



Structuring Hybrid Business Models for Conservation and Sustainability

A case study of Luwire

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Abstract

Title: Structuring Hybrid Business Models for Conservation and Sustainability - A case study of Luwire

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Accelerating global biodiversity loss threatens ecosystems and human livelihoods, particularly in high-risk protected areas like East Africa's Niassa Special Reserve, where local communities depend on shared resources.

Hybrid businesses, blending social and commercial objectives, offer a sustainable approach to address such conservation challenges that traditional models fail to tackle. This study investigates how tourism-based hybrid organisations can structure their business models to balance financial sustainability with conservation goals amidst environmental volatility and complex stakeholder dynamics.

To unveil insights, a qualitative case study of Luwire, a hybrid adventure organisation in Niassa, was conducted. Findings reveal four strategic dimensions of Luwire's hybrid model: sustaining a hybrid mission via revenue diversification, driving conservation through community engagement, navigating legitimacy challenges, and managing governance tensions. Luwire's integration of hunting revenue with conservation and community benefits demonstrates SEMC's utility but highlights limitations in addressing extreme volatility and community centrality.

This research advances hybrid organisation theory and provides practical strategies for conservation enterprises operating in similar settings. Limitations include the single-case focus, suggesting future multi-case studies with quantitative validation.

Key words: Hybrid Business Models, Strategy Conservation, Dual Mission, Social Enterprise Model Canvas, Community-Based Natural Resource Management, Sustainability.

Resumo

Título: Estruturar Modelos de Negócio Híbridos para Conservação e Viabilidade de Longo Prazo: um Estudo de Caso da Luwire

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A crescente perda global de biodiversidade ameaça ecossistemas e, conseqüentemente, meios de subsistência humana, particularmente em áreas protegidas de alto risco, como a Reserva Especial do Niassa, no sudeste-africano, onde comunidades locais dependem de recursos partilhados.

Organizações híbridas, que combinam objetivos sociais e comerciais, oferecem uma abordagem apelativa para enfrentar estes desafios de conservação que modelos tradicionais têm falhado em abordar. Este estudo analisa como organizações híbridas no setor do turismo podem estruturar os seus modelos de negócio para equilibrar sustentabilidade financeira com objetivos de conservação, em contextos voláteis e dinâmicas complexas com *stakeholders*.

No âmbito desta pesquisa, foi conduzido um estudo de caso qualitativo à Luwire, uma organização híbrida, dedicada à conservação e turismo na Reserva Especial do Niassa. Os resultados revelam quatro dimensões estratégicas do modelo híbrido da Luwire: sustentar a missão híbrida através da diversificação de receitas, considerar a comunidade como fator chave na missão de conservação, gerir desafios de legitimidade e gerir tensões

Palavras-chave: Modelos de Negócio Híbridos, Estratégia, Conservação, Dualidade de Missões, Social Enterprise Model Canvas, Gestão de Recursos Naturais integrando a Comunidade, Viabilidade de Longo Prazo.

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Introduction

The accelerating global biodiversity loss identified over the past two decades (Secretariat of the Convention on Biological Diversity, 2020) threatens ecological sustainability and, consequently, human livelihoods (Cardinale et al., 2012). This risk is particularly acute in regions where local communities depend directly on natural resources for their livelihoods, as is the case in many areas of East Africa (World Wildlife Fund Tanzania, 2022), highlighting the urgent need for effective preservation measures. In response, protected areas have been established worldwide to curb biodiversity decline (McDonald & Boucher, 2011), including the Niassa Special Reserve in northern Mozambique, which have also spurred new business opportunities, namely in the tourism sector (Thomas & Middleton, 2003). However, because protected areas are conservation-focused, traditional profit-driven business models often prove incompatible with such contexts (Zhang & Wei, 2024).

Hybrid business models, which blend social and commercial objectives, offer a promising alternative but face significant challenges in balancing financial sustainability with conservation outcomes, particularly amid environmental volatility, complex stakeholder dynamics and limited resources (Battilana & Lee, 2014; Moizer & Tracey, 2010). Addressing these challenges is critical, as sustainable business model structures can enhance conservation outcomes and ensure organisational resilience in high-risk environments (Linnenluecke, 2017; McKinsey & Company, 2021).

However, early research on how to structure business models was designed for traditional, single-purpose organisations (Upward & Jones, 2016). As hybrid organisations gain relevance in the global context, new business model frameworks tailored to their dual objectives have emerged, most notably Spaviero's (2019) Social Enterprise Model Canvas. Nonetheless, to the best of current knowledge, its suitability for structuring tourism-based hybrid businesses operating in challenging environments and managing atypical stakeholder relationships remains unexplored.

Therefore, this dissertation investigates how tourism-based hybrid organisations can structure their business models to balance financial sustainability with conservation goals, through the Social Enterprise Model Canvas (SEMC) (Sparviero, 2019) lenses. Through a qualitative case study of Luwire, a hybrid adventure organisation in Niassa, it explores community engagement, organisational structure, diversification of revenue streams and legitimacy. By examining Luwire's strategies, it contributes to hybrid organisation theory and

provides practical insights for conservation enterprises in similar contexts in Angola, Tanzania, Zimbabwe, Kenya, Botswana and Namibia.

This study is structured into five chapters. The first chapter introduces the state of the art of the key themes relevant to the study, synthesising research on biodiversity loss trends, Hybrid Business Models, Resilience Theory, Community-Based Natural Resource Management, and the Social Enterprise Model Canvas. The second chapter outlines the methodology, describing the qualitative case study approach, and presents an overview of Luwire.. It details the use of semi-structured interviews, purposive sampling, and thematic analysis (Gioia et al., 2013) to investigate Luwire's operations. The third chapter presents the data collected through the interview process, organised into four thematic dimensions: Luwire's revenue integration and diversification, community engagement, legitimacy management, and governance strategies. The fourth chapter analyses and discusses these findings in relation to the theoretical framework. The fifth and final chapter summarises the study's contributions and findings, acknowledges its limitations, and suggests directions for future research.

1. Literature review

This section is dedicated to the revision of the existing relevant literature to the study at hand, leading to the discovery of research gaps and providing a robust introduction to the concepts that are essential to the case study's framing.

1.1 Biodiversity trends: loss and conservation

Wildlife conservation has been a central focus of global discussions and concern for the past two decades as Earth experiences unprecedented and increasing biodiversity loss (Secretariat of the Convention on Biological Diversity, 2020). Anthropogenic activity, such as habitat destruction, excessive harvesting, and pollution (Stoll-Kleemann & Welp, 2006), was pointed out as the primary cause of this damage with profound implications, that threaten the integrity of whole ecosystems and progressively compromise human well-being as they degrade and indispensable and valuable natural resources become compromised (Cardinale et al., 2012).

The effects of this tendency are most noticeable where human populations are intimately connected to wildlife and natural resources. Therefore, the importance of conservation activities is emphasised in East Africa, where ecosystems support a wide variety of plant and animal species, many of which are endemic, and natural resources sustain local communities (World Wildlife Fund Tanzania, 2022).

As humans and wildlife increasingly share the same resources, the pressure on natural habitats intensifies (University of Washington, 2024). To counter this tendency, over the past century, protected areas with a variety of legal structures and mechanisms, including reserves and national parks, have been established worldwide to preserve biological and cultural diversity, ensure sustainable extraction of natural resources, and protect beautiful landscapes (McDonald & Boucher, 2011). Defined by the International Union for Conservation of Nature (IUCN) as “*An area of land and/or sea especially dedicated to the protection of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means*” (International Union for Conservation of Nature, 1994), protected areas, in addition to conserving biodiversity, are widely reputed for fulfilling important social and economic functions, including supporting tourism and recreation (Thomas & Middleton, 2003). As a result, protected areas provide a wealth of commercial opportunities, the success of which is intertwined with the obligation to preserve the very ecosystems on which they rely. Therefore, organisations that operate in protected regions are essential to safeguard biodiversity and guarantee the long-term viability of conservation initiatives (Leal & Zeits, 2014).

However, traditional profit-driven organisations frequently lack compelling reasons to actively embrace social and environmental accountability (Zhang & Wei, 2024). As businesses and local communities share the duality between the need to conserve natural resources and rely on them for subsistence, the urgent need to investigate business model options that take this complexity into account is highlighted.

