



Stakeholder Integration to Overcome Ecological and Economic Trade-Offs in Eco-Entrepreneurship

Sintu Mhlonyane and Anastacia Mamabolo¹

Gordon Institute of Business Science, University of Pretoria, Johannesburg, South Africa

Abstract. Eco-entrepreneurship research shows that ecopreneurs have to address and overcome ecological and economic trade-offs. However, limited studies focus on how ecopreneurs integrate stakeholders to overcome such trade-offs. This study explores the question: How do ecopreneurs integrate stakeholders to overcome ecological and economic trade-offs? Stakeholder theory was used as a lens for this study, as it prioritizes individuals involved in and affected by entrepreneurial activities and ventures. A narrative qualitative research approach provided insights into the study's research question. The study found that ecopreneurs use four mechanisms to integrate stakeholders to overcome ecological and economic trade-offs. First, ecopreneurs integrate stakeholders' common interests. Second, ecopreneurs include stakeholders' input in key decisions, and third, they engage stakeholders in value co-creation. Lastly, ecopreneurs adhere to the guiding institutional frameworks in their interactions with multiple stakeholders. These mechanisms are interrelated; therefore, they do not operate in isolation. This study contributes multi-stakeholder integration to eco-entrepreneurship literature and suggests practical implications for business practitioners.

Keywords: eco-entrepreneurship, ecological and economic trade-offs, stakeholders, sustainability, stakeholder theory.

1. Introduction

Sustainable development gained prominence at the United Nations' policy discussion conferences in the 1980s and 1990s (United Nations 2002; Futrell 2010). The sustainable development concept includes ecological, social, and economic paradigms, which complicates its understanding and adoption (Hák, Janoušková and Moldan 2016). As part of simplifying the sustainable development concept, the United Nations set its well-known Sustainable Development Goals (SDGs) to create awareness and promote the development of social and sustainable enterprises (Rahdari, Sepasi and Moradi 2016).

As a result of the initiative, the planet's sustainability and ecological degradation have continued to receive attention and become influential in business and academic settings (Dhahri and Omri 2018). Ecological degradation

1. Corresponding author: Anastacia Mamabolo, Gordon Institute of Business Science, University of Pretoria, 26 Melville Rd, Illovo, Johannesburg, 2196, South Africa. Tel.: +27 11 771 4346, Fax: +27 86 637 1594. E-mail: mamaboloa@gibs.co.za; anastacimamabolo@gmail.com

includes climate change; air, water, and soil pollution; species extinction; and poor agricultural practices (Piwowar-Sulej, Krzywonos and Kwil 2021). Since the adoption of the SDGs, governments have begun introducing regulatory policies to mitigate and prevent further ecological degradation (Holt 2011; Piwowar-Sulej et al. 2021), while consumers are increasingly becoming conscious of the ecological impact of their products (Dhahri and Omri 2018).

The persisting sustainability challenges prompted scholars and researchers to turn to entrepreneurship as a potential solution to ecological degradation problems (Rodríguez-García, Guijarro-García and Carrilero-Castillo 2019; Piwowar-Sulej et al. 2021). Thus, entrepreneurial action is expected to come from eco-entrepreneurship, providing entrepreneurial solutions that seek to resolve ecological degradation by using the exploitative nature of entrepreneurship (York, O'Neil and Sarasvathy 2016; Dhahri and Omri 2018; Antolin-Lopez, Martinez-del-Rio and Cespedes-Lorente 2019). Although eco-entrepreneurship is a nascent field of study with many associated concepts and theories under development (Gast, Gundolf and Cesinger 2017; Antolin-Lopez et al. 2019), it is seen as a vehicle for resolving the many ecological challenges the world faces (Hörisch 2015; Gast et al. 2017; Dhahri and Omri 2018).

Eco-entrepreneurial businesses are driven by two types of logic: The economic logic, focusing on profitability goals; and the ecological logic, solving ecological degradation (Schlange 2006). The economic logic centers on making profit for the sustainability of a business (Schlange 2006). The ecological degradation issues referred to in this research are considered grand challenges with highly complex dimensions, uncertainty, multiple and diverse role players, and being of an evaluative nature (Doh, Tashman and Benischke 2019; Hamann, Makaula, Ziervogel, Shearing and Zhang 2020). Solutions to these challenges require the collaboration of multiple role players, society, individual organizations, governments, institutions, and consumers (Hörisch, Freeman and Schaltegger 2014).

The multiplicity of these actors may result in ecological and economic tensions that could negatively impact the business venture (Günzel-Jensen and Rask 2021). Moreover, the simultaneous exploitation of the entrepreneurial venture's economic sustainability and the need for ecological value creation create a dilemma of the duality of goals for ecopreneurs. This may result in trade-offs, where ecopreneurs compromise one logic for the other.

Little is known about how ecopreneurs overcome ecological and economic trade-offs (O'Neil and Ucbasaran 2016; Gast et al. 2017; Antolin-Lopez et al. 2019) by integrating stakeholders in their ecological business ventures. Existing studies have mainly focused on identifying stakeholders and their ecological expectations and stakeholder management's effects on achieving entrepreneurial goals, such as revenue growth or other related aspects (e.g., capturing knowledge) (Hörisch et al. 2014; Khojastehpour and Shams 2020). Therefore, using

stakeholder theory, this study answers the question: How do ecopreneurs integrate stakeholders to overcome ecological and economic trade-offs?

The stakeholder theory is well suited to understanding how ecopreneurs integrate stakeholders to overcome ecological and economic trade-offs. First, this theory explains the management of individuals or groups who can affect or be affected by the achievement of the organization's objectives (Freeman 1984). Second, this study suggests that eco-entrepreneurship is bound by an ecological context, with stakeholders playing an important role in the resolution of ecological challenges (Hamann et al. 2020). Third, Ramoglou, Zyglidopoulos and Papadopoulou (2023) argue that entrepreneurship research generally has not fully explored stakeholders' role in entrepreneurial success. In sum, stakeholder theory shifts the focus from individuals to multiple stakeholders' roles in ensuring eco-entrepreneurial success.

Therefore, we conducted inductive qualitative research on a sample of 12 ecopreneurs based in South Africa. The South African context was suitable, as eco-entrepreneurship in the country is emerging. In addition, understanding the integration of stakeholders could help entrepreneurial businesses become more successful and increase South Africa's level of entrepreneurial activity, which is low (Bowmaker-Falconer and Meyer 2022). Lastly, the South African context is rich in cultural norms and values that underpin how actors engage in stakeholder relationships (Mangaliso, Mangaliso, Ndanga and Jean-Denis 2022). This context will enhance our understanding of the interaction between eco-entrepreneurship and stakeholder theory.

This paper presents the findings from our study. First, the study revealed that integrating stakeholders' common interests is the first mechanism in managing the ecological and economic trade-offs. This is done by identifying stakeholders with common interests, communicating those interests, and building trust. Second, once stakeholders' common interests have been integrated, the second mechanism is to obtain stakeholders' input in key decisions. Third, the second mechanism is a precursor of stakeholder value co-creation, which is the third mechanism. Lastly, the fourth mechanism requires ecopreneurs to adhere to the guiding institutional frameworks, such as regulations, to manage the ecological and economic trade-offs. These mechanisms are interrelated and do not operate in isolation.

The study contributes to the existing literature by defining eco-entrepreneurship underpinned by the stakeholder theory. In addition, the study contributes to the eco-entrepreneurship and stakeholder theory by expanding knowledge on balancing paradoxical goals that are inherently embedded within a business venture for the benefit of society. Contrary to the entrepreneur-driven-opportunity-exploitation research, this study contributes to entrepreneurship literature by demonstrating the consideration and engagement of the external stakeholders in shaping the actualization or exploitation of eco-entrepreneurial opportunities and goals (Ramoglou et al. 2023). The stakeholder engagement in

key decisions and value co-creation expands the general entrepreneurship research, where the entrepreneur is the key decision-maker who drives the firm's value creation. The present study also shows that eco-entrepreneurship does not occur in a vacuum, and research in this area should consider the cultural practices and national norms that influence the interaction among the stakeholders. In this study, *ubuntu* (being humane), prevalent in sub-Saharan Africa, including South Africa, is an important underlying national norm in understanding the make-up of stakeholder engagement in eco-entrepreneurship. Such multi-stakeholder integration, underpinned by interconnected mechanisms and cultural norms, is crucial for building eco-entrepreneurship theory.

The study also makes practical implications for eco-entrepreneurial business practice. First, the study shows key actions ecopreneurs can take to engage various stakeholders to overcome ecological and economic trade-offs. These actions bridge the gap between ecopreneurs and their stakeholders to achieve eco-entrepreneurial value (Ramoglou et al. 2023). Second, the study is beneficial for eco-entrepreneurship stakeholders to understand their role in supporting ecopreneurs to actualize ecological entrepreneurial opportunities. Third, the study encourages entrepreneurial support organizations to incorporate stakeholder engagement in the support programs for ecopreneurs. Lastly, entrepreneurship policy should not be designed in isolation but should also consider stakeholders who influence or are influenced by eco-entrepreneurial ventures.

