Investment professionals' readiness for effective impact evaluation using sustainable innovation: A case study of a large South African asset manager

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Abstract

In this essay, I examine the readiness of investment professionals at a leading South African asset manager, to employ effective impact evaluation methods, with a focus on the integration of blockchain technology. In it, I delve into the current state of impact investing in South Africa, highlighting the challenges and opportunities encountered by fund managers in evaluating the social and environmental impacts of their investments. Through qualitative research, including interviews with investment professionals, the study explores the use of the theory of change (TOC) and blockchain technology as tools to enhance impact evaluation practices. The findings reveal a nuanced understanding of impact evaluation among investment professionals and assess their openness to adopting blockchain for accurate and efficient impact evaluation. My results contribute to the discourse on impact investing by providing insights into the practical applications of blockchain in impact evaluation and suggesting pathways for the evolution of impact assessment methodologies in emerging market.

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List of Acronyms

SDG–Sustainable Development Goals

NDP - National Development Goals

EU green taxonomy - A European Union classification system, establishing a list of environmentally sustainable economic activities

SA green taxonomy–A South African classification system, establishing a list of environmentally sustainable economic activities

NGOs–Non-governmental organisations

AI – Artificial Intelligence

GIIR- Global Impact Investment Rating System

IRIS- Impact Reporting Investing Standard

TOC–Theory of Change

ZAR/USD–18.72

DLT – Distributed Ledger Technology

GSB – Graduate School of Business

UCT - University of Cape Town

1.1 Introduction

1.2 Background and Context of Study

I analysed impact investing within the South African context, marking a significant area for sustainable and responsible investment across the African continent. Notably, South Africa holds a substantial portion of Africa's impact investing assets under management, accounting for 68% as reported by the African Investing for Impact Barometer (Giamporcaro & Dhlamini, 2022). In this dissertation, I focus on the preparedness of investment professionals at the largest South African asset management firm to properly assess and evaluate their impact investments. Impact investing is distinguished by its dual objective of generating social and environmental benefits alongside financial returns, positioning itself as a pivotal force for socioeconomic advancement in South Africa, with technology serving as a key enabler for transformative change (Leeuw, 2023)

The examination provides a view of the impact investing landscape in Southern Africa, with a focus on South Africa, highlighting the distribution of impact capital, sectoral priorities and the blend of challenges and prospects encountered (Global Impact Investing Network [GIIN], 2016). This context is essential for grasping the nuances of the South African market, which is the largest regarding impact investing in the region, driven by the imperative to tackle the country's distinct socioeconomic issues (Ducastel & Anseeuw, 2020; Impact Investing South Africa, 2021). Further, I engage with the critique by Ducastel and Anseeuw (2020) regarding impact investing in South Africa, questioning its effectiveness as a mechanism for empowerment. In this viewpoint, I further explore how impact investments can transform South Africa's socioeconomic framework.

Leveraging the foundational insights from McCallum and Viviers (2020), In my research, I analyse the barriers and opportunities in South Africa's impact investing sector, underlining the necessity for well-defined, measurable impact goals to catalyse market expansion. The evolution from philanthropy to impact investing, as outlined by Viviers, Ractliffe and Hand (2011), marks a significant transition in perspective, reflecting the evolving nature of responsible investing in South Africa, aligning with global sustainability goals

Combining these viewpoints, I aim to contribute to the discussion on improving impact

investment strategies in South Africa. It explores how investment professionals at a leading firm can navigate and benefit from impact investing for socioeconomic growth, bridging conventional finance and the emerging impact investment sector

The thesis takes into consideration South Africa's regulatory and policy frameworks, including the National Development Plan (NDP) of 2012, which contains an outline of the country's progress and challenges since 1994, serving as a cornerstone for understanding the socioeconomic aspirations and development strategies of South Africa (National Planning Commission, 2011a, 2011b). Additionally, the establishment of the Broad-Based Black Economic Empowerment codes in 2003 by the Department of Trade and Industry (DTI, 2003) plays a fundamental role in redressing historical disparities and enhancing economic participation among historically marginalised groups.

These policy and regulatory frameworks are pivotal for situating the study within the unique socioeconomic and environmental context of South Africa. They offer insights into the relevance of impact investing in addressing the nation's socioeconomic challenges, in alignment with national development objectives and contributing to the discourse on sustainable and responsible investment practices. Coupled with recent literature and reports on impact investing, these frameworks underscore the significance of the research within the South African setting, spotlighting the imperative for strategic investments that yield social, environmental and financial benefits.

Moreover, the South African Green Finance Taxonomy (2021) represents another recent regulatory initiative intended to steer investments towards environmentally sustainable solutions. This taxonomy is crucial for understanding the investment setting under investigation, highlighting the need for investment professionals to understand its principles to facilitate impactful investments. With input from various perspectives, the thesis looks at South Africa's socioeconomic development and examines the challenges and opportunities that affect its strategy and success (McCallum & Viviers, 2020; Viviers et al., 2011), focusing particularly on the role of a prominent asset manager in the country.

