage specify concrete practices through which constrained firms act, committing to affordable loss, making do, improvising, and drawing on partners' resources (Sarasvathy, 2001; Baker & Nelson, 2005; Witell et al., 2017). These practices give theoretical content to what firms actually do when navigating constraints, which is central to how we later interpret the empirical material. Even if there exist practical differences between effectuation and bricolage, both theories introduce a nuanced perspective on resource constraints: scarcities can be a challenge, but also an opportunity, depending on a firm's ability to creatively combine resources at hand (Sarasvathy, 2001; Cunha et al., 2014).

2.4 Adapting, Learning and Proactive Market Behavior

As we try to understand how firms navigate resource constraints when committing to new opportunities, it’s important to understand what constitutes new opportunities and how they affect future decisions and the firm’s environment. Research on how firms relate to their environments distinguishes proactive attempts to influence market conditions from adapting to them. Adapting is commonly defined as responding to changes made by actors in the external environment in order to learn and increase firm-internal knowledge (Jaworski et al., 2000; Rindova & Courtney, 2020). Rindova and Courtney (2020) describe adapting as an information-gathering logic under uncertainty: firms make incremental moves to reduce

uncertainty and accumulate knowledge as situations evolve, rather than making large proactive bets. Relatedly, Fergnani (2022) describes corporate foresight as a firm's ongoing practice of collecting weak signals to envision multiple future scenarios. Common to these perspectives is that learning converts environmental engagement into internal knowledge, strengthening the firm's resource base (Barney, 1991; Schilke et al., 2018).

Instead of simply adapting to their external environments when pursuing new opportunities, firms may also attempt to influence and steer the market into their preferred direction. It can be to cater to a customer's latent needs (Narver et al., 2004), driving the actual market structure (Kohli & Jaworski, 1990) or trying to shape the trajectory of the market by different types of means (Nenonen et al., 2019). All in all, the term proactive market behavior encapsulates many different practices where firms try to change the market to create competitive advantage. In comparison to taking a more adapting-decision, firms try to alter and orchestrate their internal resource base to create new types of resource linkages, when taking a proactive market approach, not only preserving the resources they already have (Schilke et al., 2018; Helfat et al., 2023).

Although widely researched, articles on adapting and proactive market behavior in resource-scarce environments are few, as most articles study firms in more well developed markets, except from a few notable exceptions (Rawat & Singh, 2025). At the same time, what remains less examined is how adapting relates to resource constraints: whether firms adjust because of new information, or because their resources cannot sustain a more ambitious course (Pedersen & Ritter, 2022).

2.5 Competing Demands and Strategic Tensions

Apart from adaptive and proactive market behavior, a substantial body of research has examined how organizations balance contradictory strategic demands, and what firms and entrepreneurs do to decide in the tensions. One of the first strands of research on the topic originates from contingency theory which assumes that organizations are most efficient when they achieve a fit between their external and internal environment (Smith & Lewis, 2011). These theories explore what conditions decide when and how to choose between competing alternatives, which then creates a strategic tension between the two options (Smith & Lewis, 2011). Starting from early contingency theories such as Lawrence & Lorsch (1967), the term

has evolved into several distinct types of competing demands where management scholars have examined the notion of competing demands and tensions under several different fields.

Commit versus conserve

First, the organizational ambidexterity literature, building on March's (1991) foundational distinction between exploration and exploitation, addresses the tension hinging on an enterprise's long-run survival: the need to engage in sufficient exploitation of current resources, while simultaneously exploring what opportunities lie ahead, to ensure future viability. These activities require fundamentally different organizational alignments: exploitation demands short-term perspectives, efficiency and incremental improvement, while exploration emphasizes longer time horizons, autonomy, flexibility and risk-taking (O'Reilly & Tushman, 2008). However, these frameworks operate primarily at the strategic decision-level, treating exploration versus exploitation as overarching strategic postures. Additionally, they also assume firms have adequate resources to actually pursue both exploration and exploitation (O'Reilly & Tushman, 2008). This leaves gaps in how firms make specific decisions about individual opportunities, and in how the tension is handled under resource constraints.

Going back to entrepreneurial decision-making and effectuation, another tension exists when calculating risks and how to decide between allocating resources to different opportunities. Traditionally, theories regarding such trade-offs describe how organizations can use surplus resources to either create slack as a way to protect the organization against uncertainties (Nohria & Gulati, 1996) or through more formal allocation processes (e.g. Burgelman, 1983). However, concerning financial trade-offs in entrepreneurial environments with few resources, Sarasvathy (2008) introduces the concept of affordable loss. This describes how entrepreneurs with scarce resources substitute traditional financial forecasts and risk calculation to instead base decisions on how much resources the firm can afford to lose and still survive, if the new opportunity is deemed unsuccessful (Sarasvathy, 2008).

Now versus later

Another important tension arises in the decision to either do something now, or withhold resources to pursue the opportunity later in the future. Firms can for instance use corporate foresight, described by Fergnani (2022) as the firm’s ability to collect weak signals in their

environment to decide what opportunities to do now, do later, or to refrain from. However, in resource scarce environments it is often very hard to predict what future lies ahead. As McMullen and Shepherd (2006) highlight, individuals in such contexts cannot rely on objective forecasting, but must instead bridge their doubts through subjective beliefs. This temporal tension of doing something now versus waiting for the future is also conceptualized by Sarasvathy (2001), through the contrast between causation and effectuation. Whereas a causation-logic prioritizes long-term planning and waiting for optimal conditions, an effectuation framework hinges on proactive action in the present, driven by the means currently at hand at the firm, rather than predictions of an uncertain future (Sarasvathy, 2001).

Build versus borrow

An additional important tension that small scale firms face is whether to internalise or outsource a function or capability, to build versus to borrow. Classical management and strategy literature focuses on transactional costs, weighting the cost for developing something internally against buying it on the market or through strategic alliances (Williamson, 1985; Capron & Mitchell, 2009). Dyer & Singh (1998) introduce the relational view by explaining how firms can create competitive advantage through smart alliances and partnerships, to get access to external resources, instead of building them internally. Here, the authors expand the RBV-literature by establishing partnership and networks as a strategic resource, ultimately helping firms decide whether to "build or borrow". However, when firms face resource scarcity, alliances and access to business networks might be limited, hence hindering the ability to borrow capabilities from other companies. For smaller firms, the concept of bricolage explains how firms with limited resources do the best of what's at hand to create value out of nothing. As previously explained, these "improvised" solutions can be the foundation of unique and valuable resources that are hard for competitors to imitate (Baker & Nelson, 2005).

Novelty versus absorbability

As previously mentioned, firms must also make a trade-off in what type of opportunity it wishes to introduce on the market. Here, we described the difference between adapting and a proactive market behavior and different ways to tackle uncertainty. Firms can either try to adapt to their external environment by reacting and serving already established customer needs (Jaworski et al., 2000). It can also be a way to gather important knowledge that future

decision-making hinges on (Rindova & Courtney, 2020). Firms can also try to shape the market by being proactive, influencing the market structure or behavior of other market actors (Narver et al., 2004; Kohli & Jaworski, 1990; Nenonen et al., 2019). Through the eyes of RBV, it’s a question of the firm's ability to integrate and orchestrate new resource linkages that customers can adopt, understand and realize in use (Schilke et al., 2018).

2.6 Synthesis: Analytical Tension Categories

In answering our research question, four different tensions are presented that will enhance our analysis and understanding. These tensions serve as different domains of dilemmas that firms face when they navigate and decide whether to commit or conserve. As firms within the data sample all face resource constraints serving on the Kenyan market, how they are able to navigate and move forward is of particular interest to this study. As the study is informed by RBV, we seek to understand how value is created by orchestrating resources, something that is in deficiency among the sampled firms. Below is a summary of the four tensions (table 1) that will serve as a lens for further analysing the data material.

Table 1: Analytical tension categories derived from the literature

Tension	Definition	Anchoring literature
Commit vs. conserve	The overarching tension between allocating scarce resources to pursue a specific opportunity and preserving them for existing operations or future options; salient because each commitment carries a visible opportunity cost under scarcity.	March, 1991; O'Reilly & Tushman, 2008; Sarasvathy, 2008; Nohria & Gulati, 1996; Burgelman, 1983
Now vs. later	The temporal tension between acting on an opportunity while a window is open and deferring until conditions reduce the cost and risk of commitment.	Fergnani,2022; McMullen & Shepherd, 2006; Sarasvathy 2001
Build vs. borrow	The tension between internalising missing functions and infrastructure (high commitment, high control) and accessing them through partners' existing resources (low commitment, new dependencies).	Williamson, 1985; Capron & Mitchell, 2009; Dyer & Singh, 1998; Baker & Nelson, 2005
Novelty vs. absorbability	The tension between the degree of novelty a firm wishes to introduce and the degree that customers and stakeholders can understand, trust, and adopt given prevailing knowledge and trust levels; resolving it consumes scarce educational and relational resources.	Nenonen et al., 2019; Jaworski et al., 2000; Rindova & Courtney, 2020; Narver et al., 2004; Kohli & Jaworski, 1990; Schilke et al., 2018

3. Methodology

In this chapter, we present our methodological approaches and the rationale behind them. We start with the research design (3.1) followed by data collection (3.2), data analysis (3.3) and quality considerations (3.4).

3.1 Research Design

3.1.1 Methodological fit & Research approach

By accepting that some aspects of reality exist independently of how they are perceived (e.g. the resource constrained environment), we adopted an ontological position of critical realism and an interpretivist epistemology (Bhaskar, 1998). In doing so, we acknowledge that our interviewees construct and interpret their subjective meanings in ways that are contingent on the spatio-temporal contexts in which they operate (Welch et al., 2011). This benefits our study since it integrates the objective context as a critical component in our explanatory model.