The next section introduces relevant literature on eco-entrepreneurship, focusing on stakeholder theory and ecological-economic trade-offs. Subsequently, the research methodology is presented to provide the procedure used to answer the research question. The last section presents the results yielded through the data-gathering phase and discusses the results against the literature reviewed. The study's conclusion is presented with limitations and recommendations for future research.

2. Literature Review

2.1. Eco-Entrepreneurship

Eco-entrepreneurship research has gained scholarly interest for over two decades, resulting in numerous published studies (Piwowar-Sulej et al. 2021). However, researchers in the field do not agree on a single scientific definition of eco-entrepreneurship (Galkina and Hultman 2016; Gast et al. 2017; Antolin-Lopez et al. 2019; Demirel, Rentocchini and Tamvada 2019). On the one hand, the lack of unified definitions for eco-entrepreneurship has enriched this research field and promoted debate among scholars with wide-ranging perspectives, while on the other hand, the lack of conceptualization of its primary constructs creates

confusion and limits its growth as a research field (Gast et al. 2017; Antolin-Lopez et al. 2019).

Current literature uses different terms when referring to eco-entrepreneurship. These include terms such as environmental entrepreneurship (Schaltegger and Wagner 2011; O'Neil and Ucbasaran 2016; York et al. 2016), eco-entrepreneurship (Kearins and Collins 2012; Phillips 2013; Jolink and Niesten 2015; Ljungkvist and Andersén 2021), and green entrepreneurship (Melay et al. 2017; Jiang et al. 2018). Despite the multiplicity of views, there is a consensus that the phenomenon comprises ecological and economic logic (Schaltegger and Wagner 2011; O'Neil and Ucbasaran 2016; York et al. 2016). A robust definition of eco-entrepreneurship should consider the two types of competing logic.

This research adopts the eco-entrepreneurship definition inspired by York et al. (2016) as using ecological and economic logic to deal with ecological degradation by creating profitable organizations, products, services, and markets. The definition is contemporary, includes ecological and economic logic, and explicitly explains how entrepreneurial action integrates into ecological protection.

2.2. Theoretical Underpinning in Eco-Entrepreneurship

We used stakeholder theory as a theoretical anchor of the study. Stakeholder theory advances the idea that business is embedded in society and shares an interdependency with society (Freeman 1984; Freeman, Harrison, Wicks, Parmar and De Colle 2010; Freeman, Phillips and Sisodia 2020). The theory also suggests that the primary purpose of business is to create value for all stakeholders (Freeman 1984; Freeman et al. 2010, 2020). Stakeholder theory aligns with the definition of eco-entrepreneurship adopted in this study, as it suggests an interdependence between the entrepreneurial venture and its ecology context and society. It can be said that stakeholder theory and eco-entrepreneurship share the same view that seeks to extend the purpose of business to more than simply focusing on short-term shareholders' interests or profits. Both concepts emphasize the importance of understanding the role of business by positing that business is embedded, dependent, and obligated to the stakeholders it affects (Freeman et al. 2010; Hörisch et al. 2014).

Stakeholder theory can be enhanced by incorporating indigenous values specific to the context in which eco-entrepreneurship takes place. In this case, we reference the South African institutional context, where this study took place. Thus, the national norms of *ubuntu* found in South Africa and other sub-Saharan countries expand on the stakeholder approach (Woermann and Engelbrecht 2019; Mangaliso et al. 2022). *Ubuntu* simply means "*Umuntu ngumuntu ngabantye*

abantu”, translated as “A human being is a human being through other human beings” (Mangaliso et al. 2022, p 1031).

Viewing eco-entrepreneurship and using *ubuntu* principles implies that ecopreneurs and stakeholders form a relationship and are engaged in key decision-making processes regarding ecological and economic goals (Woermann and Engelbrecht 2019). The *ubuntu* principles also promote stakeholder harmony, which is critical in addressing the ecological and economic logic trade-offs. Therefore, creating synergies and mutuality between differing interests for value creation is at the core of stakeholder theory and *ubuntu*.

2.3. Ecological and Economic Logic and Trade-Offs

Ecological logic concerns developing solutions to resolve ecological challenges (York et al. 2016). This logic has been presented with differing underlying constructs. Jolink and Niesten (2015) referred to ecological concern, which implies a deep feeling of worry about the ecological system. Gibbs (2006) suggested that perceived negative ecological externalities drive ecological logic, while Kearins and Collins (2012) considered this logic as strong green values associated with a deeply learned behavior. Dean and McMullen (2007) proposed a definition by describing the congruence with the logic as seizing ecological market opportunities, which implies an exploitative behavior. Nearly all definitions of eco-entrepreneurship reference the link with ecological goals as one of the main characteristics.

The second characteristic of eco-entrepreneurship centers on economic goals. Much like the ecological logic, economic logic is presented with differing underlying constructs. Schaltegger (2002) proposed that ecopreneurs represent a market-oriented form of value creation, suggesting an extrinsic-based motivation. O’Neil and Ucbasaran (2016) describe ecopreneurs as seeking financial sustainability. Economic logic is similar to commercial entrepreneurs’ broader focus on the profitability contributed by the market stakeholders (employees, customers, suppliers, and shareholders) (Ramoglou et al. 2023).

As demonstrated above, eco-entrepreneurship is driven by ecological and economic goals. Some scholars suggest that ecological goals may have greater consideration in eco-entrepreneurship than economic goals when making business decisions (Hartman and Stafford 1998; Phillips 2013; York et al. 2016), thus resulting in a trade-off. These scholars are supported by those who have explicitly indicated that ecological and economic trade-offs characterize the eco-entrepreneurship phenomenon (Allen and Malin 2008; Hockerts and Wüstenhagen 2010; O’Neill and Ucbasaran 2016; Antolin-Lopez et al. 2019). Some authors argue that the nature of eco-entrepreneurship makes the ecological goals more significant than the economic goals (Antolin-Lopez et al. 2019).

Therefore, ecopreneurs need to overcome these trade-offs in their businesses to create lasting ecological and economic success.

2.4. Stakeholders' Integration to Manage the Ecological-Economic Trade-Offs

One of the key tenants of stakeholder theory is to solicit cooperation from stakeholders (Hörisch et al. 2014). Therefore, the first challenge in integrating the stakeholders to overcome ecological and economic trade-offs is identifying and establishing their interests (Hörisch et al. 2014). Although these stakeholders may have broad goals anchored in sustainability or ecological concerns, their interests may be different and conflicting (Schaltegger, Hörisch and Freeman 2019). For example, when a renewable energy project is considered, although it may be deemed beneficial to the ecological system and, thus, is supported by some stakeholders, other stakeholders who more closely support the preservation of nature and landscape may not necessarily endorse the project (Hindmarsh 2010). To overcome these trade-offs, Hörisch et al. (2014) posit that revealing stakeholders' mutual sustainability or ecological interests is paramount.

Another perspective focuses on the influence of institutional frameworks, which is key in impacting ecological and economic logic (Schaltegger et al. 2019). As suggested in the literature, institutions and regulators could create regulations with strong incentives to encourage stakeholders' cooperation toward providing solutions to ecological challenges (Hörisch et al. 2014; York et al. 2016). Ecopreneurs can incorporate all stakeholders' interests by creating mutual interests with ecological protection regulations as the anchoring value among stakeholders (Hörisch et al. 2014; Schaltegger et al. 2019). Therefore, the institutional and regulatory actors' role is to create supportive regulatory frameworks within which ecopreneurs and their stakeholders can operate and overcome trade-offs.

3. Research Design and Methodology

3.1. Research Design

Gast et al. (2017) suggest qualitative research as the most appropriate research method to contribute to the current understanding of eco-entrepreneurship. Highlighted further by York et al. (2016), Dhahri and Omri (2018), and Antolin-Lopez et al. (2019), there is a need for more theoretical refinement and development on aspects relating to the intentions and behavior of ecopreneurs, a research area to which this study contributes. We used a narrative qualitative

research approach to provide theoretical insights for understanding the phenomenon (Saunders and Lewis 2018). The study focused more on storytelling, as ecopreneurs narrated how they integrated stakeholders to overcome ecological and economic trade-offs (Maitlis 2012).

In this study, eco-entrepreneurship focused on managing a business venture with ecological and economic goals existing simultaneously for the entrepreneur (O'Neil and Ucbasaran 2016; Gast et al. 2017; Antolin-Lopez et al. 2019). Therefore, the target population comprised ecopreneurs operating businesses in South Africa (Saunders and Lewis 2018). South Africa is an emerging country with low entrepreneurial activity (Bowmaker-Falconer and Meyer 2022) due to the entrepreneurial framework conditions, such as government policy, limited access to funding, and access to finance not being fully developed to support all types of entrepreneurs (Bowmaker-Falconer and Meyer 2022). Some of these institutional inadequacies, also faced by ecopreneurs, call for a multi-stakeholder approach to finding solutions. In addition, similar to economic entrepreneurship, eco-entrepreneurship is still in its nascent phase, with potential for development in emerging countries. As explained, South Africa's *ubuntu* made it interesting to study stakeholders' engagement in balancing the trade-offs.