By combining these insights and regulatory contexts, the thesis aspires to substantially contribute to the dialogue on enhancing impact investment strategies in South Africa, underlining the pivotal role of investment professionals in navigating and

leveraging the complexities of impact investing for socioeconomic development. This clear narrative lays the foundation for a detailed analysis of how prepared and strategic investment professionals are within South Africa's unique socioeconomic and environmental context

1.3 Problem Statement

The primary research problem addressed in this study is the challenge of how to effectively measure and evaluate the impact of investments within the realm of impact investing. Despite the development of frameworks like the Global Impact Investment Rating System (GIIRS) and Impact Reporting and Investment Standards (IRIS), barriers persist in achieving efficient and standardised impact measurement. These barriers are especially evident due to the varied methods and the resource-intensive nature of current practices. Relevant research, such as the work of Chiappini et al. (2023) and the "GIINsight 2023: Impact Investor Demographics" report by Hand et al. (2023), underline the fragmented knowledge in the field and emphasise the necessity for a deeper understanding of investor demographics. A notable deficiency in the existing literature, and, thus, a critical knowledge gap this study aims to fill, is the limited understanding of how investment professionals, especially in emerging markets like South Africa, are unprepared to utilise these impact evaluation tools. The predominant Western-centric focus in current research and tools fails to adequately represent the unique socioeconomic dynamics prevalent in emerging markets.

1.3.1 Purpose and Significance of the Research

The concept of impact investing has evolved significantly since its early stages, marked by critical developments and challenges that have shaped its current landscape. A pivotal moment in this evolution occurred in 2008 when the Rockefeller Foundation committed USD 38 million to market design and experimentation in impact investing. Recognising the necessity for a deeper understanding of the needs of prospective impact investors, the Rockefeller Foundation spearheaded efforts to mainstream impact investing. A significant insight from the foundation emphasised the need for standards and ratings to enable investors to differentiate between favourable and unfavourable investments (Barman, 2015; Bugg-Levine et al., 2012).

Despite these early efforts, the impact investing market has faced several barriers that have impeded its growth and widespread adoption. The nascent nature of this market, often considered a niche domain, has presented unique challenges (Bugg-Levine & Goldstein,

2009). Among these barriers is the development and application of calculative tools designed to measure the social and environmental value generated by impact investments. Such tools are vital in the impact investing process, as they enable investors and organisations to quantitatively evaluate the outcomes and outputs of their investments (McCallum & Viviers, 2019; Monitor Institute, 2009).

Chiappini et al. (2023) further explained this by offering a comprehensive review that encompasses the field of impact investing and extends to related financial vehicles. Their work addresses the fragmentation of knowledge and synthesises key insights, thereby contributing to a more solid understanding of impact investing. They suggested that there are more studies being done in the field of impact investing, particularly on social benefits of impact investing. The inclusion of social outcomes along with financial gains adds complexity to these studies. In my research, I assessed the dynamic domain of impact investing in South Africa, a key region for sustainable and responsible investment on the continent and evaluated the readiness of investment professionals at a leading entity to effectively gauge and enhance their impact investment strategies.

1.3.2 Relevance of Impact Evaluation Tools Within Impact Investing

The development and refinement of impact evaluation tools such as the GIIRS and IRIS have been instrumental in providing structured frameworks for assessing the quality and effect of impact investments. Despite these advancements, the sector continues to grapple with challenges related to the time and resource intensity required for thorough impact analysis, limiting the efficiency and scalability of these practices (Bannick & Goldman, 2012; Mikalef et al., 2019). The “State of Impact Measurement and Management Practice” report issued by the GIIN in 2017 further stresses the collection of methodologies in practice, highlighting the difficulties in achieving a standardised approach to impact measurement.

Recent insights from the GIIN further underline the relevance of understanding investor demographics within the impact investing landscape. Hand et al. (2023) conducted a contemporary analysis of the composition and characteristics of impact investors, examining types, geographic distribution and investment preferences. The findings from this report reveal the prevalence of investment managers and foundations, primarily located in developed markets, thus suggesting a concentration of impact investing activities within the Western

sphere. This observation raises important questions regarding the representation and involvement of diverse geographic contexts in the impact investing industry.

This Western-centric perspective highlighted in the GIIN report brings the importance of expanding research to include underrepresented regions, such as Africa, to attain a more comprehensive global view of impact investing to the fore. Specifically, examining the South African context can provide fresh insights and contribute to a more inclusive understanding of impact investing practices. Such a focus is particularly relevant, considering the different socioeconomic dynamics and investment climates present in emerging markets, which may not be sufficiently captured by current tools and surveys that are predominantly tailored to Western contexts.

1.3.3 Blockchain Technology and Its Potential in Impact Evaluation

Blockchain technology, with its potential for precision and efficiency, presents a promising but still unexplored solution for impact evaluation (Giamporcaro & Kuk, 2024). In this study, I further examine the role of blockchain in revolutionising impact evaluation, offering investment professionals a more reliable and efficient method for assessing the true impact of their investments. Blockchain technology synthesises established technologies and principles to unlock new functionalities and capabilities (Jonsson, 2018; Stilgoe, 2020). The insights from an interview with William Michael Cunningham (as cited by Schulaka & Cunningham, 2018), enrich this exploration. Cunningham highlighted the significance of blockchain in impact investing. He underscored the potential of financial technologies to create not only financial but also social value. This perspective aligns with the aim of this study, which is to examine innovative approaches, like blockchain, that can enhance the accuracy and effectiveness of impact evaluation in investments. Additionally, the affordances-in-practice framework by Giamporcaro and Kuk (2024) provides a deep understanding of how blockchain can be practically implemented to support sustainable investment practices.

1.4 Research Questions, Objectives and Hypothesis

Research Questions

In this study, I seek to address the following primary research question and sub-questions:

Primary Research Question: How prepared are investment professionals in South Africa to effectively utilise impact evaluation tools within the scope of impact investing?