1.2 Hybrid Business Models or Impact Business Models

Social enterprises are designated as hybrid organisations due to their integration of distinct institutional logics and value frameworks from different sectors (Doherty et al., 2014). These hybrid business models, grounded in generating social impact through commercial activity, primarily sustained through enterprise rather than philanthropy, (Moizer & Tracey, 2010), present a compelling approach by aiming to balance long-term financial viability with positive social and/or environmental impact within a single organisation (Battilana & Lee,

2014). These models fill gaps left by conventional for-profit or non-profit organisations by functioning at the nexus of purpose and market. Therefore, HBMs provide innovative and alternative approaches to tackling specific societal and ecological challenges, having a wide range of potential combinations for business models (Azevedo et al., 2024).

By comprising these goals, which are often perceived as conflicting (Haigh & Hoffman, 2014), the central challenge for social enterprises is aligning revenue-generating activities with those that drive positive impact (Santos et al., 2015). Sustainably running the two lines of action within one organisation relies on successfully managing resource allocation between commercial activities and those generating positive impact (Moizer & Tracey, 2010). To achieve this, Moizer and Tracey (2010) argue that organisations can pursue three not necessarily mutually exclusive strategies:

1. **Separate the Social and Commercial Missions:** The organisation detaches its social mission from its commercial activities, effectively operating as two distinct parts—one functioning like a traditional charity, and the other focused solely on revenue generation. Rather than distributing dividends to shareholders, a portion of the surplus is redirected to the part of the organisation responsible for delivering social outcomes.
2. **Integrate Social and Commercial Missions:** The social and commercial objectives are embedded within the same operations, meaning the business activities directly contribute to the achievement of social goals.
3. **Build Alliances with For-Profit Businesses:** The organisation partners with for-profit companies to generate revenue, which is then reinvested into social initiatives.

Furthermore, as these models aim to create social value through commercial means, it is of utmost importance to establish a clear and transparent prioritisation between value creation - the impact generated - and value capture - the revenue retained by the organisation. This strategic choice is critical to shaping the organisation's identity and influencing stakeholder engagement (Santos, 2012).

The classification of hybrid business models can be based on the degree of overlap between these two categories as well as the nature of contingent value spillovers (Santos et al., 2015). According to Santos et al., (2015), hybrid businesses can be categorised into four distinct types:

- **Market Hybrids:** In this model, customers and beneficiaries are the same, and value spillover occurs automatically, without requiring further intervention from the organisation. This type of hybrid business is the closest to a purely commercial enterprise, as social impact is inherently derived from its core commercial activities.

- **Blending Hybrids:** These organisations also have as paying customers the beneficiaries of their social mission. However, unlike market hybrids, for spillovers to occur, additional activities must be undertaken to ensure social impact.
- **Bridging Hybrids:** In this category, customers and beneficiaries are distinct groups, yet they must be integrated within the same intervention for value spillovers to occur, not requiring supplementary support from the organisation.
- **Coupling Hybrids:** Similar to bridging hybrids, the beneficiaries and customers are separate groups. However, in this case, value spillovers are contingent and require deliberate, additional interference from the organisation. Due to these conditions, coupling hybrids are considered the most complex and challenging among the four categories.

To embrace innovation, hybrid organisations must design a structure that aligns value propositions with the needs of multiple stakeholders, including market actors (investors, customers) and non-market participants (community, ecosystems) (Grassl, 2012). In this context, clearly articulating a business model becomes especially relevant, as hybrid organisations often operate in highly uncertain and complex environments, making long-term sustainability a particularly relevant challenge (Austin et al., 2006; Moizer & Tracey, 2010). These strategies appear as relevant answers as businesses look for ways to solve pressing global concerns, like wildlife conservation, while preserving their financial stability (Santos et al., 2015).

In East Africa, where preserving ecosystems is vital for human populations, as previously discussed, and particularly, in protected areas, HBMs emerge as a promising solution for sustainable development, as their core structure inherently integrates the pursuit of mutual benefit for both the organisation and the environment it operates in. By making their mission, i.e. the reason for their existence, tackling a specific social or environmental problem, hybrid businesses running their activities in protected areas, ensure that their pursuit of financial success is aligned with the protection and sustainable management of the natural resources they depend on (Haigh & Hoffman, 2014), including wildlife.

1.3 High-risk environments and Resilience Theory

Nonetheless, running a company dedicated to protecting the environment and wildlife often implies basing activities in isolated and challenging areas (World Wildlife Fund, 2021) that pose special operational and logistical challenges due to their remote location, vulnerability

to natural disasters, and limited access to labour and supplies. These difficulties lead to lower profit margins, more frequent disruption, and higher costs (International Union for Conservation of Nature, 2023).

Therefore, to successfully operate in high-risk remote environments, businesses must adopt resilience strategies that comprise risk management and proactive planning (BSR, 2021). Resilience theory emphasises the importance of organisations accounting for environmental and economic fluctuations by embedding flexibility into their structures, namely through grounding their operations in business models that can adapt to significant shifts (McKinsey & Company, 2021). Consequently, organisations in high-risk remote contexts can benefit from structuring their business through a model capable of absorbing shocks and adapting quickly to changing conditions. This proactive approach promotes the reduction of financial impact in a crisis but also strengthens the organisation's capacity for rapid recovery and maintaining operations despite frequent disruptions (Linnenluecke, 2017; McKinsey & Company, 2021).

Furthermore, resilience theory highlights the importance of prioritising adaptability and transparency towards stakeholders, promoting proactive interaction (McKinsey & Company, 2021). For hybrid organisations managing the dual mission of creating positive impact and developing a sustainable revenue source, the engagement with local stakeholders is particularly relevant to maintain organisational legitimacy. Such concern is particularly pertinent while operating in protected areas, including natural parks and reserves, where the presence of local communities who live within or near these boundaries is one critical factor to be accounted for (Hartter et al., 2016). Historically, many of these populations have relied on the existing natural resources found in these regions for their livelihood, freely using and managing them for economic and subsistence purposes (Fabricius et al., 2004). After the designation of such areas as protected, restrictions are put in place that prevent these communities from accessing the resources they once depended on, which could cause conflict and resistance (Ancorenaz et al., 2007).

1.4 Community Based Natural Resource Management

Considering that protected areas are home to multiple communities (Thomas & Middleton, 2003), and in light of resilience theory's principles, it is primordial that businesses operating within these boundaries forest an open and transparent relationship with the residents.

However, certain perspectives defend that more than stakeholders, communities who lived in such areas before their designation as protected, should be entitled to share the

responsibility of managing the natural resources with the businesses and organisations now established in the region (Armitage, 2005). In line with this perspective, in response to conventional conservation models that marginalised local communities, excluding them from decision-making processes and economic benefit, Community-Based Natural Resource Management (CBNRM) emerged as a conservation approach that advocates the empowerment of these communities to manage and benefit from the natural resources in the region they are based. The main goal of traditional conservation efforts was to create protected areas with limited access for humans, often uprooting populations and ignoring their financial and livelihood needs. This exclusion caused local populations to become resentful and hostile, which in turn weakened conservation efforts because communities had little incentive to be involved in the protection of species or habitats from which they were no longer benefiting (Child & Barnes, 2010).

In response, the end of the XX century saw the rise of CBNRM, especially in southern and eastern Africa, as a strategy that intertwined conservation with local empowerment. By involving communities directly in managing and benefiting from natural resources, CBNRM aligned local economic interests with sustainable practices. When communities benefited financially from sustainable endeavours like ecotourism or controlled hunting, they were more prone to take care of their surroundings (Child & Barnes, 2010). This is in line with the key tenets of CBNRM strategy, which emphasises the value of financial incentives as a catalyst for successful community engagement (Virtanen, 2005).

Because they combine financial and mission-driven objectives, hybrid business models centred on conservation find great resonance with the ideas of CBNRM. The flexibility and sustainability of such models can be improved by the management and responsibility sharing between communities and conservation-focused businesses. Effective examples show how community involvement increases resilience and guarantees resource accountability, fulfilling both conservation and economic goals. One such example is the Ishaqbini Hirola Community Conservancy in Kenya (Measham & Lumbasi, 2013).

1.5 The Social Enterprise Model Canvas

Given the intricacy and wide variety of variables involved in running a business, organisations need to create a solid framework that unambiguously directs their steps towards the achievement of their goals (Schaltegger et al., 2013).