We used purposive sampling to select the participants. This sampling method assisted us with predetermined criteria to select the participants to ensure that the gathered data would answer the study's research question (Saunders and Lewis 2018). The target sample was limited to business owners or managers operating eco-entrepreneurial ventures based on specific criteria. First, the participants had to be ecopreneurs or managers of eco-entrepreneurial businesses focusing on ecological and economic value creation. Second, the selection criteria included established eco-entrepreneurial businesses, defined as ventures that have been operational and paying salaries for at least 42 months (Bowmaker-Falconer and Meyer 2022). The period of 42 months was developed through the longitudinal study of the Global Entrepreneurship Monitor (GEM) to show established companies. According to GEM, established businesses have "paid salaries, wages or any other payments to the owners, for more than 42 months" (Bowmaker-Falconer and Meyer 2022, p 5). Third, the ecopreneurs or managers must have experienced or be in the process of overcoming the trade-offs between ecological and economic objectives in their businesses. Lastly, the businesses had to actively engage with stakeholders who influenced and were influenced by the business.

The study's final sample size comprised 12 participants, as shown in Table 1. Since eco-entrepreneurship is an emerging phenomenon, especially in developing countries, there was a limited pool of ecopreneurs or eco-entrepreneurial business ventures. According to Guest, Bunce and Johnson (2006), a sample size of 12 is adequate to approach saturation. Since this area of research is still developing, we cannot confidently claim that we have reached saturation, but we could say we have approached saturation. We collected and analyzed data until new insights, at least from the sample, no longer emerged. We suggest that future research

concerning theory development within eco-entrepreneurship aims to have larger sample sizes above 32, as Saunders and Townsend (2016) recommended.

Table 1: Participants' Profiles

Participant	Background information
Participant 1	A manager of operations at a waste management company, responsible for the financial and ecological performance of various operations within the company. This participant is responsible for the South African activities of this organization.
Participant 2	Worked in South Africa for various ecology businesses. This participant now manages their eco-venture based in the Democratic Republic of Congo, focusing on the mining industry as its main client. The participant is still connected with the South African eco-enterprises and responded from the South African perspective.
Participant 3	Professional ecology management scientist now turned entrepreneur focusing on managing healthcare risk waste.
Participant 4	Director at an ecology consulting company operating within South Africa's Gauteng, Mpumalanga, and North-West provinces. The participant is responsible for managing the company's finances and its ecological convictions.
Participant 5	This participant was responsible for drafting ecology policies for South Africa. The participant went on to join and manage ecology-related initiatives at a municipal level and is now an entrepreneur focusing on training aspiring ecopreneurs and assisting them with funding.
Participant 6	Founder and managing director of an ecology consultancy firm operating across South Africa. The participant manages the financial aspects of the business as well as the company's ecological performance.
Participant 7	The managing director of an eco-consulting firm that operates across the Southern African region, providing ecology services to the private and public sectors. This participant is responsible for the organization's financial performance as well as its ecological performance.
Participant 8	A founding partner at a green iron refinery firm. The participant is responsible for the financial and ecological performance of the firm, actively making decisions that impact the firm's performance.
Participant 9	A founder and managing director of a company that services its clients by measuring their emissions. The organization is instrumental in determining whether its clients are within the air emissions thresholds set by the policy of various countries within the Southern African region.
Participant 10	A co-founder of an alternative energy provider. This business focuses on using alternative sources of energy, such as waste, to generate usable energy. This business processes food waste products to produce animal feed products for farming. The participant manages projects from the proposal, execution, and closeout stages. The participant makes both financial- and ecology-related decisions that impact the business.
Participant 11	Senior director at a waste management company focusing on providing ecology solutions at the business-to-business level. The director holds several roles, as the commercial director and marketing director. The director is responsible for deciding the company's ecology and economic direction.
Participant 12	A co-founder of a company that started in government ecology policy advisory in the Democratic Republic of Congo. The company has now evolved to include eco-tech services. The participant is responsible for the business's success and makes decisions that impact organizational financial performance and culture.

3.2. Data Collection Process

A semi-structured interview guide was designed that included the list of topics the interviewer had to discuss with the participants. A consent form was included in the interview guide to document participants' willingness to participate in this research voluntarily. The interview guide was developed from the anchoring eco-entrepreneurship literature review to help answer the main research question. The first question of the interview guide sought to establish participants' meeting the selection criteria and relevance to the study by enquiring about the activities of their businesses and whether they had competing goals. The remainder of the interview guide probed questions on the role of stakeholders in overcoming trade-offs (Antolin-Lopez et al. 2019; Schaltegger et al. 2019; York et al. 2016)

In qualitative research, the data-gathering process is one of the critical steps to ensuring the quality and rigor of the research (Gioia, Corley and Hamilton 2013). The study used semi-structured interviews, a data collection method in which participants are asked about a set of themes using predefined guiding questions (Saunders and Lewis 2018), which are important for obtaining real-time accounts of an experienced phenomenon (Gioia et al. 2013). The nature of the semi-structured interviews allowed for the omission or addition of questions or topics, depending on their relevance to the participants. This method was applied for this research to ensure the rigor of the data collection process (Saunders and Lewis 2018).

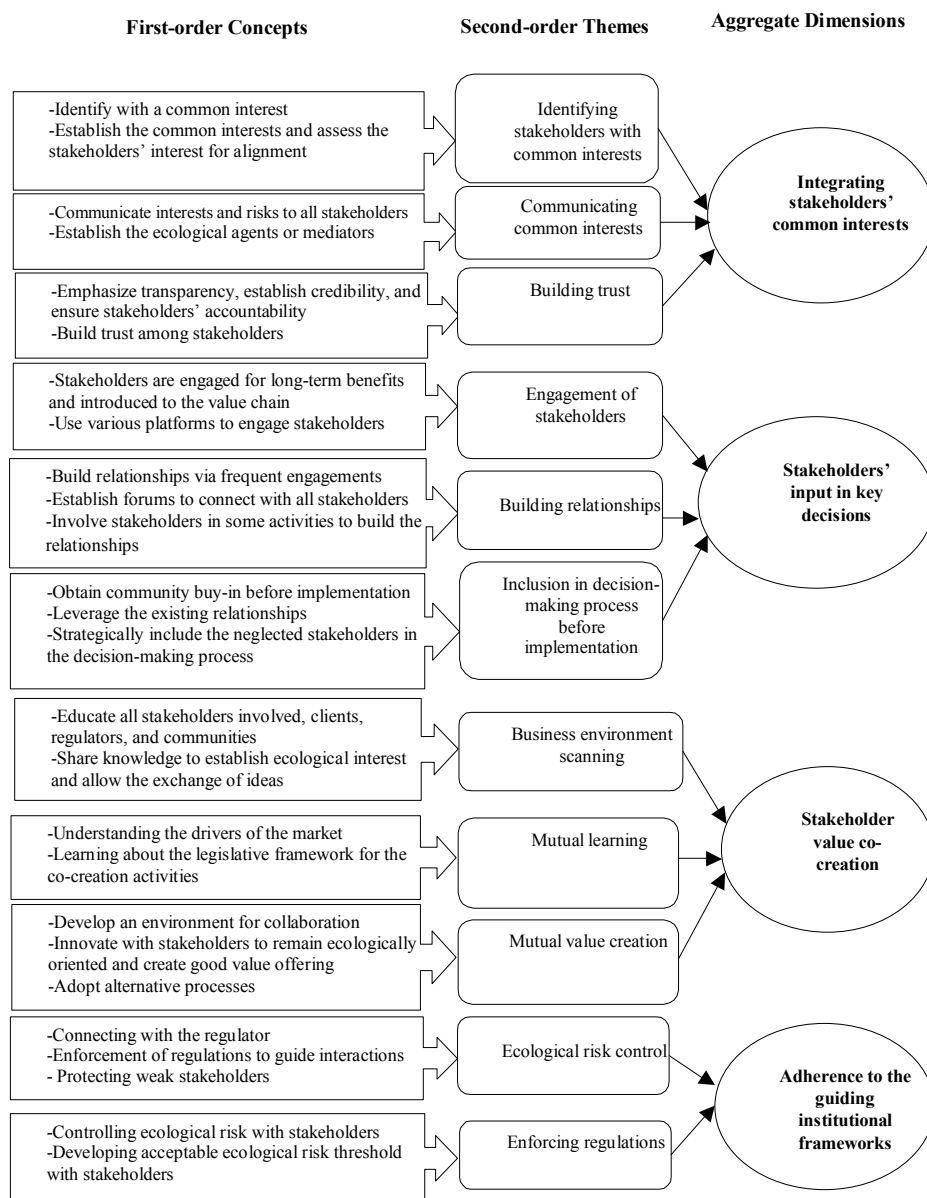
Due to the limitations posed by the Covid-19 pandemic, the interviews were conducted in real-time, using virtual meeting platforms. The researchers experienced no significant challenges with the virtual platforms. These platforms allowed the researchers to access participants in significantly dispersed geographic areas. The interviews were recorded upon receipt of the participants' consent. The interviews were conducted over a month, with each meeting lasting 40-60 minutes. The interview recordings were anonymized and stored electronically in their original form.