As this study aimed to enhance the comprehension of how firms navigate commitment tensions under constraint, a qualitative research approach was suitable because it allowed us to capture rich and context-specific data (Bell et al., 2019). Capturing subjective meanings that are bounded by an objective reality not only aligns with our critical realist ontology (Welch et al., 2011), but a qualitative research design also holds high explanatory potential when collecting complex and detailed data (Rubin and Rubin, 2012).

This study was guided by an abductive research approach. Given the limited theoretical conceptualization of how constrained firms navigate opportunity-specific commitment tensions, an abductive methodology was especially suitable, as it allowed us to iteratively move between empirical observations and existing theory to generate and refine explanatory patterns in the data (Sætre & Van de Ven, 2021).

3.1.2 Research Setting

The scope was to study firms subject to resource constraints. An environment where resource constraints are prominent are *frontier markets* characterized by constraints as e.g. low income

levels or limited access to financial systems and infrastructure (Satolli, 2024). Kenya emerged as a suitable empirical setting because it combines structural constraints, including external financing pressures and exposure to corruption, with one of Africa's more developed entrepreneurial and technology ecosystems (S&P Global Ratings, 2025; Transparency International, 2026; Startup Genome, 2025). Nairobi is frequently described as the "Silicon Savannah", and Kenya is home to major African digital innovations (McCandless Farmer, 2025). This paradoxical combination of significant resource constraints and a growing business ecosystem made Kenya a theoretically useful setting, for two reasons. First, it promised access to suitable case companies: post-revenue firms that are demonstrably active and ambitious despite operating under binding constraints. Second, we expected the tensions surrounding resource commitment to be more visible and more explicitly reasoned about by managers than in resource-rich markets.

3.1.3 Multiple Case Study

We were inspired by Eisenhardt (2021)'s approach for building theory using a cross-sectional multiple case study, where each firm was treated as a holistic case operating within the Kenyan context. Case studies are appropriate when studying contemporary phenomena in real-life settings, as they enable in-depth engagement with empirical material and context to support theory development (Dubois & Gadde, 2002). Although Eisenhardt (2021) suggests between 4-10 cases for a multiple case study, the cross-sectional approach allowed us to distinguish and draw conclusions from multiple firm cases within the Kenyan context, enhancing the richness of our findings. This benefited our study since we could contrast local nuances from multiple cases to our theoretical model to create novel insights, given the abductive nature of the study (Dubois & Gadde, 2002).

3.1.4 Sampling Strategy

Given the unfamiliar and distant context in our study, we employed a snowball sampling strategy, which is useful when studying cases that are hard to reach (Bell et al., 2019). In following this logic, we initially interviewed a few Kenyan companies that were asked to propose recommendations for other suitable companies that we could interview. As snowball sampling requires the researcher to make judgments about the fit of each recommended case

(Bell et al., 2019), we developed a set of sampling criteria to guide our decision-making, and to reduce any potential personal biases in the selection of case firms.

The criteria were: (1) firms in the post-revenue phase, meaning firms that had already sold their product or service to paying customers. We excluded pre-revenue ventures, as they may not yet have made enough consequential resource-commitment decisions to reveal a clear navigation pattern. (2) The sampling was limited to small-scale entrepreneurs and SMEs. (3) Firms represented from all of Kenya's most important economic sectors: agriculture, manufacturing and services, making up a majority of the GDP (Statista, 2025). In the end we ended up studying 11 different companies. In taking an abductive approach, data was analyzed and reviewed until a repetitive pattern emerged in our coding, which then concluded to end the data collection phase (Bell et al., 2019).

3.1.5 Choice of Participants

We sought to sample people in decision-making positions within each organization, given our interest in organizational decisions about resource commitments. In treating each firm case holistically, the main goal for each case was to interview the person(s) ultimately responsible for taking the decisions, which resulted in us interviewing founders, CEOs, CFOs and CMOs within the firms.

To ensure methodological transparency, we acknowledge that there might be an asymmetric distribution of interviews as some case companies are represented by a single participant. As outsiders with a limited timeframe, we prioritized securing single deep interviews with the final decision-maker over forcing multiple low-level interviews. This might affect internal validity for the single participant-case, as we couldn’t triangulate and cross-check the subjective views between several participants (Bell et al., 2019). To mitigate this risk, we interviewed external stakeholders such as investors or customers that could confirm or recount a firm’s prior decisions. We also cross-checked the single-participant findings against official channels such as LinkedIn, websites and fiscal documents.

Table 2: Interviewee sample

Firm	Description	Sector category	Participant	Date	Length
A	B2B fintech	Services	CEO & cofounder (A1)	09-Mar-26	60 minutes
A	B2B fintech	Services	CTO & cofounder (A2)	17-Mar-26	55 minutes
A	B2B fintech	Services	CFO & cofounder (A3)	09-Mar-26	50 minutes
B	Agricultural platform	Agriculture	CEO & cofounder (B1)	09-Mar-26	60 minutes
C	Vehicle licensing platform	Services	Country Head (C1)	10-Mar-26	65 minutes
C	Vehicle licensing platform	Services	CFO (C2)	18-Mar-26	55 minutes
C	Vehicle licensing platform	Customer	Customer representative (CUS1)	17-Mar-26	45 minutes
D	B2B HR software company	Services	COO (D1)	19-Mar-26	60 minutes
E	Employee financial services platform	Services	CEO & cofounder (E1)	12-Mar-26	55 minutes
F	Electric mobility company	Manufacturing	CEO & cofounder (F1)	16-Mar-26	65 minutes
G	Waste management technology company	Manufacturing	CEO & founder (G1)	19-Mar-26	50 minutes
G	Waste management technology company	Manufacturing	Plant Manager (G2)	16-Mar-26	45 minutes
G	Waste management technology company	Manufacturing	Team Lead (G3)	18-Mar-26	60 minutes
H	Local manufacturing company	Manufacturing	CMO (H1)	18-Mar-26	55 minutes
I	Insect-based agri-inputs company	Agriculture	CEO & founder (I1)	19-Mar-26	60 minutes
J	Soil testing technology company	Agriculture	CEO & cofounder (J1)	19-Mar-26	50 minutes
K	AI recruitment software company	Agriculture	CEO & cofounder (K1)	12-Mar-26	70 minutes
INV1	VC investor in C, D and E	Investor	Investor (INV1)	17-Mar-26	60 minutes
INV2	Climate-tech incubator and investor in G, H, I, J	Investor	Investor & incubator (INV2)	17-Mar-26	55 minutes
INV3	General incubator and investor in B, F and K	Investor	Investor & incubator (INV3)	28-Mar-26	70 minutes

3.2 Data Collection

Data was collected through semi-structured interviews, which allowed for flexible yet standardized and comparable interview outcomes (Bell et al., 2019), that were examined between firm cases. An interview guide was used (see appendix 1) comprising several open-ended questions acting more as guidance to spark an exploratory conversation. The questions were informed by the theory, but formed in a plain and jargon-free way, to ensure an adequate understanding in the mind of the participants. In having low contextual knowledge and interviewing both external and internal actors, a semi-structured interview process also allowed us to be flexible and reshape the question to fit in with the interviewee, it also aligned with our interpretivistic exploratory approach.

All interviews were conducted physically in a 2:1 setting, with both researchers present and one interviewee at a time, to mitigate the risks of social desirability biases or group effects (Bell et al, 2019). The interview times ranged between 45 and 70 minutes depending on the

participants' availability. Coming as outsiders, we insisted on holding all interviews physically, to pick up all verbal and non-verbal cues that could impact quality of the data (Bell et al., 2019). Both of us took notes during the sessions and debriefed immediately after each interview, which enabled us to discover novel patterns and bring them forward as guidance in the next interviews.

Prior to including firms in the final sample, we conducted preliminary desk research on candidate companies and held exploratory conversations with ecosystem actors who are not part of the formal interview corpus for this thesis. These background interactions, together with publicly available information, were used to identify firms that appeared to satisfy the sampling criteria.

3.3 Data Analysis

As our research was guided by an abductive logic characterized by systematic combining of our empirical material and theoretical framework (Dubois & Gadde, 2002), our initial understanding of how firms navigate commitment decisions under constraint was continuously refined as more data was collected and analysed. The data analysis process was inspired by a grounded-theory approach, where we continuously alternated between theory and empirics through systematic steps such as coding, as the material was compiled and analyzed (Timmermans & Tavory, 2012).

All interviews were audio-recorded and transcribed with the help of AI-based transcription tools, after which we manually checked and corrected the transcripts to secure accuracy in key passages. To manage the extensive amount of generated unstructured data, we adopted the Gioia thematic analysis method for structuring our data. The Gioia method is specifically well-equipped when building theory from qualitative data (Gioia et al., 2013). We visualised this structure in a Gioia data structure table (Table 3), and complemented it with a table summarising how many firms contributed to each mechanism (Table 4), to provide transparency regarding the breadth of empirical support behind the themes.

First, we conducted open coding of the interview transcripts, staying as close as possible to the informants' own language. First-order activities were developed from interviewee quotes and implicit insights, identified through repetitions, metaphors and analogies, and cross-case

comparisons (Ryan & Bernard, 2003). We focused on segments directly related to our research purpose that recurred across multiple interviews and cases.

In the second stage, we grouped first-order codes into more abstract second-order themes, moving from informant-centric to researcher-centric concepts by identifying shared underlying patterns. Throughout, we revisited earlier coding decisions, merging, splitting, and refining themes as new insights emerged.

In the third stage, we aggregated second-order themes into broader dimensions capturing the mechanisms through which firms navigate resource commitments by connecting the findings to the four different tensions identified in the literature review, correspondingly ending up with four different aggregated coding themes.