Business models appear as simplifications of reality that explain performance and competitive advantage and allow rethinking and redesigning the strategy of an organisation, facilitating communication with external stakeholders (Massa et al., 2017). A business model is a blueprint that outlines how an organisation creates, delivers, and captures value, structuring an enterprise's resources, activities, and strategies. It provides a practical tool to evaluate their options within dynamic, fast-paced, and unpredictable environments, fostering agility (McGrath, 2010).

However, initial research on business models was mostly led by economic and entrepreneurial settings (Upward & Jones, 2016), hence existing business model frameworks, such as the renowned Business Model Canvas developed by Osterwalder and Pigneur (2010) (Appendix 1), often fail to encapsulate the complexity of businesses with dual purposes (Sparviero, 2019). As hybrid organisations increasingly integrate the business paradigm, further research was pursued to accommodate their specifications.

In this realm, Sparviero (2019) developed a framework approach - The Social Enterprise Model Canvas (SEMC), aiming to account for the main challenges faced by these businesses, also referred as social enterprises. The Social Enterprise Model Canvas (SEMC) is grounded in the comprehension of business models as *“the analysis of the rationale, infrastructure, capabilities and use of resources that enable stakeholders to create value for themselves and for the organisation”*. Sparviero (2019) asserts that, to develop a business model that aligns with the particularities of hybrid businesses, it is of utmost importance to understand these characteristics. As described in greater detail in Sparviero's work, social enterprises face a strategy challenge that derives from the duality between the economic and the social goals these enterprises intend to pursue, as explored previously. Furthermore, legitimacy represents a key obstacle for hybrid businesses, stemming from the difficulty of being recognised as both trustworthy and accountable. Since their ability to create positive impact depends on generating revenue through market-based activities (Moizer & Tracey, 2010), their classification within traditional market logics is often ambiguous, complicating how they are perceived and evaluated across the diverse stakeholder groups they must engage with. Intertwined with the first two challenges, a paradox arises - the mission measurement, centred on the difficulty of measuring the social impact of social enterprises, highlights the complexity of such assessments, which are not as straightforward as measuring financial performance, characterised by clearer and widely defined indicators. Such often leads to “mission drift”, where financial goals take precedence over social ones. The author considers a fourth challenge, that brings together the three previously outlined - the governance challenge. Governance

relates to structure, and it comprises direction, control and accountability, with the chosen system and its alignment with the organisation's characteristics being crucial to its overall performance.

Moreover, Spaviero (2019) considers in the design of the model canvas the distinction between terminal values and instrumental values and thus the difference between official goals and operative goals. Official goals relate to the mission statement and comprise guidelines for the long-term strategy of the enterprise, also designated mission values. Operative goals or objectives correspond to practical quantifiable short-term desired outcomes. Such differentiation conveys flexibility to the model, enabling organisations to shift their priorities in the short-term, altering between focusing on economic and social goals without compromising its purpose.

By accounting for these factors, The Social Enterprise Model Canvas (SEMC) fills in the gaps other frameworks fail to grasp, offering a more comprehensive and resilient approach to hybrid business. Most importantly, this holistic framework unlocked the illustration of the management of the two components that comprise a hybrid business – positive financial and social impact – within complex environments.

Spaviero (2019) materialises the ideas presented above in a model grounded in clearly defining and prioritising its mission values and objectives while translating them into measurable targets and differentiating between targeted and non-targeted stakeholders, recognising their role in value co-creation. In addition, the model underscores the significance of governance structures as they are critical in shaping the necessary conditions for fulfilling its mission values.

Thus, as a simplification of the detailed presentation found in the work of Spaviero (2019), The Social Enterprise Model Canvas (SEMC) comprises fourteen building blocks (Appendix 2):

a) Inherited from the Business Model Canvas (Osterwalder & Pigneur, 2010):

1. Key Resources: assets necessary to deliver the enterprise's value proposition;
2. Key Activities: actions required to attain objectives and mission values;
3. Channels: how does the organisation delivers and communicates its value proposition;
4. Cost Structure: cost incurred to operate the business;

b) Adapted from the Business Model Canvas (Osterwalder & Pigneur, 2010):

5. Social Value Proposition: products and services offered to specific customers and beneficiaries to solve the social problem the organisation is tackling;
6. Non-targeted stakeholders: stakeholders that are partners or that can be affected by the organisation's activities but are not customers or targeted beneficiaries;

7. Customers and Beneficiaries: the groups that the enterprise aims to reach and serve;
8. Customers and Beneficiaries Engagement: explores the relationship between the organisation and its targeted beneficiaries as a bilateral interaction since both customers and beneficiaries are involved in the value creation process;
9. Income: all forms of financial and in-kind resources are recipients of;

c) SEMC distinctive blocks:

10. Mission Values: long-term goals of the organisation; reasons for its existence;
11. Objectives: short-term practical targets of the business;
12. Impact Measures: evaluation metrics of mission values;
13. Output Measures: assessment indicators of objectives;
14. Governance: structure implemented to run the organisation.

By comprising these building blocks, the Social Enterprise Model Canvas (SEMC) states to be better prepared to aid designing a strategy to tackle the social problem the organisation aims to address as well as ease the most common challenges hybrid organisations face.

However, limited research has examined the suitability of this model for tourism-based organisations operating in protected areas where local villages are present. In such contexts, the duality between financial and mission-driven goals is particularly pronounced, as the resources these businesses depend on are the very ones they strive to preserve.

Building on this gap, the present study seeks to explore how tourism-based hybrid organizations in high-risk protected areas with resident communities can structure their business models, drawing on the framework of the Social Enterprise Model Canvas, to balance financial sustainability with conservation goals while addressing extreme environmental volatility and leveraging the key role of local communities.

2. Methods

2.1 Methodological Framework

This study follows a qualitative case study approach as defined by Yin (2009), focusing on an in-depth exploration of how tourism-based organisation operating in protected areas can structure their business models to balance financial sustainability and conservation objectives.

Given the complexity and contextual nature of the research matter, a qualitative approach appeared more fitting than a quantitative one, allowing for detailed descriptions, multiple data sources, and an emphasis on understanding components and processes rather than measuring variables.

In this realm, this research employed an exploratory single-case study, as the emphasis is on the exploration of a problem with no clearly predefined set of outcomes (Yin, 2003). Yin (1984) defines case study as “*an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.*” Such study is bounded by time and activity or unit (Gerring, 2004).

Although this approach may have certain limitations, conducting a case study allows the object of analysis to be examined within its context, facilitating an understanding of a real-life situation as it unfolds in real-life settings—insights that might otherwise be overlooked (Zainal, 2007).

Alongside other sources of information, to support this study and obtain both past and real-time insights from individuals experiencing the phenomenon of theoretical interest, interviews were conducted (Gioia et al., 2013). Given the exploratory character of this research and underscoring that no clear set of answers was expected, semi-structured interviews were considered more suitable as this class of qualitative research allows for an interviewee to grant the interviewer information that would otherwise be limited in scope by a fully structured interviewing process, while still anchoring the discussion within the relevant subject matter (Alsaawi, 2014). Hence, the interview guides were developed based on the insights provided by the Social Enterprise Business Canvas (Spaviero, 2019), particularly regarding the challenges hybrid businesses face and the corresponding proposed solutions.

Considering this research entails studying how a tourism-based organisation operating in a protected area can design a business model that fits the duality between financial sustainability and conservation, it was essential that interviewees had knowledge of the organisation’s activities and its impact to some extent. Consequently, participants were chosen through a purposive sampling, a non-probability sampling technique that comprehends a selection process based on the knowledge and insights relevant to the research that individuals are capacitated to provide (Sharma, 2017). In line with Freeman’s (1984) Stakeholders Theory, which defines stakeholders as those who impact or are impacted by an organisation, the selection criteria reflected this principle. Thus, the interviewees selected included an external operator responsible for securing and guiding the clients, a community representative, the heads

of each existing department and one of the managers of the Niassa Special Reserve as of December 2024. This choice is thought to guarantee that insights were obtained from individuals who were directly involved in or impacted by the organization's activities, which is consistent with the study's goal of comprehending how a tourism-based hybrid organisation can structure its business model, in a high-risk environment, considering the conflict between conservation and financial sustainability. Appendix 3 provides an overview of each interviewee's code and their role within the study.

Given that the interviewees had varying levels of knowledge and provided diverse insights, the interview guides were tailored to their specific expertise, reinforcing the importance of adopting a semi-structured approach. Details of the semi-structured interview guidelines can be found in the tables titled '*Semi-Structured Interview Protocol*' (Appendixes 4 – 8).