3.2. Analysis Approach

Before data analysis could begin, the interviews were transcribed and prepared for analysis. Each transcript was just over ten pages, making the total pages slightly above 120 pages. One of the researchers evaluated the transcripts to identify errors and ensure that each transcript was correctly transcribed. The data were imported onto computer-assisted qualitative data analysis software for analysis.

We used the Gioia qualitative data analysis method to develop the aggregate dimensions from the data (Gioia et al. 2013). The advantage of this analysis method is that it provides a guiding analysis framework that enhances the rigor of the findings. Figure 1 shows the three levels of analysis conducted in this study. The three levels are explained as follows:

Figure 1: Data structure of stakeholder integration to overcome eco-entrepreneurship ecological and economic trade-offs



First step: Developing first-order concepts. This step focused on identifying and developing concepts from the transcribed data (Pidgeon and Henwood 2004). According to Gioia et al. (2013), concepts are “qualities that describe or explain a phenomenon of theoretical interest” (p. 2). In this study, the concepts were developed from the chunks of data using phrases that inductively emerged from the data. We also analyzed the differences across the concepts to enrich the data (Pidgeon and Henwood 2004). The data analysis resulted in about 100 clean concepts.

Second step: Second-order themes. In the second level of data analysis, the first-order concepts were further analyzed and narrowed down into second-order themes (Ganzin, Islam and Suddaby 2020). The first-order concepts that belonged together were grouped into second-order themes. Examples of second-order themes are identifying stakeholders with common interests, communicating interests, and building trust. Some first-order concepts that did not belong to any second-order themes were excluded from the analysis. For example, concepts on motives to start an eco-entrepreneurial venture were outside the scope of the research.

Third step: Aggregate dimensions. In the last level of analysis, the second-order themes that belonged together were grouped into aggregate dimensions. These aggregate dimensions gave us theoretical insights into the data. The results of this study have four aggregate dimensions that show the integration of stakeholders to overcome the ecological and economic trade-offs: The integration of stakeholders’ common interests; stakeholders’ input in key decisions; stakeholders’ value co-creation; and adherence to the guiding institutional frameworks. Once the aggregate dimensions were finalized, the researchers interpreted the results against existing literature and developed theoretical answers that explained the phenomenon (Gioia et al. 2013).

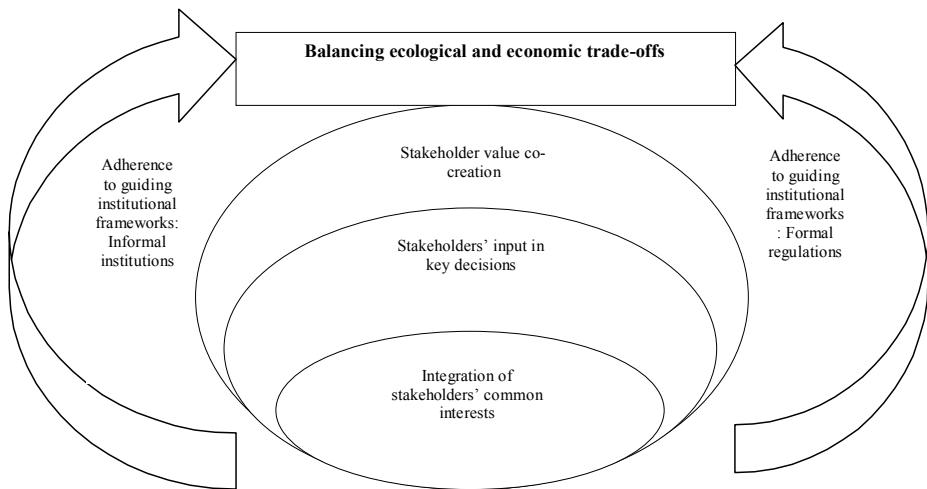
The validation and reliability step in qualitative research seeks to confirm or check the accuracy and credibility of the research process and findings (Creswell 2014). First, the interview guide was used consistently across all participants. The emerging follow-up questions were adopted as part of the interview guide. Second, triangulation through member checks with two study participants evaluated the validity of the themes that emerged from the study (Creswell 2014). Lastly, the software improved the auditability and traceability of the findings (Sinkovics and Alfoldi 2012).

4. Findings

The study’s research question explored how ecopreneurs integrate stakeholders to overcome ecological and economic trade-offs. Figure 2 summarizes the study’s

findings and shows that ecopreneurs use four main mechanisms. The first mechanism used by ecopreneurs is integrating stakeholders' common interests. Second, ecopreneurs consider the stakeholders' input in key decisions. Third, ecopreneurs involve stakeholders in value co-creation. Fourth, ecopreneurs adhere to the guiding institutional frameworks. These institutional frameworks represent the context in which the eco-enterprises are embedded. Lastly, the findings and Figure 2 show that these mechanisms are interrelated and do not exist in isolation.

Figure 2: Summary of the Findings



4.1. Aggregate Dimension 1: Integrating Stakeholders' Common Interests

The first mechanism is integrating stakeholders' common interests, which is about unifying the goals of individuals and organizations functioning in eco-entrepreneurship. This aggregate dimension is based on three second-order themes: identifying stakeholders with common interests, communicating common interests, and building trust.

Identifying stakeholders with common interests

The important action in integrating stakeholders' common interests starts with identifying all actors with common interests and those who impact or are impacted by business activities. These stakeholders include communities, government, regulators, private organizations, ecology policymakers, non-profit organizations, ecopreneurs, and employees. The study found that the community and informal ecopreneurs are important stakeholders in eco-entrepreneurship. One of the participants highlighted the importance of identifying stakeholders

and how that affects subsequent stakeholder relationships and the decisions on organizational goals:

So, identifying your key stakeholders in your business and ensuring that you have engaged them or understand what type of relationship you need within and managing that relationship is critical. Not only for your sustainability but could give access to growth, and if managed poorly, they can have a very detrimental effect on your business. (Participant 11)

Some participants highlighted that community interests vary depending on the project or location and that they significantly influence which goals an ecopreneur adopts. There was a clear indication that some stakeholders' interests could be viewed as unreasonable and, thus, could not be satisfied within the scope of ecology projects. When these unreasonable interests have been identified where the stakeholder is pivotal to the activity, as explained by Participant 8, it is abandoned to ensure ecopreneurs' values remain uncompromised:

I think that, certainly, the entrepreneur is always finding ways to overcome barriers. And if they are determined enough, they will find a way over that. So, if the one stakeholder isn't the correct stakeholder, I think you are willing to walk away from that. So again, it's about putting the long-term vision, the business, first on. (Participant 8)

Other participants stressed the importance of alignment in goals or interests among stakeholders in eco-entrepreneurship. Interests or goals around ecological protection or preservation were highlighted as most important. When all stakeholders have a shared goal regarding ecological issues, their collaboration likely revolves around generating economic value within their common ecological value system. In this way, ecopreneurs successfully balance the ecological and economic trade-offs inherent in eco-entrepreneurship. Participant 1 explained the importance of the balance:

The driver should be ecologically protected, striking a balance in the ecosystem. So should the goal be similar, all the stakeholders have the same goals, then everything, all solutions that we develop back in our minds or at the forefront, will be ecological protection. So, all these stakeholders have their mission or goal of ecological protection and sustainable sound solutions. (Participant 1)

Communicating common interests

Once stakeholders with common interests are identified, the next activity is communicating the interests shared by all. It has been demonstrated that incorporating stakeholders' interests is a challenging process that does not always have positive results. However, effective communication tailored to the particular stakeholder improves this integration process and manages the trade-offs. An essential aspect of communication is soliciting stakeholders' interests that show their genuine commitment:

A lot of things can be resolved through effective communication and discussion. You know, as humans, it's hard to have tough conversations, but it is often how it's conducted, but most people want to do the right thing. And it's important to raise those issues soon. (Participant 11)

Participants highlighted that communication with stakeholders must be frequent, open, and honest. Since eco-entrepreneurship is still a relatively new concept, even in business practice, continuous communication helps establish commonalities among stakeholders, builds legitimacy, and improves cooperation. One participant points this out by highlighting that:

I don't think they've ever not aligned because we are in a position where we hold the licenses, so we need to do what we do. As long [as] we are all reasonable in communication, then everyone's aligned. (Participant 10)

Building trust

Lastly, building trust was one of the essential aspects of integrating stakeholders' common interests. Trust happens when ecopreneurs ensure the services they provide to stakeholders are credible and trustworthy. One of the participants alluded to the importance of this aspect for stakeholder relations as well as future business opportunities (referencing investors):

We have a confidentiality agreement with our customers. So, whatever we measure, we report to them when we keep it to ourselves. (Participant 9)

4.2. Aggregate Dimension 2: Stakeholders' Input in Key Decisions

The integration of the stakeholders' common interests contributes to the second mechanism, which is the stakeholders' input in key decisions that directly or indirectly have an impact on them. The second-order themes associated with this aggregate dimension are the engagement of stakeholders, building relationships, and inclusion in the decision-making process before implementation.