3.4 Quality Considerations

We follow the criteria of trustworthiness outlined by Lincoln & Guba (1985) recommended to assess qualitative research. *Credibility* concerns the trustworthiness of the findings, *transferability* entails the applicability to external contexts*, dependability* means the consistency and traceability of the research process and *confirmability* refers to objectivity of the research (Bell et al., 2019). We also discuss *reflexivity,* i.e. how our own role as foreign researchers affects the research outcome.

3.4.1 Credibility

Credibility is of great importance given the qualitative approach of our research (Lincoln & Guba, 1985). By adopting the Gioia thematic methodology, we could retain the context of the analyzed material as well as preserving integrity of the data set. For example, the immediate post-interview debriefs allowed possible misconceptions to be checked against the combined collection of notes from both researchers. Additionally, by interviewing several stakeholders, the material could be triangulated within the specific case, which further validated the empirical material.

3.4.2 Transferability

Although firms varied in size and maturity, we acknowledge that a multiple embedded case study, conducted in Nairobi, with firms facing context-specific resource constraints, limits the

generalisability of our findings. However, the goal of the study was not to reach statistical generalization. To support transferability, the paper aims to provide a “thick description”, going beyond surface-level behaviors (Geertz, 1973) in capturing an array of perspectives from different roles, companies, backgrounds within the same context. This enables readers to assess the degree of fit between the paper’s specific content compared to other contexts where they might seek to apply the findings (Lincoln & Guba, 1985).

3.4.3 Dependability

To maintain consistency across the data collection process, we adhered to Lincoln & Guba’s (1985) widely utilized auditing approach. This was supported by internal discussions and supervisor feedback, which was documented and stored together with interview transcriptions, notes and meeting protocols. To further increase transparency and reliability as well as the understanding of our research process, we’ve included the complete interview guide (see appendix 1).

3.4.4 Confirmability

In adopting an interpretivistic view, we recognize that total objectivity is not attainable as our own interpretation may skew the data from the participant’s reflections (Bell et al., 2019). Interpersonally, coding was first conducted individually before aligning as a group to mitigate any idiosyncrasies (Bell et al., 2019). Our position as foreign researchers, publishing a report from a business school, interviewing founders, employees, investors and customers might have caused tendencies of social desirability bias amongst the participants, where answers are skewed favourably towards the specific case (Bell et al., 2019). The immediate post-interview debrief where notes and reflections were shared helped to quickly single out any potential biases from the interviewees.

3.4.5 Reflexivity

In practicing reflexivity we aim to critically assess any potential personal biases (Lincoln & Guba, 1985), especially due to the fact that we are Swedish students conducting research in a completely unfamiliar environment. To address postcolonial critiques of Western research practices acknowledging the Global North as status quo (Bell et al., 2019; Connell, 2007), we consciously mitigated the risk of "tropicalizing" the Kenyan context (Prasad, 2003). In data analysis, this was done by crafting the first and second order themes (Gioia et al., 2013) by

using the participant's own language and expressions, before intertwining it with theory. To widen our own perspective, we were keen to ask a lot of additional questions about the Kenyan context to our participants, such as setting up two background interviews with local investors, excluding our 20 sampled interviews.

4. Empirical Results

In this chapter, we present our identified constraint-navigation mechanisms generated from the thematic coding of the data (4.1). In the following four sections (4.2-4.5), we delve into each mechanism and sub-mechanism, drawing evidence from highlighted quotes and relevant examples from our empirical material. Consistent with the study's process focus, this chapter describes what firms do and how they reason about it; the analysis of how these activities navigate the tension categories defined in Table 1 follows in Chapter 5.

4.1 Identified Constraint-Navigation Mechanisms

Our coding identified four aggregate mechanisms through which the case firms navigate decisions about committing scarce resources to specific opportunities.

Assessing captures how firms judge, at minimal cost, whether a specific opportunity is worth pursuing at all under existing constraints. In the material, firms use piloting and predictive measurements to weigh whether an opportunity merits scarce resources, bearing on the commit-versus-conserve tension, and benchmarking and market timing to judge when acting becomes affordable, bearing on the now-versus-later tension. *Mobilising* captures how firms build the relational and cognitive preconditions, in the form of stakeholder understanding and trust, that their environment does not supply ready-made and without which larger commitments are not feasible. Educating and trust-building are where firms confront the novelty-versus-absorbability tension, since both determine how much novelty customers can carry. *Leveraging* captures how firms structure the commitments they do make, working through partnerships and solution architecture to make an initiative workable with the resources actually available. These two activities represent the build-versus-borrow tension directly, as partnerships give access to others' resources while solution architecture requires the firm's own. *Learning-based adapting* captures how firms convert the resources expended in each initiative into knowledge, both while an initiative is underway and after decisions have been made. Because learning follows every judgement, mobilisation and leveraging, it recurs across all four tensions rather than corresponding to any single one.

The summary of our coding can be found in Table 3, showing our identified mechanisms, sub-activities and examples of first-order codes derived from each sub-activity.

Table 3: Thematic conceptualization of constraint-navigation mechanisms

Third order	Second order	First order
Assessing	Piloting	Putting a basic version in front of users
		Letting customers try before scaling
		Checking whether usage turns into payment
	Predictive Measurements	Estimating revenue or customer acquisition before acting
		Setting practical metrics for each opportunity
		Weighing customer value against time and money spent
	Benchmarking	Looking at what has worked in other markets
		Comparing local customers with similar users elsewhere
		Asking others why similar attempts failed
	Market Timing	Holding back when the market is not ready yet
		Moving when regulation, or infrastructure starts to align
		Preparing for business models expected to arrive locally
Mobilising	Educating	Showing the problem before selling the solution
		Training users through workshops, sales teams, and demos
		Making new behaviours understandable and acceptable
	Trust-building	Clarifying what the company can and cannot deliver
		Using local champions to convince others
		Following through on promises to secure repeat engagement
Leveraging	Partnerships	Working through cooperatives, banks, lenders, and aggregators
		Using partners to reach users the firm cannot reach alone
		Borrowing access and credibility from existing relationships
	Solution Architecture	Adding financing so customers can afford the solution
		Aligning the solution with how customers already operate
		Building missing infrastructure around the product
Learning-Based Adapting	Learning between mechanisms	Building with users and changing the product as feedback comes in
		Adapting to customers' current systems instead of imposing best practice
		Dumbing down the product when it becomes too advanced for users
	Post-decision learning	Reviewing what worked and what failed after an initiative
		Writing down lessons from trials for the team
		Using board or team reviews to stop, continue, or redirect

4.2 Assessing

Across the cases, firms use four main practices to judge whether a specific opportunity is worth pursuing: piloting, predictive measurements, benchmarking, and market timing. These practices help them see if a solution solves a meaningful problem and can realistically become commercially and operationally viable under resource constraints.

4.2.1 Piloting

Piloting is a central way for firms to discover whether a new solution creates enough value in practice to justify further investment. Firms use pilots to test whether customers will use a

solution, whether they find it useful, and, in many cases, whether that value can translate into paying demand.

One common approach is to let customers try the product and observe their response. This gives firms an early indication of whether the solution addresses a real need:

> *"I think the best way is to let them use it and see how they find it. If it is not solving what they need, or if it is not fulfilling their needs, they are not going to pay for that service."* – B1

Several firms also use pilots to separate willingness to use from willingness to pay. This distinction matters because a solution may create clear use value without yet being commercially viable in its current form. Under constraint, discovering this early is what prevents larger resources from being sunk into an opportunity that cannot carry them:

> *"We did this with about 300 farmers in Rwanda. We established willingness to use the product, and we established willingness to use our recommendations. Then we tried to establish willingness to pay. But the funny thing is that the farmers we worked with in Rwanda refused to pay."* – J1

In other cases, pilots are used later to test whether an offer can work as an ongoing commercial arrangement. This includes checking workflow fit and the structure of the future client relationship:

> *"Piloting is good with any client because, first of all, we know the product will work for them. Then we learn which aspects of their workflow need our product. That is what the pilot is for, to understand what defines the relationship going forward."* – A1

Many describe pilots as quick market checks used to gather fast feedback and refine the offer. Others take a more structured approach and test explicit hypotheses. In both cases, the scope of experimentation is shaped by what firms can afford to test. C1 explains how experimentation depends on whether earlier activities generate enough surplus to fund the next trial:

> *"If I do a transaction today and my goal is a profit margin of 10 on each transaction, and I make that 10, I take 2 of that number to experiment with something else. If I do not make that 10, I cannot experiment."* – C1

4.2.2 Predictive Measurements

Firms also use predictive measurements to assess whether an opportunity appears valuable before committing more resources to it. They forecast revenue, customer acquisition, and other indicators to see if a move seems worthwhile.

B1 links these forecasts directly to decision rules:

> *"If the goal is additional customer acquisition, and the customer acquisition or conversion goes up because of that forecasted initiative, then it is worth doing."* – B1

Some firms complement this with rough estimates of how much internal effort a new opportunity will require, and whether that effort is justified by the value it may create for customers. A2 describes this as a constant trade-off between time, customer value, and payment potential:

> *"It is all about how much time it might take versus how much value we are giving the customer, both in terms of making it easy for them and whether they will pay us for it."* – A2

These predictive tools do not remove uncertainty, but they help firms make an early judgment about whether a specific opportunity appears viable enough to explore further, a judgment in which the firm's own scarce time and effort appear explicitly on the cost side of the calculation.

4.2.3 Benchmarking

Benchmarking is another important way firms assess opportunities. Across the cases, firms look at solutions, business models, and strategic approaches from other markets to assess whether similar ideas could also be viable in their own context.