Sub-Questions:

- What are the current methods and tools used by South African investment professionals for impact evaluation?
- What are the primary challenges and limitations encountered by these professionals in their current impact evaluation processes?
- How do investment professionals perceive the role and potential of blockchain technology in enhancing the impact evaluation process?

Secondary Research Question: Can blockchain technology revolutionise impact evaluation methods in South Africa, and if so, how?

Sub-Questions:

- What are the key features of blockchain technology that could improve the accuracy and efficiency of impact evaluation?
- How viable is the implementation of blockchain technology in the current South African impact investing landscape?

Objectives

The objectives of this research are to:

- Assess the current state of readiness among South African investment professionals in using impact evaluation tools.
- Identify and analyse the challenges faced by these professionals in impact assessment.
- Evaluate the potential of blockchain technology to improve impact evaluation methods.
- Provide recommendations for enhancing the impact assessment process in the South African context.

Hypothesis

Based on the research questions and objectives, the following hypotheses are proposed:

- **H1**: Investment professionals in South Africa face significant challenges in impact evaluation due to limitations in current tools being used and methodologies.
- H2**: Blockchain technology has the potential to significantly improve the accuracy and**

efficiency of impact assessments in South Africa.

1.5 Organisation of the Research Study

This research study is organised into five chapters, as outlined below:

Introduction: This chapter sets the stage for the research, introducing the concept of impact investing, its evolution and its significance. It contains an outline of the purpose and significance of the study, focusing on the advancements in impact investing and the challenges in evaluating its effectiveness.

Literature Review: In the literature review, I explores the current research landscape concerning impact evaluation tools within the sphere of impact investing. It begins with a critical examination of the nuances differentiating impact measurement from impact evaluation, exploring the details of impact outputs versus outcomes. This analysis sets the stage for a comprehensive evaluation of various tools, with a particular focus on the TOC, assessing both the opportunities and challenges inherent in this evaluative tool. Additionally, the review introduces a forward-looking perspective by analysing the role of blockchain technology in impact evaluation. It considers how blockchain's inherent attributes such as transparency, immutability and decentralisation could bring about advancements in how to evaluate and verify the impact of investments.

Methodology: In this chapter, I outline the qualitative research design and methodology used in the study, detailing the process of conducting in-depth interviews with investment professionals at a large South African asset manager, the rationale behind the chosen sample size and the data analysis approach.

Findings and Discussion: This chapter summarises the key findings from interviews with investment professionals. It assesses their readiness to use impact evaluation tools and their views on incorporating sustainable innovations, especially blockchain technology. The chapter then discusses the broader implications of these findings in impact investing. It attempts to link the findings of this research to existing literature, aiming to provide a sense of impact evaluation in this context.

Conclusion and Recommendations: In the final chapter, I summarise the key insights and contributions of the study, offering recommendations for enhancing impact evaluation in impact investing, with a focus on innovative technologies and methodologies.

Appendix and Bibliography: This section includes supplementary materials such as interview consent forms, additional data and a comprehensive bibliography of sources referenced throughout the study.

2 Literature Review

2.1 Introduction

This literature review is structured in three interconnected parts, each examining critical aspects that underpin the readiness of investment professionals to conduct effective impact evaluation using blockchain technology in impact funds. The review offers an understanding of complexities and nuances in impact investing, with a particular emphasis on the tools and methodologies employed for assessing social and environmental impacts.

The first part of the review investigates impact investing. It begins by defining the concept of impact investing and then progresses to discuss its most crucial element: the provision of tangible evidence of social and environmental impacts resulting from investments. This segment emphasises the vital distinction between impact measurement and impact evaluation. It articulates that while impact measurement offers insights into the immediate effects of investments, impact evaluation has the potential to yield more profound and meaningful results, despite its complexities in execution. This distinction lays the foundation for understanding the depth and breadth of impact evaluation in the field.

In the second part of the review, the focus shifts to calculative tools utilised in impact evaluation. Here, the TOC is presented as a fundamental evaluative tool in the assessment of social and environmental impacts within impact investing. The TOC method is explored in-depth, highlighting its systematic approach to mapping causal relationships between actions and intended outcomes. This exploration aids investment professionals in effectively determining the impact of their initiatives, offering a lens through which the effectiveness of investments can be gauged and understood.

The final part of the literature review contains an introduction to blockchain technology as a novel and potentially transformative solution for impact evaluation. In this section, I investigates the affordance theory and present the key features of blockchain, such as decentralisation and immutability. By explaining these features, the review sets the stage for a deeper understanding of how blockchain technology could offer investment professionals a more robust, reliable and efficient means of assessing the true impact of their investments. The discussion about blockchain is linked with the previously discussed TOC, demonstrating how

innovative technology can enhance and streamline impact evaluation processes. In summary, this literature review methodically unpacks the various elements of impact investing, from foundational concepts and evaluative tools to innovative technological solutions, thus creating a view of the current landscape and future potential of impact evaluation in impact investing.

2.2 Impact Investing

Impact investing has been broadly conceptualised as investments made with the intention of generating social or environmental impact alongside financial returns (GIIN, 2019). This field was characterised by Morgan (2010) as offering patient, flexible and catalytic capital primarily to underserved communities, a focus driven by an inherently low-risk profile. GIIN (2019) further refines this concept, stressing the intentionality and measurability of impact investments, which must generate tangible social and environmental benefits along with financial returns.