Engagement of stakeholders

Stakeholder engagement is about ecopreneurs getting to know and involving their stakeholders in some eco-entrepreneurial activities. Participants highlighted that stakeholder engagement should be intentional and meaningful. Stakeholder engagement allows for the surfacing of stakeholders' interests and how these interests might be incorporated into decisions. Participant 6 gave an example of engagement:

We do a stakeholder engagement whereby we engage all the stakeholders interested; those who are interested are those who are affected. And then we tell them about the project. (Participant 6)

Some participants further explained that stakeholder engagement has its challenges. The time often required in eco-entrepreneurship stakeholder engagement may never be recovered regarding economic returns. Ecopreneurs, like Participant 2, continually invest their time with the limited guarantee that the process will yield beneficial outcomes.

So, when engaging in a very small team and engaging in all these negotiations, there is a loss of tangible time and income. Things sometimes don't go according to plan; you find that you spent three months trying to be a mediator between the affected parties. If all of them don't agree, then you've wasted [time]. So, this has been the biggest challenge. (Participant 2)

Building relationships

The participants, Participant 9 included, stressed that the relationship an ecopreneur has with stakeholders determines whether stakeholders' interests are successfully integrated into the business. There are collaborative relationships where various stakeholders build relationships with accountability as a common anchoring value.

And we've got those relationships with our customers, and I think we've built it to the extent that our company is mature enough to go and have a mature conversation with the likes.... (Participant 9)

Stakeholder relationships further assist in building an understanding around the perception that eco-entrepreneurship services or products are expensive. Ecopreneurs can gain and retain market share by building solid relationships with their customers. Participant 10 explained:

One of our relationships is with a bigger waste recycling company, and we have regular conversations. They said to us: "We have this waste; can you do anything with it?" So, it is forcing us as well to sort of improve our service offering. (Participant 10)

Inclusion in the decision-making process before implementation

The participants emphasized that stakeholder engagement and building relationships are the basis of stakeholder inclusion in decision-making before implementation. Ecopreneurs explained that decisions that are implemented with limited involvement of the stakeholders result in a push-back. Therefore, as said by Participant 1, ecopreneurs solicit buy-in by making some decisions with the stakeholders.

I will give an example. When you need authorization to run a landfill, you need buy-in from the community, government, and the industries around where you will operate your landfill. (Participant 1)

The participants agreed that the influence of stakeholders should be incorporated into decision-making during the planning phase, not at the end of the projects. Some participants elaborated on how important stakeholders could be used to sway difficult stakeholders to adopt the ecopreneurs' values during the planning phase. Incorporating stakeholders in key decisions could address some challenges where establishing common interests proved difficult.

4.3. Aggregate Dimension 3: Stakeholder Value Co-Creation

The first and second mechanisms are the foundation of stakeholder value co-creation, which is the third mechanism. Stakeholder value co-creation is solving problems and designing solutions with suitable individuals. The second-order themes associated with stakeholder value co-creation are business environment scanning, mutual learning, and mutual value creation.

Business environment scanning

The participants highlighted the importance of conducting an appropriate market scan to understand the orientation of various stakeholders, including potential customers. A participant indicated forming ecological goals based on the market need and research is for credibility or legitimacy-building affiliation. Market research further informs ecopreneurs of which goals to adopt with their stakeholders. Participants 11 and 12 explained that their market research informed them of the local conditions and the role played by the regulator in developing objectives in eco-entrepreneurship.

So how are objectives defined? Well, strongly, obviously, on what the market needs and the market needs comes from two sides; one legislation, specifically waste legislation in our country, is driving our changes and changes of [the] needs in the market. (Participant 11)

We decided that we needed to do extensive research on the ground to figure out what the conditions were. So, we could make better business decisions and point resources properly in the right direction. And then, you know, goals developed or, or sort of objectives developed as, as we moved along. (Participant 12)

Mutual learning

The data showed that mutual learning is about reflecting on the ecopreneurs' learning process with stakeholders. This mutual learning occurs in different ways. First, ecopreneurs may wish to educate the primary stakeholders (including communities) directly involved in ecological activities. Second, ecopreneurs may need education around understanding the market and available eco-entrepreneurship opportunities. Third, ecopreneurs may need to learn from or be educated by other secondary or tertiary stakeholders not directly involved in the project. Lastly, regulators may need to know from different stakeholders to

formulate the most appropriate and contextual policies for effective market creation. As seen from Participant 2, the process of learning about each other and learning together should ideally help ecopreneurs deal with the trade-offs:

So now, because the government maybe is informed by what's happening outside the country, they come back and want to enforce without proper understanding as to what the needs of the mining companies are, you're not understanding. (Participant 2)

Mutual value creation

Lastly, the data demonstrated that business scanning and mutual learning with different stakeholders facilitate mutual value creation. The study's participants indicated that the value created by ecopreneurs is often perceived only in economic terms. Therefore, ecopreneurs' job is to provide enough perceived ecological value to satisfy concerned stakeholders. This suggests that the perceived ecological value created is likely to align with all stakeholders' interests or, at the very least, the perceived value should be sufficient to achieve stakeholders' satisfaction. Participant 1 explained the role of educating stakeholders:

For me, I honestly think that it is the guys on the floor, because they are the ones that are executing, and they are the ones that will be able to give us value, so we need to educate them as much as we need to educate our clients. Also, the executive, because we need buy-in from them and that the mission or the vision of the company is clear, and they can communicate it down. (Participant 1)

The participants argued that the value ecopreneurs create is often only visible in the long term, with no immediate returns for their clients. The long-term orientation makes it challenging to show the immediate or current impact, as there is a lack of appropriate measurements of value creation in sustainability activities. Therefore, institutions can help legitimize the value that ecopreneurs create by regulating the services they deliver to the marketplace, thus giving them legitimacy.

4.4. Aggregate Dimension 4: Adherence to the Guiding Institutional Frameworks

The three mechanisms already described are influenced by the last mechanism, which is adherence to the guiding institutional frameworks. Thus, the institutional frameworks will influence how stakeholders' common interests are integrated; stakeholder input is considered in key decisions, and stakeholder value is co-created. The second-order themes associated with this aggregate dimension are ecological risk control and enforcing regulations.

Ecological risk control

Ecological risk control refers to measures that, when implemented, prevent or minimize the ecological impact of business activities. These measures are often set by the regulator or other stakeholders who may be impacted. The ecopreneurs, including Participant 1, acknowledged the role regulators play in this regard, as well as their incorporation of risk control measures in their businesses:

So, there are measures in place that they put to make sure that they may follow up and give you strict restrictions or guidance on how you are supposed to manage your business or the end goal of protecting the environment. (Participant 1)

The regulator is again identified as a critical stakeholder in developing and setting the thresholds associated with ecological risk control measures. Furthermore, ecological risk control is seen as another avenue for incorporating stakeholders' interests, although this aspect of ecological risk control only includes the ecological aspects of eco-entrepreneurship. As demonstrated by the study's findings, the role of regulations cannot be overemphasized when studying eco-entrepreneurship. As Participant 9 explained, the regulations create a market for some ecopreneurs to thrive:

Okay. So that's very much government-driven if it wasn't for those licenses. Unfortunately, I don't know anyone in the country who would care about pollution, because then you can make a lot more money. (Participant 9)

Enforcing regulations

There are institutional stakeholders whose responsibility is to act as accreditation bodies to inform the ecological and economic objectives of ecopreneurs. Moreover, stakeholders who formulate the policies and legitimize the accreditation bodies (often governments) influence the development of eco-entrepreneurial goals. These institutional stakeholders determine the punitive measures for contravening the prevailing ecology laws. Consequently, establishing interests that seek to avoid these measures would inadvertently align with ecopreneurs' ecological interests. However, applying existing legislation can also result in the misalignment of interests that could lead to trade-offs. One of the participants introduced the idea that when stakeholders' goals do not align with the guiding legislation, ecopreneurs most often have to "walk away". This notion suggests that issues of sustainability that ecopreneurs seek to resolve remain unresolved as long as the stakeholders' interests do not align. Participant 2 explained:

So, those misalignments have been there, and mitigation of those misalignments is that we've immersed ourselves in a culture where we will not break the law. We will not do things that will compromise our reputation and the reputation of whomever we bring to the table, meaning our investors. (Participant 2)

Where there is a lack of enforcement of the regulator's ecology policies, an imbalance can be created in the marketplace. The inconsistent enforcement of the law could lead to unfair competition, with products or service offerings being too expensive for the market. These results support the notion that adhering to the guiding regulations is essential in overcoming ecological and economic trade-offs in eco-entrepreneurship.

4.5. The interconnectedness of stakeholder integration mechanisms

While this study has revealed the key mechanisms to overcome the ecological and economic trade-offs, we argue that these strategies should not be treated in isolation. Figure 2 shows how the strategies are interconnected and supported by the guiding institutional frameworks. The first level mechanism is integrating stakeholders' common interests. Once the interests are integrated, the ecopreneurs will include stakeholders in key decisions, which is the second mechanism level. The stakeholder value co-creation is the third-level mechanism resulting from integrating stakeholders and their inclusion in key decisions. These mechanisms are underpinned by formal and informal institutional frameworks, which can strengthen or weaken them. Thus, the adherence to the guiding institutional frameworks, the fourth mechanism, influence how the first three mechanisms unfold, and which ones matter the most.