Much of this benchmarking is directed toward more developed economies or markets. When firms look to high-technology markets, they rarely aim to copy a full solution. Instead, they identify selected features or principles that seem valuable and then assess whether those parts could work locally within existing budget and infrastructure constraints. G1 describes this as drawing on concepts that have already worked elsewhere, but implementing them slowly and selectively where local conditions allow adaptation:

> *"Most of this innovation we take from developed countries like Sweden. If something has already worked there, we take that concept and try to bring it here. But if you take everything from a developed country and you do not have the proper structure in a developing country, there will be many issues. The infrastructure is the problem. So we go slowly. But if we take the concept, spend only a little on it, and it shows that it can be adapted within the market, then we implement it."* – G1

Benchmarking also helps firms judge price viability. By comparing their offering to foreign alternatives, firms get a reference point for what a locally viable solution must deliver and what price level the market may accept:

> *"We try to think of new ways of getting the product to work, or keeping the same quality, but getting to the price of the Chinese product."* – H1

By looking at what has already worked elsewhere, firms can infer which opportunities are likely to work locally and focus their scarce discovery effort on those with the highest chance of becoming viable.

4.2.4 Market Timing

Firms also assess opportunities by judging whether the timing is right. Even when a solution appears valuable in principle, its potential depends on whether surrounding market conditions are ready enough for that value to materialise in practice.

A3 explains that some ideas may be strong in themselves, but still lack the surrounding uptake needed for commercial viability:

> *"For us, some of the ideas we have are such that, if you really sit down and look at them, the market will be ready in five years."* – A3

In such cases, ideas that seem promising are put on hold, and the firm focuses instead on solutions that fit current market conditions and can be pursued now.

A second pattern appears when firms perceive that external developments are starting to align with the opportunity. G1 describes how their reverse vending machine became easier to introduce when policymakers and producer responsibility actors started seeking solutions for source-level waste management:

> *"It was a bit of luck and the correct timing, because we were implementing it while they were needing it."* – G1

In several cases, timing decisions are also linked to what firms observe in other markets. Managers describe knowing that certain technologies, infrastructures, or business models are likely to reach Kenya because they have already become established elsewhere. E1 describes this clearly in relation to open banking:

> *"I'm pretty confident that open banking will become a thing here in the next three to five years. We see it naturally propagating across the continent over time. So we know it will come, and as we build, we think about those things."* – E1

Firm F shows a similar pattern in relation to electrification. The firm entered when demand for electric motorcycles and charging infrastructure was still weak, yet management viewed the shift to electric mobility as inevitable and therefore worth preparing for in advance. As F1 explains:

> *"And we've just tried to push this forward as fast as possible, because we know it will happen. And we see trends in China and India. And we know it's going to be a thing."* – F1

In that way, market timing is about both local readiness and what firms see coming from abroad, and it influences when they judge an opportunity to be real enough to act on.

4.3 Mobilising

Mobilising is about making new solutions workable in practice by building the understanding and relationships around them. In our cases, this work centres on two activities: educating customers and building trust. Both are described by informants as costly, slow, and unavoidable: the customer knowledge and trust that firms in developed markets can largely presuppose must here be produced by the firm itself, and the cost of producing them shapes how novel a solution firms dare to present and how far they can move toward more ambitious configurations in each opportunity.

4.3.1 Educating

Firms educate customers so that new solutions become understandable and acceptable enough to use. For many of them, education is a basic requirement before they can influence behavior, expectations, or adoption patterns, especially when they introduce digital or technically advanced solutions into traditional markets.

A common approach is to show the solution physically. Demonstrations make abstract technology concrete and help customers see what it does:

> *"Convincing the typical farmer that there is a new technology is usually very hard… once the farmer sees, that is how I have been able to hack clients."* – I1

Education, however, is costly. Changing how customers understand a solution takes time, and staff attention, which are both scarce. Managers therefore also use education as a way to test whether it is realistic to carry a particular customer group through the learning curve at all. C2 frames this as a question of staying power:

> *"What are you trying to solve, right? If what you are trying to solve is totally disruptive, do you have the staying power to go through that educational curve for your consumer base? Can you realistically go through that journey? If you can, then stick to it, but if you cannot, figure out a way to adapt to what the market is."* – C2

In these situations, firms lower the level of novelty and focus on solutions that customers can understand and adopt with the resources currently available.

In groups where firms judge that sustained education might pay off, they sometimes invest heavily. G1 describes how they spent months training users before the solution started to work in practice:

> *"You just have to spend some of the resources, organise a workshop, and train them. It took us three good months, training them every week with at least two classes, and that was physically. They had not adapted much to the technology, so we had to train them."* – G1

Because such efforts are so resource-intensive, firms become selective about where they invest. In some cases, they switch target segments when they conclude that one group would require too much education to ever reach practical adoption. More often, firms keep the target group and adjust the level of novelty instead. They remove advanced features and focus on what customers actually need to get started:

> *"We are serving smallholder farmers. They do not need that many data points. They just need the key data points to get the technology going.… We will never build the innovations that we think are amazing."* – J1

In firm J, this means keeping more advanced features in the background and concentrating on a simpler offer that farmers can use and pay for now.

By reducing complexity, firms lower the educational burden and make it easier for customers to absorb new offers. They also adjust how they frame launches, simplifying both the product and the message:

> *"Sometimes we are so smart and innovative and want to do cool things, but at times it becomes a bit too complex. One of our key themes this year has been: how can we simplify, make things clearer, and make them easier for people to*

understand? Because when you do that, the message is also much easier to spread." – F1

Through these decisions about how much to invest in teaching customers and how far to simplify the solution itself, firms build the relational and cognitive base a new solution needs and identify where it is not realistic, with present resources, to try to reach that point. When education work shows that a solution is too complex, teams also revisit earlier judgements about what customers need and what level of novelty is realistic to introduce.

4.3.2 Trust-building

Trust shapes how much novelty firms can introduce and how gradually they need to introduce it. Respondents describe trust as a necessary condition for bolder moves, yet also something that is slow and resource-intensive to build in their context.

As with education, much trust-building happens through physical presence and demonstrations:

"In Kenya, it is much more about guerrilla marketing. We have to be on the ground. We have to go to a football field and invite 300 people, and then we just stand there and talk. It takes quite a long time for people to learn. No one trusts you just by putting up a website. People want to see it for themselves, understand it, ask questions, and really know that it works. But once you reach a certain point here, it becomes incredibly trendy." – F1

Because general trust is low, firms often rely on intermediaries who already hold strong positions in local networks. By working through respected actors, they can borrow trust instead of building it alone. Firm I describes how an influential client became a channel into the wider community:

"I used to work with the loudest woman in the community. I gave her three samples, and once everybody goes to her farm, my products are showcased. That is how I have been able to hack clients." – I1

Although this kind of trust-building consumes valuable resources, firms see it as an investment with long-term pay-off. INV1 puts it explicitly:

> *"There is actually quite low trust. And so once you have cleared the trust threshold, you have a customer for a long time."* – INV1

Once that point is reached, firms feel able to introduce more novel elements because the relationship can carry more risk. C1 describes trust as a "trust currency" that has to be built first through basic services:

> *"Two things you build first are your trust currency and clarity on what you can actually deliver. You let them see both what you are struggling with and what you know you will always do well, and you let them make that choice (to work with you or not). As soon as they make that choice, it is a lot easier to keep upselling them from there, and you can take that going forward."* – C1

At the same time, firms recognise that trust and education move together. Even if customers understand a solution, low trust can still limit how bold a move they are willing to engage with. In those situations, managers prefer to start with more familiar arrangements and only add more innovative features step by step:

> *"As soon as your consumer populace is well educated, the uptake kicks in. But if the trust is not there, it is safer to adapt and then introduce the innovation in tiny bits, so that you have revenue in the pipeline sustaining and keeping the lights on."* – C2

Here, firms move forward through smaller and more familiar steps when trust is still limited, even when they have a longer-term ambition.

In this sense, mobilising through education and trust-building creates and tests the conditions under which larger resource commitments become feasible and reveals, at comparatively low cost, where they are not.

4.4 Leveraging

Leveraging is where potential opportunities become concrete initiatives. Once firms have assessed and mobilised the necessary understanding and trust, they still need workable arrangements that allow them to act at scale with the resources they actually have. In our cases, they configure their commitments mainly through partnerships and solution architecture.

4.4.1 Partnerships

Partnerships help firms turn opportunities into action by giving them access to organised structures and existing relationships. Instead of approaching end users one by one, they work through actors who already sit closer to the market. B1 explains that they chose to work through cooperatives early on because these groups were already organised and more open to digitisation than a fragmented base of individual farmers. A1 describes a similar shift:

> *"We were looking at our clients directly. We were going to approach them one by one, but it did not make sense to approach them one by one. So we looked at the aggregators, the lenders. At the end of the day, we are still achieving the objective that we had originally. The only difference is that now we are getting more of them faster than we envisioned."* – A1

In these cases, partnerships make market access practical enough that firms can move from small experiments to real rollouts. As D1 puts it, partnerships are the way to reach meaningful scale:

> *"It is much easier to impact as many people as possible by leveraging partnerships."* – D1

Partnerships also ease adoption by letting firms enter through relationships that already carry trust. Rather than trying to build new ties from scratch, they attach their solutions to actors who are already accepted in the community. J1 describes how they work through organizations that already have relationships with farmers:

> *"We provide them with the technology and then they offer that technology to the farmers. You build into the trust that already exists with the new clients that you are offering the solution to. Instead of building a new framework, you fit yourself into that framework."* – J1

A second role of partnerships is to make the offering feasible in operational terms. Firms often do not have the internal infrastructure, distribution, or regulatory position needed to deliver the full solution themselves. In those cases, partners become part of what makes the initiative possible. E1 explains how licensed partners allow them to expand with low incremental cost:

> *"If a partner wants to launch in their market with our technology, we do not really have much incremental cost to launching in, say, Ghana, because they are the licensed partner. They deal with the regulator, they have the sales teams, and so forth. So it is not a huge incremental challenge for us."* – E1

Similarly, B1 describes partnership choices as a deliberate way to avoid internalising functions that others already perform well, since building everything internally would require significant fundraising and higher operating costs. Through such arrangements, firms can undertake initiatives that would otherwise remain out of reach.