Due to Luwire's remote setting and the limited accessibility at the time of fieldwork, in-person interviews were not a viable option. Therefore, video conferencing, seen as the most suitable substitute (Gray et al., 2020), were pursued. All interviews were recorded and fully transcribed using the Transcribe feature on Microsoft Word. Nine interviews were conducted, with an average duration of thirty-seven minutes.

To gather, structure and analyse the data collected from the semi-structured interviews, this study adopts the systematic inductive approach described by Goia et al. (2013), aiming to ensure qualitative rigor. This method, as described by the author, is sectioned in three key phases. In the first stage data collected during the interviews were analysed to identify first-order concepts grounded in the interviewees' perspectives. Quotes were coded using informant-centric terms without imposing categories, preserving the authenticity of participants' views. The second step involved examining first-order concepts to identify patterns, linkages, and emerging themes. These themes are abstract interpretations drawn from the data and in line with the Social Enterprise Model Canvas (SEMC) framework (Spaviero, 2019) to contextualise hybrid business model challenges. Ten second-order themes emerged, capturing key dynamics of Luwire's management. In the third stage, the second-order themes were synthesised, forming broader theoretical dimensions that contribute to explain how Luwire balances financial sustainability and conservation objectives in the Niassa Special Reserve context. These dimensions were developed considering theoretical coherence and existing revised literature. Four dimensions were identified and displayed in a data structure table that illustrates the progression from raw quotes to second-order themes, and third order dimensions, providing a transparent analytical framework, and can be found beneath.

Table 1: Thematic Analysis (Gioia et al., 2013)

First-Order Concepts Direct Quotations	Second-Order Themes	Aggregate Dimensions
"Mozambique has faced horrendous elephant poaching, political ups and downs, and now an insurgency in the north, which makes normal tourism difficult because most people won't visit an insecure area." - D	Contextual factors more conducive to hunting tourism than to ecotourism	1. Sustaining a Hybrid Mission Through Strategic Revenue Integration and Operational Resilience in a Volatile Context
"Niassa's logistical challenges—high overheads, sparse wildlife compared to Serengeti or Kruger, and Islamic State insurgency—make it less attractive for ecotourism." - JG		
"In Niassa, dominated by miombo woodland, the uniform habitat isn't ideal for photographic tourism, which is fully conservation-focused and less viable here. Hunting tourism, however, is more feasible, relying on wildlife abundance rather than scenic beauty." - YM		
"Traditional photographic safaris don't attract enough clients to fund conservation." - DL		
"Well-managed sport hunting, as Luwire does, sustainably harvests species, generating needed revenue." - JG	Conservation-driven revenue integration	
"Sport hunting is selective, targeting mature animals based on age or size, not random culling. This creates a cycle where culling older animals encourages reproduction to fill gaps, sustaining populations. The challenge in my role is balancing this." - YM		
"I bring clients who pay to hunt, and the proceeds fund game scouts, salaries, equipment, concession fees, government payments, and community support. Clients have a great experience, and Luwire uses the revenue to improve and protect the area." - DL		
"While we focus on conservation, we must support tourism. Donations alone don't cover expenses, so tourism revenue is critical." - YM		

<p>"not to create a huge business, but to factor in commercial revenues to sustain the conservation area indefinitely" - D</p>		
<p>"The objective of fulfilling social and environmental roles means the company's revenues cover salaries and top up gaps left by philanthropy" - D</p>		
<p>"The owner and manager has molded Luwire's activities to prioritize conservation. He's not there to make a fast buck at the environment's expense. Everything we do is conservation-oriented" - DL</p>		
<p>"One reason Luwire created the Lugenda Foundation was to address financial issues, like potential taxes on donations. Dividing entities—Luwire for commercial activities and the foundation for projects—helps avoid this, ensuring project funds are used fully" - VV</p>		
<p>"the foundation running properly, to cover law enforcement and communities (...) Any surplus from the company will continue to feed into communities and the environment on a not-for-profit basis" - D</p>		
<p>"Patrols don't generate commercial benefits, yet we must cover their costs, which is a significant challenge." - VV</p>		
<p>"The scale, logistics, and challenges meant we've always had to subsidise operations" - D</p>	<p>Strategic Diversification of Revenue Sources</p>	
<p>"This diversified model—donor money, ecotourism, sport hunting, and future carbon projects or fire management—protects against revenue shocks." - JG</p>		
<p>"Recent ISIS attacks (...) led to hunt cancellations, severely impacting tourism revenue. Operators with only Niassa blocks face existential risks. (...) . Luwire's diversification mitigates this." - JG</p>		
<p>"We create an annual plan with two scenarios: a best-case scenario, assuming political stability and high client numbers, and a worst-case scenario, with reduced clients and potential conflict" - VV</p>		
<p>"We rely on tourism revenue. Throughout the year, we seek partners to help cover some expenses, as safari income alone struggles to cover all costs, especially since safaris don't run year-round." - VV</p>		

<p>"During the rainy season, we have no activities due to inaccessibility, but expenses like salaries and food persist, especially for patrol staff who ensure conservation. We approach partners for support to cover these costs during this period." - VV</p>		
<p>"Political unrest in Maputo this year was a red flag. Insurgents in Cabo Delgado on our boundary require close attention." - D</p>	<p>Operational Challenges in a High-Risk and Resource-Constrained Environment</p>	
<p>"Worldwide politics and Mozambique's economy matter—some years, we can't get fuel for flights, or essential products. . That's a risk of working in a complicated third-world country" - D</p>		
<p>Short-term goals require flexibility due to challenges like floods, fires, insurgencies, elephant poaching - D</p>		
<p>"the landscape itself is tough—terrain, climate, and diseases like malaria make operations difficult. When rains come, roads wash away, rivers flood, and the area shuts down" - DL</p>		
<p>"A major challenge is access to the reserve. The roads are in poor condition, and the distance—over 500 km from Pemba to the reserve—is tough" - VV</p>		
<p>"Poor network coverage makes this (communication between camp and Pemba) difficult" - AD</p>		
<p>"our block is one of the largest, covering approximately 4,000 km². To patrol it continuously requires significant human resources, in addition to other technological resources, such as data collection equipment" - YM</p>		
<p>"Unless there's a crisis like elephant poaching, environmental markers are more predictable and easier to see long-term. Financial performance, selling our product in a volatile environment, is less predictable." - D</p>		
<p>"In northern Mozambique, there's no infrastructure, and the government hasn't reached these areas to provide basic needs" - D</p>		
<p>"(...) but because of where we are, we're really out on the limb and we are impacted by them very severely" - D</p>		

"Luwire created jobs for unemployed youth (...) This money circulates in the community, which has a positive impact." - ZT	Development of Sustainable Livelihood Alternatives for Local Communities	2. Driving Conservation Through Community Empowerment and Strategic Stakeholder Engagement
"We employ 90% of our 100–120 permanent staff from within the block." - D		
"For the business, our sector reduces pressure on Luwire by diversifying community income through agriculture, horticulture, and poultry, decreasing job-seeking demands" - IA		
"we step in as virtually a development agency, helping build schools, clinics, and basic infrastructure for education, health, and food security." - D	Community Empowerment and Benefit Sharing for Conservation	
"One way is by reducing conflicts between humans and wildlife, like elephants, in our area. Luwire has frequently helped with this. I have also noticed infrastructure that benefits society." - ZM		
"We're trying to empower them (the local communities), giving them a real stake and value in the resources they live with" - D		
"Communities are key to sustainable resource management. Without a healthy relationship, they might engage in illegal activities" - IA		
"We redirect patrols to these water sources, using information from informants in villages to guide our planning." - YM		
"For conservation, our work prevents illegal activities like poaching by fostering community buy-in. Programs like conflict deterrence protect crops and people, reducing retaliation against wildlife." - IA		
"Mozambican law only requires operators to pay government fees, but Luwire goes beyond, valuing communities through employment, 20% revenue sharing, and other benefits to show they gain from the operator's presence" - IA		
"For wildlife in these areas, communities living in Niassa's concession need monetary benefits from the animals, or they won't want them around." - DL		
"The 20% revenue share (from concession fees and abate tickets) goes to the respective block's communities." - JG		
"The community participates more in activities like preventing poaching and uncontrolled fires, which are prohibited. We work together on this." - ZT		