Since these mechanisms demonstrate the interplay between the individual, organizations, communities, and institutional environment, micro-foundations could explain how the mechanisms are interconnected (Sun et al. 2020). Thus, in future research, micro-foundation literature can help to enlighten how the individual and organizational actions and sub-processes connect the mechanisms. Considering the micro-meso-micro focus of eco-entrepreneurship, the micro-foundations could help elucidate and theorize the concept further.

Due to the cross-sectional nature design of the study, we are limited in concluding that the mechanisms are *perfectly* linear. The mechanisms are connected, but the process can be strengthened in future research. This limitation provides an opportunity for future research to explore how the mechanisms emerge, unfold, develop, and change over time to overcome the ecological and economic trade-offs (Leonidou et al. 2020). Another question is, do these mechanisms emerge at the different stages of eco-entrepreneurial projects or journeys? Additionally, the studies could explore the iterative nature of the mechanisms. The iteration means that ecopreneurs and their stakeholders will continuously refine (or go back-and-forth between) their strategies if they are not working or suit the contexts. The changes in the formal and informal institutions may also require refining the mechanisms to suit the context.

5. Discussion

The study's research question explored how ecopreneurs integrate stakeholders to overcome ecological and economic trade-offs. The summary of the findings in Figure 2 shows that ecopreneurs overcome the trade-offs by integrating stakeholders' common interests, considering stakeholders' input in key decisions, stakeholder value co-creation, and adhering to the guiding institutional frameworks.

The findings of this study show that the identification of stakeholders with common interests is a vital step before integration can take place. Part of identifying the stakeholders involves focusing on the important ones, often not well-represented. The data demonstrate that the often-neglected stakeholders, communities, and informal ecopreneurs are crucial in eco-entrepreneurial projects. For example, informal ecopreneurs in urban areas assist established businesses in managing and achieving their ecological goals. These findings align with Alvarez, Newman, Barney and Plomaritis (2023), who argue that stakeholders should be reviewed according to their roles and suitable engagement mechanisms.

The inclusion of marginalized stakeholders aligns with the *ubuntu* principles, where every person is part of the community and has a right to participate in decision-making (Woermann and Engelbrecht 2019; Mangaliso et al. 2022). Contrary to general and social entrepreneurship that emphasizes limited and fewer stakeholders (Rodríguez-García et al. 2019), this study's findings showed that the multiplicity of stakeholders in eco-entrepreneurship plays a central role in the operation of eco-ventures and entrepreneurship. Such a rich bank of stakeholders influences how they overcome trade-offs.

Once the potential stakeholders have been identified, the important action is to identify the stakeholders' goals with an aim to integrate them. We found that the communication of interests, commonality of goals, and trust among stakeholders enables the integration of interests. Similar to strategies to resolve stakeholder legitimacy conflicts by Alvarez et al. (2023), we found that in some cases where it was difficult to integrate stakeholders' interests, the eco-opportunities were not fully exploited, and ecopreneurs decided to exit the projects. These findings demonstrate that while stakeholder integration is encouraged, it is sometimes difficult to attain. Therefore, the multi-stakeholder approach to overcome trade-offs should not only be viewed from a positive perspective but the costs and failures to integrate should also be considered.

While it is not popular in economic or general entrepreneurship to engage key stakeholders in key decision-making (Schlange 2006), this study demonstrates that stakeholders' input in decision-making matters when addressing the economic and ecology trade-offs. The findings show that constant engagement with stakeholders, relationship building, and soliciting feedback before implementation are some ways of incorporating the key stakeholders in decision-

making. Emphasis was placed on the importance of ensuring that the marginalized stakeholders' voice is heard in the process.

Expanding on the eco-entrepreneurship literature that does not explicitly highlight the roles of cultural norms and institutional make-up (Freudenreich et al. 2020), this study demonstrates that *ubuntu* norms of giving each person an equal opportunity to be heard and provide input is significant in ensuring alignment between the ecological and economic logic. Similar to other stakeholder-focused studies (Hörisch et al. 2014; Freudenreich et al. 2020; Schaltegger et al. 2019), the findings show that it is not about stakeholder management but engagement and establishing long-standing relationships. Such engagement of stakeholders, including communities and informal ecologists, helps ecopreneurs to manage the ecological and economic trade-offs.

The study's findings demonstrate that stakeholder value co-creation is important in balancing the ecological and economic trade-offs. In alignment with existing research (Schaltegger et al. 2019), our findings demonstrate that value co-creation with stakeholders is one of the more prominent issues that stakeholder theory seeks to resolve, and it is enhanced through mutually beneficial stakeholder relationships. Value co-creation is also considered to play an important role in the long term for society's benefit. We agree with Re and Magnani (2022) that although value co-creation matters in economic entrepreneurship, there is limited empirical research on the topic. This could be influenced by the business model approach that focuses on a one-dimensional value-creation relationship between customers and businesses (Freudenreich et al. 2020). Our findings demonstrate that value co-creation with external stakeholders is critical in eco-entrepreneurship. Perhaps the development of the eco-entrepreneurial business models should incorporate value co-creation, rather than merely value creation as a central element.

Value co-creation includes mutual learning by educating stakeholders and market scanning for opportunities in the market. Education not only helps raise awareness among stakeholders, but also introduces the empowerment element to the management of sustainability projects. Additionally, value co-creation spills over into identification and exploitation of new opportunities. Mitchell, Israelsen, Mitchell and Lim (2021) argue that general entrepreneurship on new venture emergence research should consider second-person opportunities, which are co-created with stakeholders or based on interactions of multiple actors. This study expands the argument that even in established firms, stakeholders play a role in co-creating second-person opportunities that integrate their ecological interests or goals. Their participation in co-creating opportunities and value helps ecopreneurs better manage the trade-offs.

Lastly, the study shows that adherence to the guiding framework helps ecopreneurs balance ecologic and economic goals. Building on Hörisch et al. (2014) and Ball and Kittler (2019), the study's findings prove that the incentives-based regulatory institutions and the command-and-control regulations contribute

positively towards successfully balancing ecological and economic goals in eco-entrepreneurship. Therefore, the role of the regulatory stakeholders is to provide a conducive regulatory framework that incentivizes good behavior but also provides a command-and-control framework for those who may not see the incentives as sufficient motivators to adopt sustainability practices. However, the contexts under which their impacts become undesirable need to be investigated.

5.1. Theoretical Contributions

Towards the conceptualization of eco-entrepreneurship

The study demonstrates that there are limited theoretical frameworks that adequately explain eco-entrepreneurship. We used stakeholder theory to demonstrate that engagement rather than management of stakeholders helps integrate stakeholders to overcome ecological and economic trade-offs. Our study shows that the stakeholder approach is enhanced by the national norms governing stakeholder interactions. These norms are anchored in the *ubuntu* principles that encourage dialogue, participation, and trust (Woermann and Engelbrecht 2019; Mangaliso et al. 2022). The *ubuntu* principles also allow ecopreneurs to integrate with the often-neglected communities and informal ecopreneurs critical in eco-entrepreneurship. The study contributes to the literature by arguing that indigenous theoretical frameworks could enhance our understanding of how ecopreneurs make sense of the world and become stakeholder centric. These *ubuntu* values of engagement align with the work by North (1990), who stated that informal institutions govern how people interact and behave. The concept of *ubuntu* includes normative institutions (Scott 2013) having to display the preferred and desirable values, and how things should be done in the ecopreneur and stakeholders' attempt to minimize trade-offs. This study argues that integrating stakeholders to overcome trade-offs is also the function of informal and normative institutions.

The findings expand on the notion of Mitchell et al. (2021) that the stakeholder approach shifts the focus of entrepreneurial opportunity from individuals to stakeholders. Our study demonstrates that decision-making and co-creation in managing the trade-offs are the important mechanisms through which new opportunities can be exploited and actualized in eco-entrepreneurship. This focus, which differs from unidimensional value creation, especially in economic entrepreneurship (Freudenreich et al. 2020), builds on an emerging discussion on value co-creation and opportunity identification and exploitation by stakeholders in eco-entrepreneurship. Thus, value co-creation and opportunity identification scholars in eco-entrepreneurship should not exclude the role of stakeholders in shaping those opportunities.

Contrary to generic entrepreneurship that prioritizes market stakeholders (Ramoglou et al. 2023) and beneficiaries in social entrepreneurship (Schlange

2006), we argue that in eco-entrepreneurship, the emphasis should also be on the non-market stakeholders who are at times operating informally and who are affected by and contribute to the ecological logic of the business. With this understanding, our refined definition of eco-entrepreneurship is *the exploitation of ecological and economic logic to address ecological degradation problems by integrating multiple stakeholders embedded in an institutional context*. The definition highlights the two types of logic, the kind of problems to be solved, and the ‘who’ and the ‘where’ of the phenomenon. This definition, which still requires refinement in future research, will differ depending on the theoretical lens used in the study. Since this study focused on stakeholder integration, it was important to highlight how it is embedded in the definition.