At the same time, partnerships create dependencies that can later constrain how far a move can be sustained. This is particularly visible in firms that rely on financial actors to reach the market. F1 highlights how their model depends on access to a wider financing system:

> *"People will never buy in cash, which means that the firm is dependent on an entire financing industry. The only way of becoming resilient is to work with many actors rather than relying on one. Otherwise, if a single partner changes something, the firm becomes stuck."* – F1

This means that firms may reach the market through partnerships, while still having to work within the limits of existing financing arrangements. Partnerships therefore do not simply remove barriers. They make ambitious initiatives feasible for firms whose own resources

would not carry them, but they do so through arrangements that can themselves introduce new constraints and may need to be revised as conditions change.

4.4.2 Solution Architecture

Firms also configure commitments by changing the offering itself. Instead of presenting a stand-alone product, they integrate financing, complementary services, or system elements so that the solution becomes workable in real conditions. In this sense, solution architecture is part of what enables implementation.

One recurring pattern is that financing is built into the offering instead of being treated as external. In firm G, for example, the platform not only verifies waste and provides incentives, but also allows waste collectors and aggregators to turn their activity into loans or working capital. A similar logic appears in J, where financial systems are embedded because many smallholder farmers struggle to prioritise an intangible input such as soil data over something more immediate like fertiliser:

> *"We also embed the group partners into financial systems or financial institutions that, for example, are providing loans. One of the big hindrances to soil testing for smallholder farmers is that most of them are poor and they cannot prioritise something intangible like data over something tangible like a bag of fertiliser. But if it is embedded in a system that removes the choice of 'do I have this money now', then most of the time they will accept to do it."* – J1

Founders describe this as a deliberate way of making adoption possible at all. Without embedding finance into the offer, the product would simply not be used by the customers they target.

The same pattern appears in firm C, where financing is folded into the offer rather than left to external banks. C1 describes the company as part of the full life cycle of the car, not a stand-alone service. A dealer explained how a customer who cannot pay the full amount up front is referred to them, which pays the dealer in cash while the customer repays in monthly installments. The same dealer emphasised that firm C is often preferred to banks because the turnaround time is far shorter, making the solution workable for both dealers and buyers.

A second pattern is visible when firms conclude that the core product is not enough on its own and that a broader ecosystem has to be built around it. As F1 puts it:

> *"It is not enough to have a product; you also need the whole ecosystem."* – F1

In firm F's case, this meant not only selling electric motorcycles but also investing in charging infrastructure and related services around the vehicles. Here, the offer extends beyond the product to include the surrounding system required for it to function in the market at all. Where partnerships let firms borrow missing structures, this variant means building them, a considerably heavier use of the firm's own resources undertaken because no partner yet exists to borrow from.

A third aspect appears when founders recognise that a more complex architecture can become unworkable in practice and therefore needs to be simplified. K1 describes how an initially ambitious solution had to be scaled back:

> *"Initially we offered a full-package solution, software plus financing, to reshape how clients buy this service. But in practice it was too complex. Sales cycles became very long and we spent too many resources. So we simplified the offer and now sell a basic version that fits into clients' existing systems."* – K1

Firm K's episode shows the commitment configuration itself being retreated from: the architecture that was meant to make the initiative workable turned out to consume more resources than it returned, and the firm withdrew to a lighter configuration that fits structures already in place.

4.5 Learning-Based Adapting

Learning-based adapting is about what firms retain from the resources they have already spent. Across the cases, managers describe two moments of learning: adjustments made while an initiative is still running, and reflection after a decision has been carried out. Both convert expenditure into knowledge that is carried into subsequent opportunities.

4.5.1 Learning Between Mechanisms

In several cases, managers describe how they learn and adjust an initiative while it is still underway as they gather new insights.

For some firms, this learning is described as a deliberate way of working. J1 explains how they repeatedly developed simple versions of their offer, introduced them to farmers, and then changed the product based on the reactions:

> *"We built the most basic version, took it to market, collected feedback, improved on that version, took it to market, collected feedback. We have a philosophy internally which is built for your users with your users."* – J1

Similarly, A2 describes how work with new customers led them to realise that their original idea of "best practice" did not match the situations they met:

> *"During the onboarding process we noticed that we had to adapt to what the customer has, instead of what we think of as best practice."* – A2

K1 gives a related example, where client reactions led the team to simplify the product and rethink how far they should go on one dimension of innovation:

> *"we realised we might need to dumb down a version of our product to make it easier to understand… the market has a sweet spot where going deeper becomes overkill, so we added more breadth instead and it changed how we think about relevant innovation."* – K1

Firm F provides another example of how learning during rollout leads to changes in the same initiative. F1 explains how experience from the field made the team reconsider its initial position in the debate between charging and battery swapping:

> *"In the fight between charging and swapping, we realised that we were maybe too much only charging, and everyone else was too much swapping. Now we are trying to be more in the middle."* – F1

Across these examples, managers describe how new insights feed back into the same opportunity and influence how the solution is configured and developed over time. Notably,

the adjustments run largely in one direction, toward simpler and more familiar configurations, which suggests that part of what firms learn is where the limits of their own and their customers' resources lie.

4.5.2 Post-Decision Learning

Managers also talk about learning that takes place after an initiative has already been decided on and carried out. In these situations, they look back at what happened and use the experience when deciding what to do next time. C2 emphasises the importance of going back over completed ideas and experiments:

> *"Just do a proper post-mortem on whatever idea you have experimented or tested, and be humble enough to accept the failures and backtrack immediately."* – C2

In other firms, learning from earlier initiatives is written down and shared inside the organization. H1 describes how results from trials are turned into concrete guidelines for the team:

> *"Once we learn I make sure the team at the facility understands… they have a written document showing that if you move this crate from point A to point B within five hours these are the consequences… so I've just written them somewhere for the team and for them to understand."* – H1

G1 shows another way of revisiting past decisions. G1 explains how the firm regularly discusses ongoing projects together with its board and uses these discussions to decide which initiatives to continue and which to stop:

> *"We stopped the project because we have a good board of directors, and every quarter we sit down, look at what has happened, and decide which projects should go on and which ones we should leave."* – G1

Through these kinds of practices, experiences from one initiative do not stay isolated, but are carried forward and shape how managers think about opportunities in the future.

5. Analysis

In this chapter, we analyze our findings by first discussing the links between the different identified mechanisms (5.1). We then introduce three core insights (5.2), leading to the conceptual framework (5.3).

5.1 Navigating the Commit–Conserve Tension Through Four Mechanisms

This section examines how the four mechanisms help firms navigate the tension between committing scarce resources to an opportunity and conserving them. Table 4 summarises the frequency of sub-mechanism for each case firm, as well as the tension each sub-mechanism primarily navigates, where the results will be elaborated further below.

Table 4: Display of mechanisms among case firms

Mechanisms	Sub-mechanisms	Primary tension navigated	A	B	C	D	E	F	G	H	I	J	K	Σ
Assessing	Piloting	Commit vs. conserve	X	X	X	X	X	X	X	X	X	X	X	*11*
	Predictive Measurements	Commit vs. conserve	X	X	X			X						*4*
	Benchmarking	Now vs. later		X	X	X	X	X	X	X	X	X	X	*10*
	Market Timing	Now vs. later	X	X	X	X	X		X			X		*7*
Mobilising	Educating	Novelty vs. absorbability	X	X	X	X	X	X	X		X	X		*9*
	Trust-building	Novelty vs. absorbability	X		X	X	X	X			X	X	X	*8*
Leveraging	Partnerships	Build vs. borrow	X	X		X	X	X				X		*6*
	Solution Architecture	Build vs. borrow		X	X		X	X	X			X	X	*7*
Learning-Based Adapting	Learning between mechanisms	All four	X	X	X	X	X	X		X	X	X	X	*10*
	Post-decision learning	All four	X	X	X	X	X	X	X	X	X	X	X	*11*

5.1.1 Assessing

When assessing, all firms use *piloting* to test perceived value before further resource commitment. Piloting is an efficient way to explore future value potential (Nenonen et al., 2019), which may help explain why all firms use it. Under scarcity, the scope of such tests is bounded by what firms can afford to lose rather than by what expected returns would justify, in line with the affordable loss principle (Sarasvathy, 2008). Firm C illustrates this directly, funding experimentation out of the margin generated by completed transactions and stopping when that margin fails to materialise. Some firms use *predictive measurements* in trying to

discover value potential, by for instance using scenario-planning, similar to Fergnani's (2022) notion of corporate foresight, where firms envision multiple future scenarios under uncertainty. However, as frontier markets face many different constraints and hurdles (Satolli, 2024), it's natural that only a few firms use predictive measurements when the environment is volatile. Interestingly, firms can use *market timing to actively* wait and arrange their internal resource base to fit with future technologies that are certain to come to Kenya. Market timing assumes that the future is observable, which contradicts existing views that firms act as a response to an unobservable future (Rindova & Courtney, 2020). It also sits uneasily with the assumption that entrepreneurs under uncertainty cannot rely on objective forecasting and must instead bridge their doubts through subjective belief (McMullen & Shepherd, 2006), a point we return to in 5.2.1.