"Sustainable utilization ensures communities realize benefits, like meat from hunts and monetary proceeds." - DL	Community Engagement Challenges and Expectation Misalignments	
"The company cannot meet all the community's needs, but it does what it can." - ZT		
"Language is a challenge. We use translators, but this can dilute communication." - IA		
"Over recent years, relations have improved, shown by increased trust—people share personal issues (e.g., health) and attend meetings willingly" - IA		
"Low education levels hinder learning, especially reading-based assimilation." - IA		
"The community, especially in Lugenda, does not accept Luwire hiring people from other districts. When this happens, it causes discontent." - ZT		
"The price Luwire offered to buy the honey was not what the community expected. This was one of the misunderstandings." - ZT		
"Another challenge is the expectation that all activities should be paid, which we counter by promoting voluntary participation for long-term benefits." - IA		
"The biggest challenge is the world's lack of understanding that utilization isn't inherently bad" - D		
"Challenges include ecotourism's conflict with sport hunting, as some tourists oppose hunting, limiting ecotourism potential." - JG	Hunting and Conservation External Perceptions	3. Navigating Legitimacy and Impact Through Perception Management and Context-Specific Metrics
"The main challenge is the perception of conservation as utopian—expecting 100% preservation." - YM		
"We can measure financial compliance—paying concession fees, abate tickets, or adhering to hunting quotas—and check for violations like shooting underage animals, females, or extra animals. Wildlife monitoring, management, and community support are harder to assess due to vague KPIs" - JG		
"Financial indicators are clear: did they pay concession fees on time? Did they meet their quota? Did they violate hunting standards? Conservation indicators, like wildlife monitoring or community support, are vague" - JG	Context-Specific Impact and Compliance Measures	
"Our main indicator is community acceptance and relationship quality, though it's hard to quantify." - IA		

<p>"Quotas are usually predictable, but sometimes the government (ANAC) cuts them for no reason, forcing us to go to court, creating operational difficulties" - D</p>		
<p>"SGDRN contracts are poorly written, with vague key performance indicators" JG</p>	<p>Niassa Special Reserve Governance Tensions</p>	<p>4. Managing Governance to Align Conservation and Commercial Goals</p>
<p>"The co-management agreement between the government (ANAC) and WCS can be disruptive when they have disputes" - D</p>		
<p>"ANAC's Maputo office holds the real authority" - JG</p>		
<p>"Concession operators had contracts with SGDRN, but when SGDRN was replaced by WCS, new contracts were made with ANAC, not WCS" - JG</p>		
<p>"ANAC has significant influence but focuses on revenue—timely concession fees and abate tickets—and positive community and local government relations" - JG</p>		
<p>"We reduce patrols to avoid conflicts between tourists and patrollers, which is a manageable tension but impacts our conservation goals"</p>		
<p>"With limited staff, we use the same team for tourism and conservation. High tourism demands reduce our ability to meet conservation targets on time, as we divert resources to support tourism activities."</p>	<p>Tensions Between Conservation and Commercial Activities</p>	
<p>"hunting staff get extra benefits—not from the company, but from clients. When clients leave, they often tip the team involved in their hunt, sometimes significant amounts. Conservation staff don't benefit as much, which can cause discontent. To address this, we've started involving conservation staff in hunts so they can earn tips too."</p>		

2.2 Luwire – Lugenda Wildlife Reserve Overview

Located in northern Mozambique, the Niassa Special Reserve ranks among Africa's most extensive protected areas (42,300 square kilometres) and is managed through a public-private partnership between the Government of Mozambique, represented by the National Administration of Conservation Areas (ANAC), and the Wildlife Conservation Society (WCS). The reserve shelters the most significant populations of wildlife in Mozambique, including the critically endangered wild dogs, and comprises 31% of Mozambique's protected land (WCS, 2021).

Luwire Lda. is an adventure safari company operating within the Luwire - Lugenda Wildlife Reserve concession (Block L7), one of the largest privately owned concessions within the Niassa Special Reserve, spanning approximately 4,450 square kilometres. Situated a ten-hour drive from the nearest international airport, amid vast miombo woodlands and inselbergs, the block comprises six villages - Mussoma, Manhure, Nahavarra, Ndirima, Mucorria and Mpamanda - home to more than five-thousand people.

The business is divided between adventure safaris, that may include hikes, walks, river rafting and game drives, and hunting with a rigorously determined quota of trophies, regulated in alignment with biodiversity trends and the operator's compliance with the ethical standards in previous years. However, the landscape, sparse wildlife, high overhead costs, and prevailing instability have pointed sport-hunting tourism as a more viable source of income.

Intertwined with the establishment of such activities, is a passion for wildlife and a deep understanding of the importance of its conservation. As so, Luwire grew to operate as a hybrid business, whose financial performance relies on the safari related operations and profits are applied in conservation, namely through the Law Enforcement department, focused on anti-poaching and wildlife monitoring endeavours, and the empowerment of the communities within the block.

Established in the Niassa Special Reserve since the beginning of the century, the organization soon comprehended the crucial role the communities based in the concession would play fighting for wildlife preservation. To comply with the regulations associated with the designation of the area as protected, those living in the villages saw farming and raising cattle restricted by the presence of wildlife and law, which led many to resort to poaching as a source of protein and income. Such behaviour represented a threat to the biodiversity conservation progress and posed a barrier to the fulfilment of Luwire's goals for the concession. Thus,

Luwire decided to pursue an approach of mutual support and understanding, prioritising community empowerment, becoming the first anchor site for Community-Based Natural Resource Management in Mozambique. Currently, such activities include fostering a close relationship with the villagers, materialised by various efforts: providing employment opportunities and entrepreneurial initiatives, such as honey production for sale; protein provision through a duck project and game-hunting meat distribution; improvements in health care ensured by building a health centre and granting monthly specialist medical appointments and for the first time in 2024, direct cash benefit distribution was implemented. This approach, which empowers the communities to take responsible ownership of the land, assuming a role more akin to a shareholder than a stakeholder, entails a relationship with the villagers that requires a careful management and consideration when strategically planning the organisation's next steps.

Furthermore, in the organisation's assessments when planning ahead, the harsh and volatile environment, struck yearly by a severe rainy season, often resulting in floods and frequently exposing operations to other natural disasters, and the costs that follow can't be ignored.

In addition to balancing these contextual factors, the organisation faces a structural challenge of monetising the resources it aims to protect – wildlife. This management is particularly complex as the funds for conservation, in addition to grants and donations, streams from wildlife exploration activities.

In 2023, as part of consolidating its hybrid model, Luwire established the Lugenda Foundation as its philanthropic arm, entrusting it with responsibilities related to law enforcement, local communities' empowerment, and the promotion of sustainable livelihoods. The foundation is funded through surplus generated by Luwire's commercial activities as well as external donations and is managed by the owner and manager of Luwire Lda.

3. Results

This section presents the findings from the qualitative case study of Luwire, exploring how a tourism-based organisation balances financial sustainability and conservation objectives, operating in a protected area with villages integrated. The thematic analysis of all nine interviews, following the thematic approach outlined by Gioia et al. (2013), reveals key insights and emergent themes derived from the collected data. Such emanate from the first-order

concepts, selected based on the most notable insights and their relevance to the research question. Sixty-five quotes from nine interviews were synthesised into eleven second-order themes and four aggregated dimensions, as presented in the table in Appendix 9.

3.1 Sustaining a Hybrid Mission Through Strategic Revenue Integration and Operational Resilience in a Volatile Context

The first dimension captures the organisation's essential dynamics, demonstrating how Luwire sustains its dual economic and conservation goals by diversifying revenue streams and adapting operations to Niassa's demanding political and environmental conditions. It builds on four second-order themes: Contextual factors more conducive to hunting tourism than to ecotourism, Conservation-driven revenue integration, Strategic Diversification of Revenue Sources and Operational Challenges in a High-Risk and Resource-Constrained Environment.

Given the security risks propelled by political instability, the uniform landscape, characterised by miombo woodlands, and sparse wildlife, interviewees believe sport hunting tourism to be more viable than ecotourism, as emphasised by YM - "In Niassa, dominated by miombo woodland, the uniform habitat isn't ideal for photographic tourism, which is fully conservation-focused and less viable here. Hunting tourism, however, is more feasible, relying on wildlife abundance rather than scenic beauty.". Sport hunting tourism is also perceived as a more robust source of revenue, as stated by DL "Traditional photographic safaris don't attract enough clients to fund conservation."