As the field evolves, a concern arises regarding the potential convergence of socially responsible investing (SRI) and impact investing, which are traditionally distinct in their objectives. Arjaliès and Watson (2022) cautioned against the blending of these fields, noting that while SRI has focused on risk mitigation, impact investing actively seeks to create positive change. They argued that maintaining clear and consistent standards can prevent greenwashing and confusion because the superficial merging of these practices could dilute the authenticity of impact-driven efforts.

Building upon this discussion of authenticity and differentiation, I review recent literature calls for precise definitions and rigorous measurement standards to distinguish true impact investments from broader market practices. This scholarly discourse serves to clarify the conceptual framework of impact investing, setting it apart as investments intended to maximise societal and environmental impact (Barman, 2015).

The market-based approach to addressing social and environmental issues has seen various iterations, from microfinance to clean technology ventures (Monitor Institute, 2009). It is argued that impact investing, as an emerging asset class, signifies an evolution that requires unique investment and risk management skills, along with the potential for financial returns

and social benefits (O'Donohoe et al., 2010)

The complexities of impact investing are illuminated by Casasnovas (2022) who examined the UK's social investment market and the mixed effects nature of policy support. The GIIN estimates the global impact investing market size at an impressive $1.164 trillion USD, which marks a turning point in the sector's growth and shows that the industry is maturing (GIIN, 2022). This global growth, however, masks regional disparities in growth rates, particularly in Africa. According to the African Investing Barometer, approximately USD 65.2 billion was directed towards impact investing in Africa in 2021, with $44.36 billion USD of the impact funding coming from South Africa (Giamporcaro & Dhlamini, 2022). Despite its status as the continent's most sophisticated financial market, South Africa's engagement with impact investing is still in its infancy. In stark contrast to the global figures, the impact investing market in South Africa—and indeed across much of Africa—remains modest. For instance, on the Johannesburg Stock Exchange, a leading indicator of financial activity in the region, impact investments constitute 3% of the nearly ZAR 19 trillion market capitalisation, reflecting the early stage of impact investing in the region (Bennot, 2021). This disproportionate growth highlights the crucial need for targeted strategies that address the unique challenges and opportunities within African markets to unlock the full potential of impact investing on the continent.

Another key contribution to the field comes from the Force for Good Initiative (2023), which outlines strategies for leveraging capital to close the Sustainable Development Goals (SDG) gap. This report underscores the mobilisation of capital, policy implementation and technology's role in achieving these goals by 2030, emphasising the need for global collaboration and political commitment.

In conclusion, the literature reveals that impact investing is not merely an investment strategy but a complex field that demands continuous efforts to secure its position within the broader financial landscape. The industry's growth, underscored by significant milestones, continues to require definitions, standards and global cooperation to ensure its authenticity and efficacy.

2.3 Impact Measurement and Impact Evaluation

Building on the foundational concepts of impact investing outlined above, impact measurement and evaluation stand as critical mechanisms for validating the effectiveness of these investments and mobilising additional capital. As identified in the literature, the ability to demonstrate tangible outcomes and the efficacy of impact strategies is vital for attracting investment (Ebrahim & Rangan, 2014; Schlütter et al., 2023).

In the academic discourse on impact investing, impact measurement and impact evaluation emerge as distinct yet interconnected practices that are integral to the investment lifecycle. Impact measurement involves tracking and analysing the social and environmental effects of impact investments throughout the investment life cycle, including activities such as impact assessment initiatives (Choda & Teladia, 2018). In this process, Igauge outputs, which are the immediate, tangible results of investments, like enrolment numbers in an educational initiative. The distinction between outputs, like the number of students enrolled due to educational investments, and outcomes, such as the academic achievements of those students, becomes essential for investors (Gok, 2021; Rockerfeller Philanthropy Advisors, 2019). Impact evaluation dips into the extended and profound effects of these investments on beneficiaries, assessing outcomes such as educational attainment rates, thus requiring a more sophisticated set of skills (Johnson et al., 2019).

Scholars make a distinction between these practices, emphasising that while they share similar vocabulary, their methodologies and end results often differ (Ebrahim & Rangan, 2014; Höchstädter & Scheck, 2015; Schlütter et al., 2023; Tsotsotso, 2020). The field recognises impact measurement as part of an ongoing evaluation process, whereas impact evaluation is seen as a conclusive assessment at the investment's exit point, verifying the achievement of broader social outcomes (Choda & Telaida, 2018; Ebrahim & Rangan, 2014; Tsotsotso, 2020).

The literature highlights the critical role of these processes in substantiating the effectiveness of impact investments and in attracting further capital (Schlütter et al., 2023). By providing a rigorous and transparent account of both the immediate and sustained impacts of investments, these practices offer clarity and accountability, which are vital in mobilising additional funds towards impactful ventures (IFC, 2019; McCallum & Viviers, 2019; UBS, 2018). Hence, although both measurement and evaluation are essential, the depth of the latter is key to unlocking the potential influx of capital, giving emphasis to the importance of a robust system for impact management.

2.4 Evaluative Tools in Impact Investing

The importance of impact evaluation in affirming the value of impact investments is emphasised by the increasing role of evaluative tools in refining impact assessment for investment professionals. The diversity of value in the impact investing landscape presents a profound challenge, with no singular, universally accepted definition of social and environmental value. This variety shows a wide range of interpretations, each necessitating its own metric of value (Espeland & Stevens, 1998). The development of credible evaluation systems is recognised as a key driver for mainstream investor engagement in impact investing (GIIRS, 2010). Without these tools, discerning the quality of impact investments becomes a challenge (Antadze & Westley, 2012).