Another contribution from the study is the interaction between the mechanisms for stakeholder integration. We identified the mechanisms for stakeholder integration to overcome eco-entrepreneurship ecological and economic trade-offs as integrating stakeholders’ common interests, stakeholders’ input in key decisions, stakeholder value co-creation, and adherence to the guiding institutional frameworks. We have demonstrated that these mechanisms are interconnected and do not exist in isolation. These mechanisms support that eco-entrepreneurship is grounded on the micro-processes between the individuals and their institutional environment.

Implications to the economic and social entrepreneurship literature

Since both economic and social entrepreneurship affect stakeholders (Mitchell et al. 2021; Ramoglou et al. 2023; Schlange 2006), the suggested mechanisms could still be relevant in engaging with stakeholders and addressing some of the customer or beneficiary alignment challenges. The suggested mechanisms are not only relevant in engaging with external stakeholders, but they could also be used to engage with internal stakeholders in economic and generic entrepreneurship. The findings of this study suggest that understanding the role of normative and indigenous factors could help us understand economic and social entrepreneurship. For example, *ubuntu* in the study applies to social entrepreneurship, which focuses on empowering disadvantaged beneficiaries through humane principles. In economic entrepreneurship, *ubuntu* could enhance our understanding of how business is conducted in adherence to ethical principles. Consequently, some of the lessons from the eco-entrepreneurship findings are also applicable to economic/generic and social entrepreneurship.

5.2. Practical Considerations

The study has several practical implications. The study reveals that ecopreneurs should engage rather than manage their stakeholders to overcome ecological and economic trade-offs. The findings also demonstrate that engaging stakeholders

through dialogue and open communication will bridge the gap between ecopreneurs and their stakeholders. While the focus in economic entrepreneurship is more on market stakeholders, this study shows that ecopreneurs should integrate the often-neglected stakeholders who are critical to the success of their business ventures. As part of engaging the often-neglected stakeholders, ecopreneurs have to leverage the informal institutions that could contribute to building strong relationships with them.

The role of institutions in guiding the interactions of ecopreneurs and their stakeholders proved important to this study. The regulatory framework that contributes positively to eco-entrepreneurship was found to be a hybrid model between the incentive-based frameworks and the traditional command-and-control frameworks. Therefore, governments could adopt hybrid regulatory frameworks that provide incentives in addition to the traditional command-and-control structure.

Traditional businesses are generally customers of eco-entrepreneurship services, as demonstrated by this study's results. Trust among stakeholders in eco-entrepreneurship leads to reduced operational costs, and thus prices, for their services. Therefore, businesses should focus on activities that build trust in their relationships with ecopreneurs and act towards building long-lasting, mutually beneficial relationships.

Lastly, the multi-stakeholder approach in eco-entrepreneurship calls for more participation of stakeholders in the ecology sphere. Community members and ecology stakeholders could be involved in shaping eco-entrepreneurial activities in their communities.

6. Conclusion

The findings show that ecopreneurs actively integrate their stakeholders to overcome ecological and economic trade-offs. They do this by integrating stakeholders' common interests, considering stakeholders' input in key decisions, engaging in stakeholder value co-creation, and adhering to the guiding institutional frameworks. The study demonstrates that stakeholders, including the regulator, society, and ecological agents, directly or indirectly impact the development of the goals in eco-entrepreneurship through market instruments, such as legislative frameworks and societal pressure. The study also showed the role of informal institutions, such as the *ubuntu* principles of engagement, in advancing eco-entrepreneurship and stakeholder theory.

This research has several limitations. The utilization of a qualitative study and the limited number of participants imply that the results do not allow for generalization to the entire population. Further exploration could broaden the study's applicability across various industries and countries with different regulatory institutions. The participants were all operating within the Southern

African region, most of which is developing. Therefore, this study's conclusions may only be limited to inferences about a similar phenomenon in developing nations. The focus of this study was derived from ecopreneurs' perspectives, thus limiting insights from other stakeholders.

Although eco-entrepreneurship is a relatively new area of research, several studies, including the current one, have made significant strides in providing a foundation for future research. First, the contribution of eco-entrepreneurship to ecological improvement has yet to be investigated. Research in this area could explain how stakeholders are involved in value co-creation and exploitation of entrepreneurial opportunities. Second, the impact of regulations in eco-entrepreneurship needs to be investigated, focusing on over-regulation versus under-regulation and incentive-based regulatory frameworks versus command-and-control. The focus should also be on the role of the non-regulative institutions, such as normative and cultural-cognitive regulations.

Third, the role of society or consumers, financial institutions, and other non-governmental organizations as stakeholders in the creation of an enabling environment for ecopreneurs should be investigated. It would be interesting to establish the often-neglected stakeholders and informal ecopreneurs who play a significant role in eco-entrepreneurial activities. Fourth, to overcome trade-offs, ecopreneurs integrate the stakeholder's common interests, consider stakeholders' input in key decisions, co-create value, and adhere to guiding frameworks. Quantitative studies must test these claims and further investigate the interrelationships between the various strategies or mechanisms. Fifth, the study did not show whether the ecopreneurs have successfully implemented the mechanisms, how they measured the success, and the contextual factors that influenced their success. Also, the study did not focus on eco-entrepreneurship projects that failed. Therefore, future research could use longitudinal research designs to explore the success of the mechanisms in the long term. This kind of design could help to access failed projects, identify the causes of failure, and identify any potential mechanisms for recovery. The results show a need for a more robust theoretical framework to explain eco-entrepreneurship.

References:

- Allen, J.C. and Malin, S. (2008), "Green Entrepreneurship: A Method for Managing Natural Resources?", *Society & Natural Resources*, 21(9): p 828-844.
- Alvarez, S., Newman, A.B., Barney, J. and Plomaritis, A. (2023), "Creating Stakeholder Legitimacy in the Eyes of Stakeholders: The Case of Havana's Paladares", *Entrepreneurship Theory and Practice*, 47(1): p 17-65.
- Antolin-Lopez, R., Martinez-del-Rio, J. and Cespedes-Lorente, J.J. (2019), "Environmental Entrepreneurship as a Multi-Component and Dynamic Construct: Duality of Goals, Environmental Agency, and Environmental Value Creation", *Business Ethics, the Environment & Responsibility*, 28(4): p 407-422.
- Ball, C. and Kittler, M. (2019), "Removing Environmental Market Failure through Support Mechanisms: Insights from Green Start-Ups in the British, French and German Energy Sectors", *Small Business Economics*, 52(4): p 831-844.
- Bowmaker-Falconer, A. and Meyer, N. (2022), *Fostering Entrepreneurial Ecosystem Vitality: Global Entrepreneurship Monitor South Africa 2021/2022*. Stellenbosch: University of Stellenbosch.
- Creswell, J.W. (2014), *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Los Angeles, CA: Sage.
- Dean, T.J. and McMullen, J.S. (2007), "Towards a Theory of Sustainable Entrepreneurship: Reducing Environmental Degradation through Entrepreneurial Action", *Journal of Business Venturing*, 22(1): p 50-76.
- Demirel, P., Li, Q.C., Rentocchini, F. and Tamvada, J.P. (2019), "Born to Be Green: New Insights into the Economics and Management of Green Entrepreneurship", *Small Business Economics*, 52(4): p 759-771.
- Dhahri, S. and Omri, A. (2018), "Entrepreneurship Contribution to the Three Pillars of Sustainable Development: What Does the Evidence Really Say?", *World Development*, 106: p 64-77.
- Doh, J.P., Tashman, P. and Benischke, M.H. (2019), "Adapting to Grand Environmental Challenges through Collective Entrepreneurship", *Academy of Management Perspectives*, 33(4): p 450-468.
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*. Boston, MA: Pitman.
- Freeman, R.E., Harrison, J.S., Wicks, A.C., Parmar, B.L. and De Colle, S. (2010), *Stakeholder Theory: The State of the Art*. Cambridge, UK: Cambridge University Press.
- Freeman, R.E., Phillips, R. and Sisodia, R. (2020), "Tensions in Stakeholder Theory", *Business and Society*, 59(2): p 213-231.
- Freudenreich, B., Lüdeke-Freund, F. and Schaltegger, S. (2020), "A Stakeholder Theory Perspective on Business Models: Value Creation for Sustainability", *Journal of Business Ethics*, 166(1): p 3-18.
- Futrell, W. (2010), "UN Conference on Environment and Development", in: Mulvaney, D. and Robbins, P. (Eds.), *Green Politics: An A-to-Z Guide*. London: Sage.
- Galkina, T. and Hultman, M. (2016), "Ecopreneurship – Assessing the Field and Outlining the Research Potential", *Small Enterprise Research*, 23(1): p 58-72.
- Ganzin, M., Islam, G. and Suddaby, R. (2020), "Spirituality and Entrepreneurship: The Role of Magical Thinking in Future-Oriented Sense-making", *Organization Studies*, 41(1): p 77-102.
- Gast, J., Gundolf, K. and Cesinger, B. (2017), "Doing Business in a Green Way: A Systematic Review of the Ecological Sustainability Entrepreneurship Literature and Future Research Directions", *Journal of Cleaner Production*, 147: p 44-56.
- Gibbs, D. (2006), "Sustainability Entrepreneurs, Ecopreneurs and the Development of a Sustainable Economy", *Greener Management International*, 55: p 63-78.
- Gioia, D.A., Corley, K.G. and Hamilton, A.L. (2013), "Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology", *Organizational Research Methods*, 16(1): p 15-31.
- Guest, G., Bunce, A. and Johnson, L. (2006), "How Many Interviews Are Enough? An Experiment with Data Saturation and Variability", *Field Methods*, 18(1): p 59-82.