In sum, assessing functions as an initial filter in the commitment process: firms experiment and explore to understand if an opportunity has solid value potential and can be made workable under existing constraints, before firms carry it forward into the subsequent mechanisms. Firms use these mechanisms to judge whether it's worth committing scarce resources to the opportunity but they are equally an effective way to conserve resources: benchmarking and market timing help firms make fuller use of the resource base they already have before committing anything new.

In this way, assessing delimits the set of opportunities for which commitment is even considered, and channels the rest into deferral or continued low-cost exploration. In terms of the analytical categories in Table 1, this mechanism primarily navigates the overarching commit–conserve tension and, through benchmarking and market timing, the now-versus-later tension.

5.1.2 Mobilising

Mobilising captures how firms attempt to build relational and cognitive readiness around an already identified opportunity. Almost all firms use *educating* to examine how much of their own resources need to be committed for the customer to fully understand the new solution. In a sense, the goal of education is to increase the resource of knowledge (Barney, 1991) among customers. If that resource is low, for instance when introducing a high-tech solution among

farmers, big resource investment would be needed to get the customer to fully understand the solution.

Table 4 also reveals the importance of *trust-building* when trying to move an opportunity toward commitment. This activity occurs both directly and through intermediaries: firms invest time in face-to-face presence and also work through respected local actors or existing client organizations to borrow credibility and lower the burden of establishing new relationships from scratch. Trust is a valuable interrelational resource (Clulow et al., 2007), and under resource constraints building trust is costly, which forces managers to select where to invest and how complex a solution they can realistically present to their customers.

Mobilising functions as a second filter in the commitment process: education and trust-building indicate that stakeholders can understand and carry a more novel resource configuration before opportunities move forward toward larger commitments. However, when receptiveness remains low or fragile despite initial efforts, firms may go back to assessing, e.g. to do a new pilot, or decide to keep the initiative closer to market standards, conserving resources rather than committing further. In terms of Table 1, mobilising navigates the novelty-versus-absorbability tension: educating and trust-building are the activities through which firms make new resource linkages adoptable, understandable and realisable in use for their customers (Schilke et al., 2018). They are also how firms discover where the degree of novelty they wish to introduce exceeds what customers can absorb, and where a more adapting-oriented offer, closer to already established needs, is the only viable route (Jaworski et al., 2000; Narver et al., 2004).

5.1.3 Leveraging

Leveraging captures how firms structure external linkages and the offering itself so that a new configuration can actually operate under existing constraints.

Partnerships allow firms to reach scale and legitimacy by working through cooperatives, lenders and producer organizations instead of approaching end users one by one. Here firms take advantage of their business network, the intangible resource between firm and market actor (Dyer & Singh, 1998), to ease implementation of the initiative. *Solution architecture* refers to how financing, complementary services and system components are built into the

offer so that it becomes workable in practice, e.g. to embed a financial service into an existing solution, or building complementary service infrastructure when introducing a new vehicle. Interestingly, a core difference between the two is that partnerships leverage business networks to decrease resource commitment, whereas solution architecture requires more resource investment to realise the commitment. This mirrors the classical trade-off between developing a capability internally and obtaining access to it through the market or through alliances (Williamson, 1985; Capron & Mitchell, 2009). What our material suggests, however, is that the choice is governed less by comparative transaction costs than by whether the firm's resource base can carry the internal option at all: firms borrow because building is unaffordable, and build only where no partner exists to borrow from.

Table 4 shows that around half of the firms use these leveraging activities. This reflects an important standpoint. Not all opportunities that "go through" the mechanisms end up in a resource commitment.

Leveraging functions as the mechanism that turns a vetted opportunity into a concrete arrangement: when suitable partnerships and solution architectures can be assembled under constraint, firms commit to the initiative. However, when opportunities prove too difficult or costly to construct, firms retreat toward configurations that fit existing channels and structures, or return to the earlier mechanisms until conditions change. In terms of Table 1, leveraging navigates the build-versus-borrow tension: partnerships borrow, solution architecture builds.

5.1.4 Learning-Based Adapting

Learning-based adapting captures how experiences from one opportunity feed back into both ongoing iterations and new decision-phases. As Table 4 showcases, this is an important mechanism that all case firms use. *Learning between mechanisms* appears in-between the three other mechanisms, for when firms iterate between piloting and educating. Here, firms learn when calibrating the degree of solution novelty against the current knowledge base of the target customer to try and find the perfect mix. *Post-decision learning* appears when firms reflect on completed commitments or retreats, building knowledge for future decision cycles. Learning is a way to respond to external signals as a means to build internal knowledge (Jaworski et al., 2000; Rindova & Courtney, 2020). And as knowledge is an intangible

resource (Barney, 1991), learning-based adapting strengthens the internal resource base (Schilke et al., 2018). Interestingly, it doesn't matter if firms decide to commit resources to an opportunity or retreat to a decision more aligned with current market arrangements, firms always accumulate knowledge that strengthens future decision cycles.

Taken together, learning is what makes the commitment process iterative in practice as it links assessing, mobilising and leveraging together, where experience is carried forward so that later opportunities are evaluated from different positions. It also shows that the commitment process is not linear. Because each of the four tensions recurs with every new opportunity, and because acting from means at hand involves exploiting contingencies as they arise rather than following a fixed plan (Sarasvathy, 2001), firms can always fall back, either to continue to iterate or withdraw from the opportunity. Learning-based adapting operates across all four tension categories in Table 1 by converting each navigation episode into knowledge.

5.2 Navigating Commitments Under Resource Constraints

In this section, we present and discuss our three core findings related to navigating commitment tensions under constraint, a predictable future from the resource constrained market (5.2.1), commitment as a discontinuous process (5.2.2) and the duality of adapting (5.2.3).

5.2.1 A predictable future from the resource constrained market

In their attempts to discover and audit opportunities with value potential, firms actively wait until the market is ready. This resembles corporate foresight, where firms scan and pick up weak signals on future opportunities (Fergnani, 2022). What we suspect though, is that market timing holds a unique trait that would not be possible in developed markets.

As Kenya lags behind developed economies, firms can observe what products have already succeeded on high-technology markets and predict with reasonable confidence when those solutions will arrive. For instance, firm E highlights that open banking will most likely come to Kenya within a few years, meaning they have that in mind in future decision-making. Similarly, firms may benchmark and cherry-pick specific concepts already proven on developed markets, and adapt them to the market-specific context. These specific

discovery-practices do more than help firms decide whether to commit or conserve resources. As firms do not have to invest valuable resources in discovery and testing, we suspect it makes resource orchestration of their internal resource bundling easier.

This temporal arbitrage exploits the lag between developed markets and the local market readiness and questions a common assumption in the literature on strategic action under uncertainty: that firms must act in response to an unforeseeable future (Rindova & Courtney, 2020), and that entrepreneurs operating under such uncertainty must substitute subjective belief for objective forecasting (McMullen & Shepherd, 2006). We argue that the future is partly observable in another geography and resource constrained firms may use that observability to reduce the resource investment associated with novel commitments, and the risks associated with it. Rather than scanning for weak signals (Fergnani, 2022), we see that firms read strong signals from markets that have already proven that the solutions work. In doing so, they resolve the now-versus-later tension on firmer ground than the entrepreneurial decision-making literature typically assumes is available to them.

In relation to our four tensions, this confirms the effect of resource constraints on firms' ability to navigate the now-versus-later tension (Table 1). Additionally, it also confirms the arguments from effectuation and bricolage that resource constraints are double-edged, the same constraints that limit development. Simultaneously enable an advantage unavailable to developed-market actors (Sarasvathy, 2001; Baker & Nelson, 2005).

5.2.2 Commitment as a discontinuous process

A central finding is that commitment does not build up along a smooth continuum. Whether to sell their solution to investors, or establish a reputation among their customers, a majority of participants see difficulties in attaining trust, admitting that the general level of trust in the Kenyan population is low. Trust is perceived as a key external, interrelational resource for orchestrating resources (Clulow et al., 2007; Dyer & Singh, 1998) which enables the larger commitments firms make when initiatives move forward (Sirmon et al., 2011). Based on these accounts of generally low trust, we conceptualise trust as a scarce relational resource that firms need to cultivate if they are to make larger resource commitments. To attain the resource, firms differ in their view of how long it may take: firm G hosted multiple educational customer workshops over several months to finally establish the product among their target group, firm F used one occasion to physically gather stakeholders to introduce

them to their solution in order to strengthen the trust in the product. Interestingly, this depicts a scenario where the commit-versus-conserve decision is contingent on one particular resource. What are companies then doing if that resource is not under their control?

When the general trust level is not sufficient, firms consistently describe a preference for caution, leaning toward conserving resources instead of committing them at scale. Firm C describes how it's more rational to adapt to the market if the trust is not there. Firms then tend to iterate between assessing and mobilising, until firm-level trust has been established between company and market actor. We argue that this is a response to the low degree of trust among actors. Conserving is thus the only viable option before an adequate level of trust has been reached. In terms of the commit-versus-conserve tension (Table 1), trust therefore determines which side of the tension firms can act on: with low trust, exploratory commitments are not merely riskier but unavailable, and firms exploit what already works until the relational resource has accumulated.

In this sense, we add to the understanding of how commitment decisions unfold under constraint by identifying trust as the organizational level gate that creates a distinctive pattern. This also nuances how the exploration and exploitation tension is understood in resource constrained settings. Existing treatments of this tension concern how firms allocate their own resources between the two orientations, and assume that firms possess enough of them to pursue both (March, 1991; O'Reilly & Tushman, 2008). Our findings indicate that the choice is not only a question of internal allocation, but is governed by a relational resource that the firm does not control on its own, and which therefore determines what kind of initiatives can be pursued at all. Non-linear patterns might arise from the emergence of new opportunities, or from iteration and feedback loops between mechanisms (Nenonen et al., 2019). What our findings indicate however, is that the non-linear pattern depends on the control of an intangible resource created together with external actors (Clulow et al., 2007). We then suspect that commitment occurs as a discontinuous process, leaning on the resource of trust.