The ambition for a standardised framework that defines and measures social and environmental value is essential, as advocated by Barman (2015). The industry, however, exhibits a reluctance to conform to a single metric, revealing a preference for context-specific tools (Reeder et al., 2015). This aligns with the current trends in corporate impact investing, as highlighted by the U.S. Impact Investing Alliance's "Impact at Work" report. This document recognises a shift in corporate behaviour from traditional grant-making to leveraging impact investing tools, with an emphasis on transparency and the use of best practices (U.S. Impact Investing Alliance, 2023). It showcases the potential for corporations to contribute to the public good through sustainable impact investing strategies that yield positive social, economic and environmental outcomes.

This corporate engagement enriches the ongoing conversation about impact evaluation. The traditional tools, while comprehensive, are critiqued for their rigidity and Northern-centric bias, which may not fully accommodate the unique perspectives of investors from varied geographies (Jackson, 2012). The "Impact at Work" report serves as a testament to the evolving nature of impact investing, where corporate actors are now part of the ecosystem, further increasing the need for adaptable and inclusive evaluation methods (U.S. Impact Investing Alliance, 2023).

Inclusive methods that consider different impacts and causes are required (Flynn & Barnett, 2017). These methods align with industry preferences for nuanced, tailored assessment tools

(Reeder et al., 2015). Such tools should provide structured yet flexible evaluation processes, enabling impact investors to measure their specific and unique outcomes. The Acre (2021) whitepaper shows the importance of authenticity and transparency in delivering financial and non-financial outcomes, highlighting the evolving landscape of institutional asset management and its implications for impact investing.

In conclusion, the integration of diverse perspectives, including the recent corporate shift towards impact investing, requires flexible, context-specific and inclusive evaluative tools. These tools must empower investors to measure and compare impact outcomes while respecting the diversity of values and objectives inherent in the field. This approach involves not only balancing the need for standardisation but also acknowledging the unique contexts and challenges faced by impact investors globally.

The quest for an evaluative impact investing tool that is both nuanced and standardised has been going on for many years. Over the years, the industry has sought instruments that could cater to the diverse, complex nature of impact investments while providing a common framework for assessment.

Table 1 contains a selection of evaluative tools that impact investing professionals can adopt for their impact evaluation processes. These tools were selected based on the literature review, which identified them as the most widely used in impact investing. They consistently appeared in relevant research and are frequently mentioned in the field (Flynn & Barnett, 2017; Jackson, 2013).

Table 1: Impact Evaluation Tools

Evaluative Method	**Description**	**Details**
TOC	Logical Model	The TOC model is a part of theory-based evaluation models. It guides impact investors to critically interrogate the logic behind impact investments. TOC enables the assessment of impact at various stages: before, during and after a project or investment.
Social Return on Investment	Monetisation/ Expected Return	This method focuses on metrics that estimate the future value of an investment's impact, either environmentally

Evaluative Method	Description	Details
(SROI)		or socially. SROI, specifically, concentrates on the social return of investments. However, the methodology can be expanded to encompass environmental returns as well.
SDG Alignment	Mission Alignment	SDG Alignment involves aligning an impact fund's objectives with the United Nations Sustainable Development Goals. This approach is increasingly popular, with impact funds setting specific SDG-aligned impact outcomes for evaluation. (Source: Advisors & Roadmap, n.d.)
Randomised Controlled Trials (RCT)	Experimental or Counterfactual	RCTs belong to the experimental or quasi-experimental category of evaluation tools. They assess the impact of an intervention by comparing it with the status quo, capturing the concept of additionality. RCTs help ensure that the impact is accurately measured, neither overestimated nor underestimated, by comparing the outcomes of an impact fund against those of a non-impact commercial fund (White, 2006)
Key Performance Indicators (KPIs)	Ratings Models	KPIs are a primary approach towards standardising impact reporting across sectors. They involve collecting quantitative or qualitative data on investments. Using similar KPIs within sectors enhances harmonisation and simplification in assessing impacts. However, KPIs have limitations in addressing broader impacts. (Sources: Flynn & Barnett, 2017; Tsotsotso, 2020)

2.4.1 TOC

In the domain of impact investing, evaluators have an arsenal of tools to assess social and environmental impacts. Prominently, the TOC has been heralded for its ability to delineate

impact logic, facilitate internal consensus and enhance stakeholder communication (Verrinder, 2015; Verrinder et al., 2018). Yet, the TOC's capacity to capture the nuanced layers of impact is subject to ongoing academic discourse.

Although TOC offers a structured approach for mapping investment objectives to outcomes (Reeder et al., 2015), critiques surface regarding its limitations. Jackson (2012) argued that TOC fails to fully comprehend the multifaceted levels of impact, particularly those indirectly related to the organisation's activities. This sentiment is echoed by Verrinder et al. (2018), who called attention to the need for an expanded suite of data collection and analytical methods to augment the TOC and provide a more holistic view of impact.

This debate is further invigorated by Camacho, Garland and Beach's (2023) recent contribution, which presents process-tracing methods as a means to construct detailed process theories of change. By articulating a three-step approach, they argue for a refined methodology that can trace the nuanced mechanisms of intervention impacts, potentially fortifying the TOC framework with a granular understanding of causal chains (Garland & Beach, 2023).

The discourse is clearly illustrated when considering practical applications, such as investments in solar energy lamps intended to facilitate extended study hours for students. A traditional TOC might concentrate on output metrics, like the quantity of lamps distributed. However, Jackson (2012) underscores the importance of delving deeper, examining not only the distribution but also the qualitative impact on students' study habits and environmental benefits. This perspective challenges the evaluator to consider broader outcomes and the transformational 'so what' of impact assessment.