- Günzel-Jensen, F. and Rask, M. (2021), "Combating Climate Change through Collaborations? Lessons Learnt from One of the Biggest Failures in Environmental Entrepreneurship", *Journal of Cleaner Production*, 278: article 123941.
- Hák, T., Janoušková, S. and Moldan, B. (2016), "Sustainable Development Goals: A Need for Relevant Indicators", *Ecological Indicators*, 60: p 565-573.
- Hamann, R., Makaula, L., Ziervogel, G., Shearing, C. and Zhang, A. (2020), "Strategic Responses to Grand Challenges: Why and How Corporations Build Community Resilience", *Journal of Business Ethics*, 161(4): p 835-853.
- Hartman, C.L. and Stafford, E.R. (1998), "Crafting 'Enviropreneurial' Value Chain Strategies through Green Alliances", *Business Horizons*, 41(2): p 62-72.
- Hindmarsh, R. (2010), "Wind Farms and Community Engagement in Australia: A Critical Analysis for Policy Learning", *East Asian Science, Technology and Society: An International Journal*, 4(4): p 541-563.
- Hockerts, K. and Wüstenhagen, R. (2010), "Greening Goliaths Versus Emerging Davids – Theorizing About the Role of Incumbents and New Entrants in Sustainable Entrepreneurship", *Journal of Business Venturing*, 25(5): p 481-492.
- Holt, D. (2011), "Where Are They Now? Tracking the Longitudinal Evolution of Environmental Businesses from the 1990s", *Business Strategy and the Environment*, 20(4): p 238-250.
- Hörisch, J. (2015), "The Role of Sustainable Entrepreneurship in Sustainability Transitions: A Conceptual Synthesis Against the Background of the Multi-Level Perspective", *Administrative Sciences*, 5(4): p 286-300.
- Hörisch, J., Freeman, R.E. and Schaltegger, S. (2014), "Applying Stakeholder Theory in Sustainability Management: Links, Similarities, Dissimilarities, and a Conceptual Framework", *Organization & Environment*, 27(4): p 328-346.
- Jiang, W., Chai, H., Shao, J. and Feng, T. (2018), "Green Entrepreneurial Orientation for Enhancing Firm Performance: A Dynamic Capability Perspective", *Journal of Cleaner Production*, 198: p 1311-1323.
- Jolink, A. and Niesten, E. (2015), "Sustainable Development and Business Models of Entrepreneurs in the Organic Food Industry", *Business Strategy and the Environment*, 24(6): p 386-401.
- Kearins, K. and Collins, E. (2012), "Making Sense of Ecopreneurs' Decisions to Sell Up", *Business Strategy and the Environment*, 21(2): p 71-85.
- Khojastehpour, M. and Shams, S.R. (2020), "Addressing the Complexity of Stakeholder Management in International Ecological Setting: A CSR Approach", *Journal of Business Research*, 119: p 302-309.
- Leonidou, E., Christofi, M., Vrontis, D., and Thrassou, A. (2020), "An Integrative Framework of Stakeholder Engagement for Innovation Management and Entrepreneurship Development", *Journal of Business Research*, 119: p 245-258.
- Ljungkvist, T. and Andersén, J. (2021), "A Taxonomy of Ecopreneurship in Small Manufacturing Firms: A Multidimensional Cluster Analysis", *Business Strategy and the Environment*, 30(2): p 1374-1388.
- Maitlis, S. (2012), "Narrative Analysis", in: G. Symon and C.M. Cassell (Eds.), *Qualitative Organizational Research: Core Methods and Key Challenges*, p 492-511. London: Sage.
- Mangaliso, M.P., Mangaliso, N.A., Ndanga, L.Z.B. and Jean-Denis, H. (2022), "Contextualizing Organizational Change Management in Africa: Incorporating the Core Values of Ubuntu", *Journal of African Business*, 23(4), p 1029-1048.
- Melay, I., O'Dwyer, M., Kraus, S. and Gast, J. (2017), "Green Entrepreneurship in SMEs: A Configuration Approach", *International Journal of Entrepreneurial Venturing*, 9(1): p 1-17.
- Mitchell, J.R., Israelsen, T.L., Mitchell, R.K. and Lim, D.S.K. (2021), "Stakeholder Identification as Entrepreneurial Action: The Social Process of Stakeholder Enrollment in New Venture Emergence", *Journal of Business Venturing*, 36(6): article 106146.
- North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*. Cambridge, UK: Cambridge University Press.
- Phillips, M. (2013), "On Being Green and Being Enterprising: Narrative and the Ecopreneurial Self", *Organization*, 20(6): p 794-817.
- O'Neil, I. and Ucbasaran, D. (2016), "Balancing 'What Matters to Me' with 'What Matters to Them': Exploring the Legitimation Process of Environmental Entrepreneurs", *Journal of Business Venturing*, 31(2): p 133-152.

- Pidgeon, N. and Henwood, K. (2004), "Grounded Theory", in: Melissa Hardy and Alan Bryman (Eds.), *Handbook of Data Analysis*. London: Sage.
- Piwowar-Sulej, K., Krzywonos, M. and Kwil, I. (2021), "Environmental Entrepreneurship – Bibliometric and Content Analysis of the Subject Literature Based on H-Core", *Journal of Cleaner Production*, 295: article 126277.
- Rahdari, A., Sepasi, S. and Moradi, M. (2016), "Achieving Sustainability through Schumpeterian Social Entrepreneurship: The Role of Social Enterprises", *Journal of Cleaner Production*, 137: p 347-360.
- Ramoglou, S., Zyglidopoulos, S. and Papadopoulou, F. (2023), "Is There Opportunity Without Stakeholders? A Stakeholder Theory Critique and Development of Opportunity-Actualization", *Entrepreneurship Theory and Practice*, 47(1): p 113-141.
- Re, B. and Magnani, G. (2022), "Value Co-Creation in Circular Entrepreneurship: An Exploratory Study on Born Circular SMEs", *Journal of Business Research*, 147: p 189-207.
- Rodríguez-García, M., Guijarro-García, M. and Carrilero-Castillo, A. (2019), "An Overview of Ecopreneurship, Eco-Innovation, and the Ecological Sector", *Sustainability*, 11(10): article 2909.
- Saunders, M. and Lewis, P. (2018), *Doing Research in Business and Management (2nd ed.)*, Harlow, UK: Pearson.
- Saunders, M.N.K. and Townsend, K. (2016), "Reporting and Justifying the Number of Interview Participants in Organization and Workplace Research", *British Journal of Management*, 27(4): p 836-852.
- Schaltegger, S. (2002), "A Framework for Ecopreneurship: Leading Bioneers and Environmental Managers to Ecopreneurship", *Greener Management International*, 38: p 45-58.
- Schaltegger, S., Hörisch, J. and Freeman, R.E. (2019), "Business Cases for Sustainability: A Stakeholder Theory Perspective", *Organization and Environment*, 32(3): p 191-212.
- Schaltegger, S. and Wagner, M. (2011), "Sustainable Entrepreneurship and Sustainability Innovation: Categories and Interactions", *Business Strategy and the Environment*, 20(4): p 222-237.
- Schlange, L.E. (2006), "Stakeholder Identification in Sustainability Entrepreneurship: The Role of Managerial and Organisational Cognition", *Greener Management International*, 55: p 13-32.
- Scott, W.R. (2013), *Institutions and Organizations: Ideas, Interests, and Identities*. Thousand Oaks, CA: Sage.
- Sinkovics, R.R. and Alfoldi, E.A. (2012), "Progressive Focusing and Trustworthiness in Qualitative Research", *Management International Review*, 52(6): p 817-845.
- Sun, S.L., Shi, W., Ahlstrom, D. and Tian, L. (2020), "Understanding Institutions and Entrepreneurship: The Microfoundations Lens and Emerging Economies", *Asia Pacific Journal of Management*, 37(4): p 957-979.
- United Nations (2002), *Report of the World Summit on Sustainable Development*. New York, NY: United Nations.
- Woermann, M. and Engelbrecht, S. (2019), "The Ubuntu Challenge to Business: From Stakeholders to Relationholders", *Journal of Business Ethics*, 157: p 27-44.
- York, J.G., O'Neil, I. and Sarasvathy, S.D. (2016), "Exploring Environmental Entrepreneurship: Identity Coupling, Venture Goals, and Stakeholder Incentives", *Journal of Management Studies*, 53(5): p 695-737.