5.2.3 The two sides of adapting

Across the interviews, firms describe adapting as a way to learn and demystify what is happening in their surroundings. Much in line with Rindova and Courtney (2020)'s view of adapting as an information-gathering logic, managers use incremental moves to reduce uncertainty and build knowledge when the environment is unclear. Firm A's pilots with

enterprise clients, for instance, led the team to refocus its target group toward actors better positioned to capture the value of their solution. Rather than a setback, this is an instance of learning-based adapting: the firm reorchestrated its resources in ways that strengthened its knowledge base (Schilke et al., 2018). As Table 4 showcases, all firms participate in some kind of learning practice, and such learning actively narrows the gap to the adequate level of trust discussed above (Rawat & Singh, 2025).

What caught our attention was a second variation of adapting. Firms sometimes exit or scale back an attempted commitment because the resource cost of continuing exceeds the resources available, or because they judge that the potential value does not justify further investment. That firms abandon initiatives when resources run short is not, in itself, a novel observation. What the adapting literature does not account for is that such retreats are themselves a form of adapting. Adapting is conventionally explained either as a response to customer needs and stakeholder behaviour (Narver et al., 2004; Jaworski et al., 2000), or as a way to accumulate knowledge as situations evolve (Rindova & Courtney, 2020). Our findings indicate that firms also align their resources towards market standards for neither reason: not to keep up with external change, and not primarily to learn, but because their current resource base cannot sustain the commitment. We term this constraint-based adapting.

Empirically, constraint-based adapting occurs when the tensions in Table 1 resolve toward the conserving side. After assessing, the now-versus-later tension can settle on later: A3 notes that certain ideas are "five years away", leading the firm to deprioritise them in favour of solutions that align with current market settings. After mobilising, the novelty-versus-absorbability tension can settle on absorbability: C2 states that if firms don't have resources to educate customers to absorb a more ambitious move, it's better to adapt to current market conditions, and J1 describes her choice to hide more advanced features, providing only the "key data points" that smallholder farmers could process. In leveraging, the build-versus-borrow tension can leave both options unsustainable: K1 describes how a full package of product, software and financing became overly complex, with long sales cycles and high internal resource use, after which the team simplified the architecture into a basic version that fits clients' existing systems.

The empirical material therefore presents a duality of adapting: a learning-oriented, commitment-enabling side, and a constraint-based, commitment-limiting counterpart. Disentangling the two matters because their causes differ. Learning-based adapting builds the

conditions under which larger commitments become possible, while constraint-based adapting registers the point at which those conditions cannot be met, making it the clearest observable cost of operating under severe resource constraints.

5.3 Framework

In our synthesis of the analytical tension categories (2.6), we theorized the navigation of the commit–conserve tension using resource orchestration together with the action logics of effectuation and bricolage. Previous sections have showcased a more granular and nuanced view of this decision-making process, where reaching a commitment is described as a non-linear, discontinuous process dependent on the interrelational resource of trust.

To better grasp what activities firms use to navigate this tension, the mechanism labels were initially drawn from research on proactive market behavior (Nenonen et al., 2019), which structured our early engagement with the field. Their content, however, is re-theorised here as constraint navigation rather than as capabilities for changing the market. Assessing and mobilising assess and prepare an opportunity, and leveraging is where a resource commitment is finally realised. These mechanisms reflect the empirical material well, especially since firms may retreat from any mechanism, and commitment is first viable at the leveraging stage.

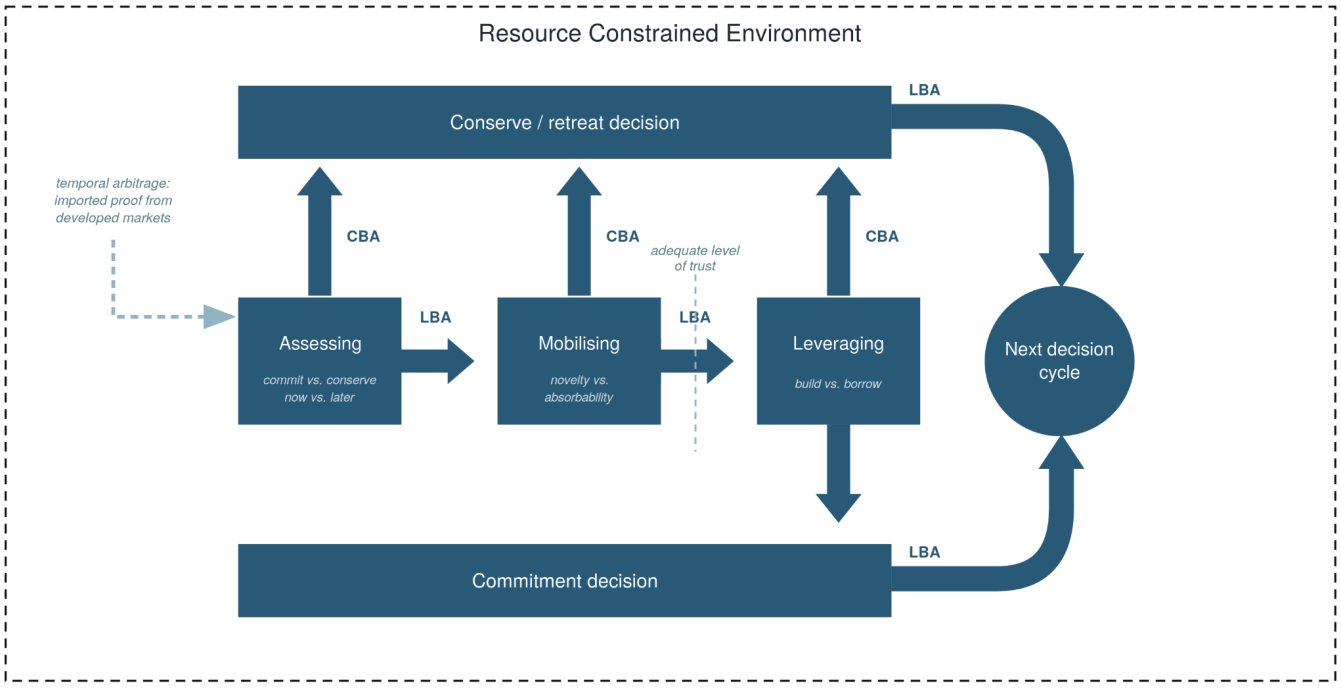
What is analytically noticeable is the duality of adapting. Firms treat adapting as a mechanism to learn after engaging with external stakeholders, either in iterating between assessing, mobilising and leveraging, or after decisions. This confirms the defined view of adapting as an internalized learning process (Rindova & Courtney, 2020). In line with this, we conceptualize learning-based adapting as the fourth mechanism. In the framework, we visualise this as the iterative arrows in-between mechanisms, as well as the link between a decision and the next decision cycle, since firms learn both while iterating and after deciding.

Emerging from our findings is another definition of adapting, not based on external changes, but a retreat from an attempted commitment: constraint-based adapting. Given the lack of conceptual clarity about this kind of adapting in the literature (Nenonen et al., 2019; Pedersen & Ritter, 2022; Rindova & Courtney, 2020), we attempt to fill the gap by introducing constraint-based adapting as the consequence of when firms decide to conserve resources

instead of committing them further. We therefore incorporate constraint-based adapting into the framework as the arrows between each mechanism and the conserve/retreat outcome.

Conceptually, the four mechanism model can therefore be seen as a snapshot of one organizational level decision cycle. Firms move through many such cycles over time, where each decision feeds into the next cycle. Each cycle brings learning that firms internalize to strengthen their resource base, ultimately leading them to better future decisions.

Figure 1: Conceptual framework



CBA = Constraint-based adapting, LBA = Learning-based adapting

6. Discussion and Conclusion

6.1 Conclusion

This thesis set out to answer how post-revenue SMEs in a frontier market navigate the tension between committing scarce resources to new opportunities and conserving them. Based on 20 interviews across 11 Kenyan firms, the answer is that navigation proceeds through four mechanisms. Assessing, mobilising and leveraging follow one another as filters of increasing resource intensity, each organised around one of the tensions that constraints force firms to confront: commit versus conserve and now versus later, novelty versus absorbability, and build versus borrow. The fourth mechanism, learning-based adapting, operates across all of them, converting each navigation episode into knowledge that is carried into the next. Three findings characterise the process. Trust operates as a scarce relational resource whose slow accumulation makes commitment discontinuous. Constraint-based adapting, a retreat forced by resource cost rather than chosen on new information, is a systematic outcome reachable from every mechanism. And temporal arbitrage shows the double edge of constraint at work: the market's lag renders the future partly observable, letting firms substitute imported proof for costly experimentation. Firms in this setting cannot buy their way past these tensions. What they can do, and what the studied firms demonstrably do, is navigate them repeatedly, accumulating across decision cycles the knowledge, trust and calibrated judgement that gradually expand the commitments they can afford to make.