Camacho Garland and Beach (2023) responded to this challenge by advocating for process tracing to causal links from intervention to broader social and environmental outcomes. In my study, I use their methodology to substantiate how, for instance, an investment in renewable energy envisages not only the deployment of technology but also the subsequent social and environmental benefits. A comprehensive TOC would encompass both the immediate outputs, such as the number of renewable energy units installed, and the broader outcomes, like improved air quality and community health. By adopting process-tracing methods, evaluators can trace the step-by-step causal chain from intervention to outcome, providing a richer narrative and substantiation of the changes observed (Garland & Beach, 2023).

In synthesising these perspectives, it becomes apparent that while TOC is a cornerstone in impact investing evaluation, its traditional application may fall short in addressing the complexity of impacts. The integration of process-tracing methods, as proposed by Camacho Garland and Beach (2023), offers a promising avenue for enriching TOC frameworks, ensuring they articulate and substantiate the multilayered and long-term impacts of investments.

In conclusion, the interplay between the proponents and critics of TOC in the literature encapsulates a field in evolution. The discourse reflects a community in search of methodological enhancements that can contend with the intricate realities of impact investing. As such, the continuous refinement of TOC and its integration with innovative approaches like process-tracing is not merely beneficial but necessary to advance the precision and credibility of impact evaluations.

2.5 Blockchain Technology

2.5.1 Introduction

In this section of the literature review, I examines the pivotal role of technology, particularly blockchain, in facilitating effective impact evaluation. Initially, the paper presents a series of practical applications of blockchain technology in socially and environmentally driven investments. These applications, spanning diverse sustainability domains, provide real-world illustrations of how blockchain is currently employed to bolster impact assessment and reporting. Subsequently, the discussion shifts to the affordance theory. This theoretical framework offers insights into how blockchain technology may present new opportunities in the sphere of impact evaluation. By understanding the unique properties of blockchain, such as decentralisation and immutability, we can appreciate how it can potentially reform traditional methods of data collection and validation in impact investing. The narrative then progresses to the potential integration of the TOC with blockchain. As impact investing grows and the complexity and volume of data increases, the need for innovative technologies like blockchain becomes critical. These technologies provide efficient means for practitioners to collect comprehensive and meaningful data for impact evaluation. The concept of affordance, as described by Gaver (1991), is instrumental in understanding how blockchain can enhance impact evaluation in impact investing. With the integration of blockchain in various sectors,

comprehending its affordances is key to leveraging its innovative potential for improving impact evaluation (Du et al., 2019).

2.5.2 Applicability of Blockchain

A superficial look at blockchain would suggest that the technology works independently, continuously changing for the better (Stilgoe, 2020). However, it is crucial to understand that complex technologies like blockchain cannot be fully understood just by themselves. They need to be seen in the context of the wider society, particularly its users (Luisam & Norberto, n.d.). In the case of investment professionals, it is key that they engage with the blockchain in setting the TOC.

In this section of the literature review, an extensive evaluation of the applicability of blockchain technology is undertaken to ascertain whether this technological innovation can be effectively harnessed for the benefit of an average individual.

Kshetri (2017) suggested that blockchain could play a key role in reducing poverty in the Global South. He points out that it could lead to economic, social and political changes by increasing transparency, reducing fraud and corruption, and cutting down on transaction costs. This idea fits well with the main theme of this research, which looks into using blockchain to measure social and environmental impact created by impact funds. It makes a strong case for using blockchain in impact investing, especially in evaluating the social effects.

Hajda and Zhang (2018) underscored the significance of blockchain in measuring and optimising social impact. Their presentation elucidates how blockchain can serve as a decentralised and transparent platform for collecting, verifying and tokenising impact data, thus fostering efficiency, accountability and trust in social impact reporting. This perspective enhances our understanding of blockchain's role beyond the financial sector, highlighting its applicability in achieving Sustainable Development Goals. Adding a practical dimension to the discourse, the interview with Schulaka (2018) offers insights into the convergence of financial technology innovations, such as blockchain and crowdfunding, with impact investing. Cunningham's opinion emphasises the transformative potential of these technologies in creating social and financial value, which further substantiates the argument for integrating blockchain into the sphere of impact investing (Schulaka & Cunningham,

2018).

The literature shows that although blockchain has great potential to impact investing, its success depends on dealing with the challenges of the complexity of the technology itself and proper inputs (Kshetri, 2017). The real-life examples and studies by Hajda and Zhang (2018) show what blockchain can do, but they also highlight the need for real data and detailed analysis to truly understand how effective and scalable these solutions can be. Collectively, these studies provide a detailed look at how blockchain can be used in socioeconomic development, but they also point out the obstacles to using it effectively. The thorough review of both the theory behind blockchain and practical examples gives us a clear picture of both the potential and challenges of blockchain technology worldwide.

2.5.2.1 Examples of Blockchain Technology in Driving Impact

Recent advances in blockchain technology have promising applications in the measurement of outcomes for various projects aligned with the SDGs. Blockchain's distributed ledger capabilities offer an innovative approach to capturing large sets of data across various sectors, enabling more efficient and transparent processes (Galen et al., 2018). In the realm of energy asset trading, Han et al. (2023) introduced a new blockchain-based platform that has the potential to change the industry. They outlined the development of a system for trading energy certificates, emphasising the platform's capacity to streamline transactions and ensure the integrity of data within the energy sector. This platform exemplifies blockchain's ability to optimise operations, such as the use of energy grids and facilitating peer-to-peer energy transactions (Han et al., 2023). Addressing the financial inclusion gap, Chen and Volz (2021) investigate how blockchain-based project bonds can mobilise finance for sustainable infrastructure in low- and middle-income countries. Their conceptual analysis proposes that these bonds can improve transparency and local currency mobilisation, thereby enhancing the appeal and reach of sustainable investment(Chen & Volz, 2021).