Revenue from tourism, particularly sport hunting tourism, directly funds conservation activities, as DL pointed out: "I bring clients who pay to hunt, and the proceeds fund game scouts, salaries, equipment, concession fees, government payments, and community support. Clients have a great experience, and Luwire uses the revenue to improve and protect the area.". Interviewees further emphasised conservation as the primary focus of the organisation, with commercial activities viewed as a means to achieve this goal. This highlights a prioritisation of value creation over value capture. D noted, "(on the organisation's purpose) not to create a huge business, but to factor in commercial revenues to sustain the conservation area indefinitely." IA underscored this alignment, stating, "Luwire's goals are clear - tourism supports conservation.". Similarly, YM reiterated, "While we focus on conservation, we must support tourism."

However, due to climatic and, occasionally, safety matters, commercial activities do not run year round, as VV noted - "During the rainy season, we have no activities due to

inaccessibility, but expenses like salaries and food persist, especially for patrol staff who ensure conservation. We approach partners for support to cover these costs during this period."

To ensure the pursuit of conservation goals considering seasonality and vulnerability of tourism operations, Luwire found the need to diversify its revenue sources, namely through philanthropy, creating the Lugenda Foundation, JG highlights "This diversified model - donor money, ecotourism, sport hunting - protects against revenue shocks.". By doing such, the organisation divided the value creating activities from the revenue generating ones as VV pointed out "One reason Luwire created the Lugenda Foundation was to address financial issues, like potential taxes on donations. Dividing entities—Luwire for commercial activities and the foundation for projects—helps avoid this, ensuring project funds are used fully" and D underscored "the foundation running properly, to cover law enforcement and communities (...) Any surplus from the company will continue to feed into communities and the environment on a not-for-profit basis".

The adversities presented by Luwire's location were designated as the biggest operational challenges, highlighting the necessity of flexibility and resilience, as D shared "Short-term goals require flexibility due to challenges like floods, fires, insurgencies, elephant poaching", differentiating between short-term and long-term objectives.

3.2 Driving Conservation Through Community Empowerment and Strategic Stakeholder Engagement

This dimension is centred on the critical role that local communities have on Luwire's achievement of its conservation goals. Thus, it illustrates how Luwire attains conservation outcomes by empowering local communities through economic benefits and fostering trust. It integrates three second-order themes: Development of Sustainable Livelihood Alternatives for Local Communities, Community Empowerment and Benefit Sharing for Conservation, Community Engagement Challenges and Expectation Misalignments.

Living in a remote area, where job opportunities are scarce, poaching and other illegal activities might be seen as an appealing source of income. To steer away from that direction, the organisation provides alternative income streams by developing complementary initiatives, like honey production, and hiring locally as expressed by D - "We employ 90% of our 100–120 permanent staff from within the block" and reinforced by ZM - "Luwire created jobs for unemployed youth (...) This money circulates in the community, which has a positive impact."

However, to incentivise local communities to be active stewards of the block's biodiversity, it is of upmost importance to establish a healthy relationship and emphasise their role as co-owners of the natural resources as IA pointed "Communities are key to sustainable resource management. Without a healthy relationship, they might engage in illegal activities" and D underlined "We're trying to empower them (the local communities), giving them a real stake and value in the resources they live with".

Furthermore, interviewees also stated that to achieve a strong bond with local communities the benefits associated with the presence of the operator should be noticeable. ZM mentions the importance of helping with human-wildlife conflicts and infrastructures' improvement - "One way is by reducing conflicts between humans and wildlife, like elephants, in our area. Luwire has frequently helped with this. I have also noticed infrastructure that benefits society.". However, IA pointed that Luwire demonstrates exceptional commitment to benefit sharing by distributing 20% of their revenue by the six villages "Mozambican law only requires operators to pay government fees, but Luwire goes beyond, valuing communities through employment, 20% revenue sharing, and other benefits to show they gain from the operator's presence".

Nonetheless, challenges in engaging with local communities and meeting their expectations occasionally arise, as IA highlights "Another challenge is the expectation that all activities should be paid, which we counter by promoting voluntary participation for long-term benefits."

3.3 Navigating Legitimacy and Impact Through Perception Management and Context-Specific Metrics

The third-dimension respects to Luwire's external perception and the performance metrics specificities. It incorporates two second-order themes: Hunting and Conservation External Perceptions and Context-Specific Impact and Compliance Measures.

External scepticism about hunting's conservation role poses legitimacy challenges, as D stated "The biggest challenge is the world's lack of understanding that utilization isn't inherently bad", and YM confirmed - "The main challenge is the perception of conservation as utopian - expecting 100% preservation.". This perception is particularly difficult to address, as measuring preservation impact, despite the use of both qualitative and financial metrics, remains intricate due to the vagueness of indicators such as community trust and conservation outcomes, JG explained "Financial indicators are clear: did they pay concession fees on time?"

Did they meet their quota? Did they violate hunting standards? Conservation indicators, like wildlife monitoring or community support, are vague".

3.4 Managing Governance to Align Conservation and Commercial Goals

The last dimension encompasses Luwire's management of regulatory disruptions and governance tensions to align conservation and commercial priorities. In this dimension, interviewees focused on managing entities and structure as well as the obstacles they impose. It integrates Niassa Special Reserve Governance Tensions and Tensions Between Conservation and Commercial Activities.

The public-private partnership that manages Niassa Special Reserve is often subject to flaws that condition the regular operations of concessionaires, D shared "The co-management agreement between the government (ANAC) and WCS can be disruptive when they have disputes". Within this management agreement, power dynamics are imbalanced, JG informed "ANAC's Maputo office holds the real authority", having the Mozambican government the authority to rectify the hunting quotas impacting significantly Luwire's commercial activities as highlighted by D - "Quotas are usually predictable, but sometimes the government (ANAC) cuts them for no reason, forcing us to go to court, creating operational difficulties".

In addition to such adversities, Luwire faces difficulties associated with managing under the same operations commercial and conservation activities, as YM expressed "With limited staff, we use the same team for tourism and conservation. High tourism demands reduce our ability to meet conservation targets on time, as we divert resources to support tourism activities.", limited resources are shared between the two pillars of the organisation, imposing restriction to their usage, conditioning the normal pursuit of conservation activities.

The two factors add on to the complexity of the managing structure.

4. Discussion

4.1 Theoretical and managerial contributions

In this section, the study's findings are analysed in light of the literature review. This exercise not only confirms trends identified in previous research but also uncovers key dynamics essential to managing the duality between conservation and financial goals in a protected area that includes local villages. Furthermore, the core aspects of Luwire's approach

to goals' duality management in Niassa's volatile context are matched against the blocks outlined by Spaviero (2019) in the Social Enterprise Model Canvas (SEMC), to assess whether the model addresses Luwire's specific challenges and serves as an appropriate framework for how tourism-based organisations operating in similar contexts can structure their business models.

The first finding of this study reveals the fundamental rationale behind Luwire's existence and sheds light on the organisational structure it has adopted, revealing how Luwire sustains its hybrid mission, aligning with Social Enterprise Model Canvas's Economic Value Proposition (Spaviero, 2019) by generating revenue to support conservation. The data collection process identified Luwire's revenue streams and highlighted the flow and interconnection between its conservation and commercial activities, reflecting SEMC's Revenue Streams and Key Activities in balancing economic and social goals.

Luwire's purpose is to ensure conservation. To achieve its purpose, economic and conservation operations appear inextricably linked, as one cannot exist meaningfully without the other: wildlife is vital to the business's survival, thus preservation is a priority, while conservation efforts would not be feasible without sufficient financial resources, a dynamic captured by SEMC's Key Resources. This interdependence clearly illustrates Battilana and Lee's (2014) argument that hybrid business models offer a compelling alternative to traditional models by fostering a balance between long-term financial viability and positive social impact within a single organisation. Additionally, the emphasis by interviewees on conservation as the organisation's core focus, with commercial activities serving primarily to fund it, reinforces its conservation-driven identity and supports Santos' (2012) assertion that it is of utmost importance for organisations to clearly define their priorities between value creation and value capture. This clarity is essential both for effective management and for maintaining legitimacy in the eyes of stakeholders.

Furthermore, the description of Luwire's structure helped elucidate its designation as a hybrid coupling, as defined by Santos et al., (2015). The organisation's beneficiaries, namely the ecosystem, and its clients, sport hunting tourists and ecotourists, belong to distinct groups, which means that additional actions are required for spillover to occur. Specifically, Luwire must operate a Law Enforcement and Patrols department as well as a Community Relations department, corresponding to SEMC'S Key Activities in managing conservation and community engagement. Moreover, the decision to create the Lugenda Foundation and assign it the value creation activities, separating these from the commercial operations, is aligned with

Moizer and Tracey's (2010) strategy of separating social and commercial missions to enhance resource management sustainability.