6.2 Theoretical contributions

First, the thesis develops a four-mechanism model grounded in how firms navigate resource-commitment decisions in resource constrained environments. In doing so, it extends the literature on resource constraints, effectuation and bricolage by showing more concretely how firms move from early assessment of an opportunity to actual commitment, and how these moves are adjusted over time. Where effectuation and bricolage describe general logics of action under scarcity (Sarasvathy, 2001; Baker & Nelson, 2005; Witell et al., 2017), the model shows the ordered organizational activities through which those logics are enacted around individual opportunities. It also qualifies how one classical trade-off operates under scarcity: where the build-versus-borrow decision is conventionally explained by the comparative costs of internal development versus market or alliance access (Williamson,

1985; Capron & Mitchell, 2009), our material suggests that severely constrained firms borrow because building is unaffordable, and build only where no partner exists to borrow from. The model also makes the processual side of navigation more visible, as firms move back and forth across opportunities and over time. In addition, it gives empirical content to the argument that conditions in a firm's environment decide when and how it must choose between competing alternatives (Smith & Lewis, 2011): each mechanism is observably organised around one of the tension categories derived in Table 1, in a setting where the resource sufficiency assumed by much of the tensions literature does not hold (O'Reilly & Tushman, 2008).

Second, the thesis contributes by refining the concept of adapting. Firms engage in learning-based adapting, where adaptation helps them build knowledge, test assumptions, and improve later commitments. On the other hand, firms also engage in constraint-based adapting, where attempted commitments are scaled back or abandoned because available resources, trust, or partner structures are not sufficient to carry a more ambitious move. This distinction adds greater conceptual clarity to adapting under resource constraints, and it disciplines the double-edged view of scarcity: constraint-based adapting is the observable cost of operating under constraint, and any account that only emphasised the generative side of scarcity would misdescribe the material.

Third, the thesis contributes to research on decision-making in frontier markets. Firms often remain in cautious, incremental modes until an adequate level of trust has been reached, which makes commitment a discontinuous, threshold-crossing process. In addition, the study shows that firms in lagging markets may commit under lower uncertainty by drawing on solutions already proven elsewhere, a practice we term temporal arbitrage. This qualifies the assumption that entrepreneurs acting under uncertainty must substitute subjective belief for objective forecasting (McMullen & Shepherd, 2006), since in a lagging market part of the future is observable in another geography. Together, these findings suggest that the same conditions that constrain frontier-market firms also endow them with possibilities unavailable to developed-market actors (Sarasvathy, 2001; Baker & Nelson, 2005), and that decision

processes in such markets therefore differ in kind, not merely in degree, from those assumed in developed-market research.

6.3 Managerial implications

The findings suggest that managers can use the four mechanisms identified in this thesis as a simple decision tool for organizational level choices. Before committing scarce resources, they can ask four questions: What do we know about the value potential of this opportunity, and what is the cheapest way to assess it? Which understanding and trust must be mobilised for it to work, and can we afford to build them? How exactly would we leverage the opportunity, by building capacity ourselves or borrowing it through partners? What would we change, and what would we retain, if the first version does not work as expected? Thinking in these steps makes the choice between committing and conserving an explicit part of everyday decision-making.

The results also highlight the need to manage the trust level deliberately. Managers in resource constrained settings often have to decide whether an opportunity should stay in a cautious, low-commitment mode or whether conditions are strong enough to justify a larger commitment. Making this judgement explicit, for example by agreeing on clear signs of repeated use, partner commitment, or stable revenues, can reduce the risk of overcommitting too early, or of holding back for too long when conditions are in fact favourable.

A further implication is that managers need strategies for handling constraint-based adapting without becoming stuck. When firms are forced to scale back attempted commitments because of limited funding, capabilities, or partner support, it is important to capture what has been learned and to set conditions under which the attempt might be revisited.

Finally, the study shows that managers in lagging markets can work more systematically with global benchmarks. They can scan which solutions and business models have already proven viable in more advanced markets and use these as starting points for local opportunity design. Doing so can reduce discovery costs and uncertainty, provided that managers also budget time and resources for adapting these models to local infrastructure, purchasing power, and institutional constraints.

6.4 Limitations

This study has several limitations that should be considered when interpreting the findings. First, the study focuses on post-revenue firms operating in Kenya. This context was theoretically relevant because severe constraints make the studied tensions unavoidable and therefore observable, but it also limits the transferability of the findings. The four mechanisms may operate differently in more mature markets or among firms with greater resources; at the same time, the underlying tensions are general, and only the sharpness with which they are felt is context-dependent, so they should not be treated as peculiar to this setting.

Second, the study is based on a qualitative multiple case design using snowball sampling. This allows for rich and context-sensitive insights, but it also means that the findings are derived from a limited number of cases selected for theoretical relevance rather than statistical representativeness.

Third, the findings rely mainly on retrospective interview data. Although interviews were suitable for capturing how managers and other actors interpreted past decisions, such accounts may be affected by memory bias, post hoc rationalisation, and social desirability. This is particularly relevant in a study of strategic decision-making, where respondents may present decisions as more coherent or deliberate than they appeared in practice.

Fourth, some of the concepts developed in the analysis, such as constraint-based adapting and temporal arbitrage, are grounded in this specific empirical setting and should therefore be treated as analytically useful but still preliminary. Their broader validity needs to be examined in future studies across different contexts and types of firms.

6.5 Future research

Several directions for future research follow from this study. First, future research could examine whether the four mechanisms identified here also appear in other contexts. Comparative studies across different countries, industries, or levels of market maturity would help clarify which parts of the model are context-specific and which are more broadly transferable, for instance among early stage ventures in developed markets or firms under crisis-induced scarcity.

Second, we encourage further development of the distinction between learning-based adapting and constraint-based adapting. In particular, more work is needed to understand which types of constraints most often lead firms to scale back attempted commitments, and under what conditions such retreats remain temporary rather than becoming long-term lock-in to existing market arrangements. Constraint-based adapting could also be researched in more settings where firms face constraints, such as early stage startups.

Third, future research could examine the role of trust more directly. The concept of an adequate level of trust emerged as central in this study, but more research is needed to understand what constitutes an adequate level of trust, and how firms assess it. This would help to sharpen the relationship between the mobilising and leveraging mechanisms.

Finally, to understand how temporal arbitrage and market timing affect firms' resource mobilisation over time, scholarly attention should be drawn to studying the commitment process longitudinally. Because this thesis relies largely on retrospective accounts, there is room for studies that follow firms over time and observe how opportunities are assessed, prepared, committed to, retreated from, and learned from as the process unfolds. Such studies could provide a more fine-grained understanding of how firms move between committing and conserving in real time.

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8. Appendix

8.1 Appendix 1: Interview Guide

Introduction

- Research topic
- Interview format
- Recording only for transcription, with permission
- Anonymity available if preferred
- Any questions before we start?

Background

- What is your role at the company?
- How long have you been involved with the company?
- Could you briefly describe what the company does?

Company development

- From your perspective as [role], could you please chronologically describe the development of [X] from its early stages as a company to how it operates today?

Possible follow up questions:

    - You mentioned X. Could you tell that part in more detail?
    - You mentioned X. What other options did you consider, and why did you choose this one?
    - What changed over time?

Important decisions

- Can you describe a situation where the company had to make an important decision about a product, customer group, market, partnership, or initiative?

Possible follow up questions:

- What options did you consider?
- Why did you choose that path?
- What made the decision difficult?
- What did you decide not to do?

Focus and constraints

- How do you decide what to focus on when resources are limited?

Possible follow up questions:

- What resources are usually most limited?
- Have you had to pause, scale down, or stop an idea?
- How do short term pressures affect longer term ambitions?
- Are there things you would like to do, but cannot do yet?

Closing questions

- If you had an opportunity to provide advice on how to balance shaping and adapting to other entrepreneurs, what would that be?
- Are there any other aspects of [X] that we have not discussed today that you feel would be of interest for the research project?
- Is there anyone else you think we should speak to?

8.2 Appendix 2: Use of Generative AI

During the thesis process, we used Perplexity as a supporting tool. It was mainly used for language refinement, structure, feedback, and clarification of ideas. More concretely, we used it to identify unclear passages, reduce repetition and test whether arguments were easy to follow. Parallel to this, we used Claude to check overall coherence of the thesis and also double checking grammar and fine-tuning sentences and the flow of the text.

The use of AI helped improve the quality of the thesis by making the writing clearer and more precise. It was especially useful when we had written sections that made sense to us, but risked being unclear to the reader. In those cases, Perplexity and Claude functioned as a sounding board. It helped us see where a paragraph needed a clearer transition, where a concept needed to be explained more simply, or where the argument needed to be tightened.

However, AI was not used to produce the substance of the thesis. It was not used to collect empirical data, conduct interviews, code the material, create first order codes, develop second order themes, or draw analytical conclusions. All empirical interpretations, theoretical reasoning, and final conclusions were developed by us as authors. AI suggestions were treated as input for reflection, not as finished answers.

We also identified several risks in using AI. One risk was relying too much on AI suggestions, especially when working with complex arguments. As Perplexity might be good at bouncing ideas to get new perspectives, it’s still only an LLM with very limited cognitive reasoning. To reduce this risk, we made sure that all analytical decisions remained our own. Another risk was that AI could suggest formulations that were too general, inaccurate, or not fully aligned with our empirical material. Therefore, all suggestions were checked against our data, our theoretical framework, and the academic sources we used. However as stated, AI was used more to plant a seed about certain ideas e.g. analytical directions that we might’ve missed.

We were also careful with confidentiality. We did not enter names, personal details, or identifiable interview information into Perplexity. When empirical examples were discussed, they were anonymized and described at a general level. This was done to protect the participants and to stay aligned with ethical research principles.

Overall, using AI gave us a better understanding of our own writing process. It made us more aware of unclear reasoning, weak transitions, unnecessary complexity, and places where we assumed too much from the reader. The main insight was that AI can be useful as a critical discussion partner, but only if its suggestions are actively questioned and filtered by the researchers. In this thesis, AI supported the process, but it did not replace our own judgement, analysis, or responsibility as authors.