The healthcare sector also stands to benefit from blockchain innovations. As evidenced by Rymedi's recent $9 million investment to expand healthcare data transfer software, blockchain technology is being harnessed to create more secure and efficient data infrastructures, which are essential for improved patient care globally (Fitzgerald, 2023). Furthermore, the investment environment performance evaluation of the blockchain industry itself has seen

methodological advancements. Xu (2021) introduces the Intuitionistic Fuzzy CODAS method, providing a nuanced approach to assess the blockchain industry's investment environment by incorporating various performance criteria. This method represents a significant step forward in offering a refined and comprehensive assessment tool that caters to the complexities of the blockchain sector (Xu, 2021).

In wealth management, a white paper by J.P. Morgan and Apollo (2023) discusses the potential of blockchain technology in portfolio management. The integration of blockchain is highlighted as a key driver for efficiency and innovation in the management of diverse asset types, suggesting a broader impact of blockchain applications in the financial sector. Collectively, these developments suggest a shift from the earlier applications of blockchain technology. The integration of blockchain technology in various sectors is demonstrating its potential to address complex challenges related to sustainable development and impact evaluation. As blockchain continues to permeate different industries, its role in facilitating and measuring the social and environmental impact becomes significant, warranting further investigation and adoption by impact investors.

2.5.3 Affordance Theory

The foundational principles of affordance theory, established in the domain of ecological psychology by Gibson (1966), have significantly evolved through interdisciplinary engagement. Gibson's conception of 'affordance' described the possibilities for action that the environment offers to an organism, a concept that has been adapted and extended into various fields, including human-computer interaction (HCI; Giamporcaro & Kuk, 2024). Norman (1988) appropriated this ecological principle to the HCI context, differentiating between 'real affordances' linked to physical properties and 'perceived affordances' which relate to user perception (Norman, 1999).

In HCI, the interplay between these affordances and user perception has been extensively explored, leading to insights into how cultural, social and experiential factors influence interaction with technology (Gaver, 1991). Gaver's (1991) work extended the discussion by categorising affordances into a matrix that encompasses correct rejections, false affordances, perceptible affordances and hidden affordances, with the latter two being particularly salient in the context of technology use.

Within impact investing, blockchain technology exemplifies a digital environment ripe with affordances, offering a transparent and secure platform for tracking investments and measuring impacts. This technological landscape affords precision and trust in evaluating the tangible outcomes of social and environmental investments.

Craig and Wayne (2016) built on this discussion by suggesting a Latourian approach to affordance theory. Developed by Bruno Latour, a French philosopher and sociologist known for his work in science and technology studies, this approach emphasises how humans and technology interact. Latour's key concept, actor-network theory (ANT), suggests that both human and non-human entities (e.g., technologies, objects and organisations) are "actors" that interact and form networks. In this view, technology is not just a passive tool but an active participant that influences human actions and social processes (Sittig, 2017).

By applying this approach to blockchain in impact investing, we can observe the interactions among various stakeholders, including investors, beneficiaries and the technological infrastructure itself. Blockchain acts as an intermediary, facilitating actions and outcomes that might be hidden from humans due to a lack of understanding of the technology. Therefore, Craig and Wayne (2016) suggest unlocking hidden affordances and mitigating false ones.

Similarly, Mota (2021) offers a perspective that complements this view. Mota suggests looking deeper into how people interact with technology by combining philosophical and practical methods. Following Mota's perspective and applying it in the context of impact investing, the benefits of blockchain technology should not be seen as fixed traits but as dynamic features that become evident through real-world use. Thus, when considering blockchain's role in impact investing, it is essential to view its capabilities as flexible and dependent on the context. This perspective encourages users to experiment with blockchain to see how its features can be used for more effective impact evaluation and to align with social and environmental goals that fit regional contexts. In my approach, I acknowledge the complexities of digital environments.

In summary, integrating Mota's (2021) critique with the concept of affordances if applied to blockchain in impact investing adds depth to the discussion on how technology shapes and is shaped by human actions. It highlights the transformative potential of blockchain, moving

from traditional impact assessment methods to a system that responds to the evolving socio-material of our digital era.

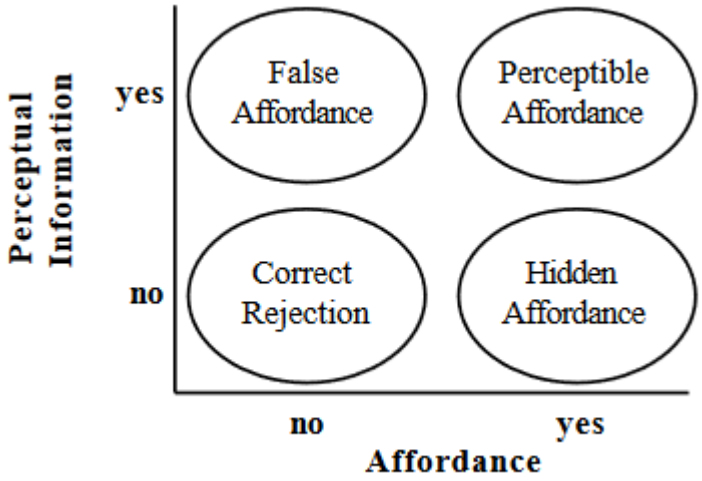


Figure 1: Perception and Inter-referentiality (Source: Gaver, 1991)