This structure, in line with stated by Santos et al., (2015), is considered to present additional challenges, as it involves managing more complex stakeholder relationships and operational demands, consistent with SEMC's Stakeholder Engagement requirements.

Moreover, Luwire's high-risk environment aligns with World Wildlife Fund's (2021) observation that organisations dedicated to protecting the environment and ecosystems often operate in remote and challenging areas. Due to its isolated location, inadequate infrastructure, exposure to insurgency threats, and vulnerability to natural disasters, Luwire, consistent with IUCN's (2023) observation, faces higher overhead costs, frequent disruptions to commercial activities, and reduced profit margins, reflecting SEMC's Cost Structure challenges.

Security threats lead to interruptions of commercial activities at times. Additionally, the location's annually exposure to extreme climatic events restricts year-round safaris. In order to safeguard conservation efforts from such disruptions and enhance mission resilience, Luwire has adopted a diversified revenue model, partially supported by philanthropic contributions, further aligning with SEMC's Revenue Streams and Key Partnerships. Furthermore, in alignment with the core tenets of Resilience Theory (McKinsey & Company, 2021), the organisation conducts scenario planning to anticipate and respond more effectively to the volatile and unpredictable conditions in which it operates and engages strategically with its key stakeholders, as the second finding brings to light.

In addition, the volatile context in which Luwire operates compels management to distinguish between short-term objectives and long-term goals, as shifting circumstances require frequent adjustments in short-term priorities to address emerging challenges, while the long-term mission remains intact, in line with Spaviero (2019) distinction between official goals and operative goals.

The second finding of this study identifies the local communities as crucial to the fulfilment of Luwire's mission.

Within Luwire's concession, seven villages are home to more than five thousand people. Similarly to as described by Ancrenaz et al. (2007), in the Niassa Special Reserve, the designation of the area as a protected brought restrictions on resource use, initially fuelling a tense relationship with local residents.

In addition, the region offers limited employment opportunities, leading many to engage in illegal activities such as poaching, directly threatening Luwire's conservation objectives, underscoring the need for SEMC's Stakeholder Engagement to mitigate these conflicts.

Aligned with the principles of Community-Based Natural Resource Management (Child & Barnes, 2010), Luwire recognised that excluding communities from both the management and benefits of the resources they had traditionally relied on created a hostile environment that undermined its mission.

Luwire understood that reversing this situation would require additional efforts to strengthen its relationship with the communities, who often serve as both the first line of defence against illegal activities and, at times, active participants in them.

As a first step, the organisation employed more than hundred people from local communities and introduced complementary projects that provided skills development and alternative sources of income, creating viable substitutes for environmentally harmful activities.

Furthermore, Luwire acknowledged that in order for communities to actively safeguard the ecosystem, they must regard it as their own and recognise that conservation can yield direct benefits. In accordance with the pillars of CBNRM (Virtanen, 2005), Luwire implemented a revenue-sharing program that allocates 20% of its revenues to local communities, demonstrating the tangible value of their contribution to conservation. By helping to preserve the ecosystem, commercial activities could operate successfully, revenue could be generated, and, because communities were part of that success, they were entitled to share in the benefits. This approach positioned them more as shareholders, with a say in how resources are managed and benefits distributed, rather than passive stakeholder, consistent with Armitage's (2005) perspective.

Regardless of the improvements seen in recent years, the relationship between the organisation and the local communities still presents challenges, mainly related to expectations towards the organisation. As communities have come to realise that some activities are monetarily compensated, there is a tendency to expect financial remuneration for all activities they are invited to participate in. However, in many cases, the activity itself constitutes the benefit, such as workshops or agricultural education.

The identification of communities as key stakeholders, personalised and careful engagement and further assessment of the main barriers in the relationship are portrayed in the Resilience Theory (McKinsey & Company, 2021) as central to successfully operate in high-risk environments, reinforcing SEMC's Stakeholder Engagement as a critical component for mission resilience.

The third finding of this research highlights Luwire’s management of external hunting perceptions and use of simplified metrics to secure legitimacy and prove impact in Niassa’s context.

The sport’s hunting business contribution to conservation is seen by many with scepticism. The third finding unveils that such derives from misconceptions of what it entails or utopian views on conservation that disregard the surroundings of the operations.

Despite the fact that Luwire’s fundamental mission is conservation, its involvement with hunting, even if strictly controlled and monitored, can harm the organisation’s reputation and influence how it is regarded externally. Spaviero (2019) identifies this as a common difficulty faced by social enterprises, as external knowledge of their approach is frequently limited. This misperception threatens Luwire’s credibility, requiring active pursuit of reparations from the organisation, as depicted in the “Non-targeted Stakeholders” block of the SEMC (Spaviero, 2019).

As a hybrid business model, Luwire evaluates its progress through financial metrics—mainly linked to commercial operations—and qualitative indicators focused on conservation. However, while financial metrics are generally perceived as clear and measurable, conservation indicators were described as vague, making it difficult to articulate the organisation’s full impact. This, in turn, weakens the ability to showcase the positive role hunting plays in supporting Luwire’s conservation outcomes. Spaviero (2019) identifies this issue as recurrent in social enterprises, identified as the Mission Measurement paradox, and addresses it in the SEMC through the clear definition of “Impact Measures,” which reflect mission values, and “Output Measures,” which track operational objectives.

The final finding sheds light into Luwire’s governance challenges within Niassa Special Reserve’s unconventional regulatory and contractual paradigm as well as internal hierarchy structure, aligning with SEMC’s Governance block (Spaviero, 2019). Despite holding the concession, Luwire operates under the hierarchical authority of the Niassa Special Reserve’s public-private partnership between the Mozambican government, via ANAC, and the Wildlife Conservation Society (WCS). Such governance structure imposes top-down decisions that have the power to disrupt commercial activities, like hunting, through unpredictable quotas adjustments. Furthermore, the contractual agreements between the managing authorities and the concessionaires are not uniform and irregularly established.

Internally, tensions arise from allocating limited resources between commercial and conservation activities. The friction between the two components of the organisation is underscored as the main challenge hybrid business organisations face by Battilana and Lee (2014) and labelled by Spaviero (2019) as a strategic challenge.

The interplay of external regulatory volatility and internal strategic dynamics underscores the need for a robust management structure, as Spaviero (2019) argues.

The four dimensions above discussed collectively illustrate Luwire's dynamic system for managing the duality of financial sustainability and conservation objectives in Niassa's volatile and harsh context as well as the main difficulties associated with managing hybridity. Having analysed the four dimensions, this section evaluates the Social Enterprise Model Canvas (SEMC) (Spaviero, 2019) suitability for organisations operating in similar settings as Luwire. As shown in Table 1, the SEMC, filled in based on the information collected during the interviews process, effectively structures Luwire's hybrid model by integrating economic and social value creation, distinguishing between short term objectives and long run goals, tackling the mission measurement paradox Luwire faces given the vagueness of the conservation metrics in comparison with financial ones, addressing the legitimacy challenge Luwire can endure due to sport's hunting association and approaching the governance obstacle by propelling the clear definition of a managing structure and power dynamics.

These findings extend Battilana and Lee's (2014) hybrid organisation theory by demonstrating how revenue diversification, community trust and empowerment, perception management, and adaptive governance enable duality in high-risk settings.

However, the framework presents limitations in addressing Niassa's extreme volatility in regard to climatic, political and safety matters. Additionally, despite capturing the relevance of local communities as strategic stakeholders, it fails to encapsulate the criticality of their role to the fulfilment of Luwire's mission values and their proximity to a shareholder position. Furthermore, even though it clearly depicts the dual value proposition, in Luwire's case, where the resources that are being explored are the same ones being preserved and considering the interdependence between the two actions, the model fails to represent such dynamic.

These limitations suggest the need for context-specific adaptations, such as blocks that account for resilience, the pivotal role of local communities as more than a stakeholder and the exceptional status of the commercial and conservation components of the organisation that explore and preserve the same resources.

Table 2: Social Enterprise Model Canvas (Spaviero, 2019) applied to Luwire.

<p>Governance Hierarchical structure under Niassa Reserve’s public-private partnership (ANAC-WCS). Commercial activities with priority in resource allocation during the high season. Foundation and Luwire Lda. under the same management</p>			
<p>Non-Targeted Stakeholders</p> <p>Regulators (ANAC), co-manager (WCS), donors, potential clients</p>	<p>Key resources</p> <p>Local staff, wildlife (for safaris), community relationships, limited infrastructure (roads, camps), transportation methods (cars and little airplane)</p>	<p>Channels</p> <p>Direct engagement (hunting safaris, community programs, fairs), partnerships (donors, regulators), limited digital channels due to infrastructure.</p>	<p>Customers and Beneficiaries</p> <p>Customers: clients; Beneficiaries: ecosystem, local communities</p>
	<p>Key Activities</p> <p>Hunting operations, ecotourism, community programs (jobs, agriculture), anti-poaching patrols, scenario planning.</p>	<p>Customer and Beneficiaries Engagement</p> <p>Beneficiaries: Empowers communities through job opportunities, revenue sharing and resource ownership. Costumers: fomenting a close proximity with the project, through storytelling.</p>	
<p>Mission values</p> <p>Long-term conservation of Niassa’s ecosystem, community welfare, sustainable resource use.</p>		<p>Social Value Proposition</p> <p>Delivers conservation (wildlife protection, reduced poaching) and community benefits (jobs, trust, infrastructure).</p>	<p>Impact Measures</p> <p>Number of local hires, Community's participation, patrol frequency, sightings.</p>
<p>Objectives</p> <p>Short-term targets: Reduce poaching, employ locals, stabilize revenue, comply with quotas.</p>			<p>Output Measures</p> <p>Safaris sold, financial compliance, deviation from the annual budget</p>
<p>Cost structure</p> <p>Costs include patrols, salaries, infrastructure maintenance, transportation, bureaucracy.</p>		<p>Income</p> <p>Revenues from hunting, ecotourism, donor funds</p>	

4.2 Limitations

Despite its merits, this study has notable shortcomings. The single-case focus on Luwire limits generalizability because Niassa's unique socio-political volatility and hunting-centric approach might not be applicable worldwide. Furthermore, due to restricted access to the location and interviewees limited connectivity to wi-fi, only nine interviews were possible. While diverse, this small sample may exclude critical perspectives from regulators (ANAC) or clients, thereby biasing findings toward managerial and community views.

In addition, relying on qualitative data without quantitative validation reduces the ability to corroborate conservation or financial outcomes. Additionally, Niassa's extraordinary circumstances may overemphasize resilience, restricting applicability to more stable settings.

The SEMC framework (Spaviero, 2019) adequately structures Luwire's hybrid model, however it underestimates volatility and stakeholder expectation complications, demanding further development. To improve generalizability, future research should use multi-case studies spanning varied protected regions, quantitative indicators, and broader stakeholder views. Refining SEMC with resilience blocks and complex stakeholder interactions may increase its application to high-risk tourism-based hybrids.

5. Conclusion

This study investigated how Luwire balances financial sustainability and conservation goals within Niassa Special Reserve, and it revealed a dynamic hybrid model through four aggregate dimensions: sustaining a hybrid mission via revenue integration and resilience, driving conservation through community empowerment, navigating legitimacy with perception management and simplified metrics, and managing governance and stakeholder conflicts.

These dimensions, derived from a qualitative analysis of nine interviews, show Luwire's strategic integration of diverse revenue sources (e.g., hunting, donor funds), community trust, qualitative impact measures, and adaptive governance to align economic and environmental goals in a volatile environment.

The Social Enterprise Model Canvas (SEMC) (Spaviero, 2019) efficiently portrays Luwire's model into blocks such as Revenue Streams and Stakeholder Engagement, but its shortcomings in reflecting Niassa's extreme volatility, resources usage and preservation dynamics and, the pillar role of communities emphasise the need for improvement. Practically, the report highlights tangible measures for tourism-based hybrids, such as diversifying revenue, promoting community revenue-sharing, addressing public misconceptions, and pushing for clear rules. These findings are especially significant considering the existence of organisations operating in similar settings in Tanzania, Kenya, Namibia, Angola, Zimbabwe and Botswana, implying that they may be applied to similarly high-risk protected regions.

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Appendix

Appendix 1: Business Model Canvas by Osterwalder and Pigneur (2010)

Key Partners (KP)	Key Activities (KA)	Value Proposition (VP)	Customer Relationships (CR)	Customer Segments (CS)
	Key Resources (KR)		Channels (CH)	
Cost Structure (CS)		Revenue (RS)		
Social and Environmental Costs		Social & Environmental Benefits		

Appendix 2: Social Enterprise Model Canvas by Spaviero (2019)

Governance (GOV)				
Non-Targeted Stakeholders (NtS)	Key Resources (KR)	Channels (CH)		Customers & Beneficiaries (C & B)
	Key Activities (KA)	Customer & Beneficiaries Engagement (C&B E)		
Mission Values (MV)		Social Value Proposition (SVP)	Impact Measures (IM)	
Objectives (Obj)			Output Measures (OM)	
Cost Structure (C\$)		Income (I\$)		

Appendix 3: Interview Participants

Interview Participants		
#	Identification	Capacity
1	D	Owner and Manager
2	YM	Conservation and Law Enforcement Director
3	DL	Safari Operator

4	JG	Niassa Special Reserve Field Operations Manager
5	IA	Community Deveolpment Manager
6	ZM	Community Representative
7	VV	Financial Director
8	AD	Logistics and Operations Director
9	GK	Human Resources Director

Appendix 4: Semi-structured interview protocol

Semi-structured interview protocol - Manager / Owner		
#	Topic	Questions
1	Introduction	Could you tell me about the origins of the business and what drives its operations today?
2	Balancing Business and Conservation	How do you see these two dimensions interacting in practice?
3	Strategic Planning	What kind of challenges shape your decision making?
4	Impact and Decision-Making	How do you measure or reflect on your performance, both financially and in conservation terms?
5	Resources and Stakeholders	What are the most important resources your organisation depends on—and are there any limitations or risks?
		Who are your key stakeholders—from customers to partners, etc.?
6	Financial Model	What are your most relevant sources of income and how are revenues typically allocated?
7	Communication	Are your conservation efforts and values well perceived and understood externally?

Appendix 5: Semi-structured interview protocol - Department's Directors

Semi-structured interview protocol - Department's Director		
#	Topic	Questions
1	Role and Responsibilities	Could you tell me about your role within the organisation?
		How does your department contribute to both the tourism business and conservation?
2	Balancing Business and Conservation	Are there tensions between business needs and conservation priorities in your work?
3	Planning and Goals	How do you approach planning within your department?

4	Resource Management	What key resources are essential for your operations?
5	Challenges	What are some of the challenges you face in your role, considering the duality of goals you're set to attain?
6	Monitoring	How do you track or evaluate success in your department?

Appendix 6: Semi-structured interview protocol - Community Representative

Semi-structured interview protocol - Community Leader / Representative		
#	Topic	Questions
1	Relationship	What's the role of the communities in the organisation's activities?
2	Benefits and Challenges	How would you describe the relationship with Luwire? Are there benefits / challenges?
3	Decision-Making	How does the organisation involve you or other community members in planning or activities?
4	Value Perception	From your perspective, what is the most valuable thing this organisation does for the community and the environment? Is this value clear to most people in the community?

Appendix 7: Semi-structured interview protocol - Reserve Management Representative

Semi-structured interview protocol - Reserve Manager Representative		
#	Topic	Questions
1	Role and Governance	Could you tell me about your role and responsibilities within the reserve and in what way it relates to the concessions?
2	Strategic Priorities	What are the long-term strategic priorities for the reserve? How do you ensure that concessionaires align with those goals?
3	Balancing Goals	In your view, how can a business like this operate profitably while preserving the biodiversity and ecological integrity of the reserve?
4	Community Role	What role do local communities play in the reserve's strategy or in concession-related activities?
5	Governance	How are decisions made around who gets to operate concessions and under what conditions?

Appendix 8: Semi-structured interview protocol - Safari Operator

Semi-structured interview protocol - Safari Operator		
#	Topic	Questions
1	Role	What's your role?
2	Business-Conservation Interaction	In your view, how do tourism operations interact with conservation objectives?
3	Challenges	What specific challenges do you face operating in this kind of environment?
4	Community Role	What role do local communities play in the reserve's strategy or in concession-related activities?
5	Collaboration	How do you see your activities contributing to both tourism and conservation?