2.5.4 Key features of blockchain

In this section, I focus on some of the distinctive properties of blockchain technology that align with the affordance theory previously discussed. This analysis is particularly relevant in the context of impact evaluation within impact investing. Blockchain, as a concept, represents an innovative approach to digital ledger management. I ingeniously synthesise established technologies and principles to unlock new functionalities and capabilities (Jonsson, 2018; Stilgoe, 2020). However, as Shin and Hwang (2020) noted, blockchain's complexity often poses a significant barrier to comprehension and utilisation for the average individual. This complexity is primarily due to the intricate coding required, which can obscure its full potential and utility in various applications, including impact investing. By explaining the specific attributes of blockchain technology, I aim to demystify its complexities and illustrate how it can be effectively leveraged for evaluating the outcomes and impacts of investment initiatives (Shin & Hwang, 2020). In light of the affordance theory discussed earlier, I researche three pivotal properties of blockchain technology that are of interest to the domain of impact investing.

Decentralisation: A defining feature of blockchain is its decentralised framework. This aspect

marks a significant departure from traditional centralised ledger systems, which typically depend on a central authoritative entity for validation (Nakamoto, 2008). In the context of impact investing, such decentralisation enhances transparency and mitigates risks associated with centralised control (Tapscott & Tapscott, 2016). By distributing the ledger across a network, blockchain ensures that impact evaluations are less susceptible to manipulation, thus upholding the integrity of the data.

Immutability: Central to blockchain's appeal is its immutability. As Swan (2015) pointed out, once a record is made in a blockchain, it is exceedingly difficult to alter. This feature is invaluable in the realm of impact investing, as it guarantees the authenticity and permanence of recorded information. Immutability instils a sense of confidence among stakeholders, as it assures that the data reflecting the impact of investments remains unaltered over time, thereby facilitating accurate and reliable evaluations (Swan, 2015).

Transparency and Traceability: Blockchain's transparency and traceability are integral to its applicability in impact investing (Mougayar, 2016). Each transaction is visible and traceable by all network participants, ensuring a high degree of accountability (Tapscott & Tapscott, 2016). For impact investments, this means that the flow of funds and the resultant impacts can be meticulously tracked and scrutinised. This level of transparency is instrumental in validating the efficacy and authenticity of the impact claims, thereby fortifying trust among investors and stakeholders (Mougayar, 2016). In summary, the decentralised nature, immutability and transparency and traceability of blockchain collectively enhance its suitability for impact evaluation in impact investing. These attributes align closely with the affordance theory, underscoring the potential of blockchain technology to revolutionise traditional practices in this field.

2.5.5 Blockchain and the TOC

In this section of the literature review, I aim to elucidate key characteristics of blockchain technology that are crucial for enhancing impact evaluation, particularly through the effective implementation of the TOC. I focus on two central features: decentralisation and immutability.

Effective impact evaluation necessitates that investing professionals rigorously gather evidence of impact outcomes, such as positive changes in the lives of beneficiaries, and assess

whether these impacts were realised as intended (Peersman, 2014). This process demands meticulous data collection that aligns with the TOC, considering both the key impact outcomes and the available resources. For efficient data collection, it is imperative for impact professionals to utilise existing data optimally and supplement it with new data obtained directly from impact beneficiaries. The selection of data collection tools and validation processes should be tailored to complement both the intended impact and the resource constraints of the beneficiaries.

A persistent challenge in this area is the collection of data on impact outcomes in inaccessible areas and fragile contexts. To accurately evaluate the intended impact, it is essential to gather data from direct beneficiaries and indirect beneficiaries (in the case of lamps, data should be collected from students using the lamps for studying). Leveraging technology becomes indispensable in this scenario for continuous data collection from remote beneficiaries (Wiatt, 2019). Digital methods such as surveys, SMS polling, geo-spatial mapping and visual mediums like photographs and videos are becoming increasingly important for collecting both quantitative and qualitative data (Shrestha et al., 2020).

Table 2 below contains a synopsis of the potential interrelations between the blockchain affordances previously discussed and their application in the implementation of TOC.

Table 2: Blockchain affordances for theory of chain process

Evaluation process	**Definition of process**	**Blockchain features**	**Affordance**
Investment activities	Lending–impact investors lend money to an agri-farmer to grow business	When a block is filled, it is set. Each block in the chain is given an exact time stamp when it is added to the chain.	Perceptible affordance–the ledger helps capture large energy data at the facilities level
Output data	Capture the growth data of agribusinesses. Either revenue numbers or numbers of clients over time.	Using DLT blockchain can maintain databases at different nodes (computers) instead of a central location (Craig & Wayne, 2016). Any of the stakeholders (nodes) can capture the growth data.	Perceptible affordance–use of blockchain technology to store digital files and records of patients in the healthcare sector

Outcome	Impact outcome goal for the impact fund is for Agribusiness to engage/supply clients in rural households or small holding businesses	Using hash function blockchain technology has the potential to impact all record-keeping processes, including the way transactions are initiated, processed, authorised and recorded and can, thus, be used in the supply chain for Agribusinesses, thus providing insights about the end customer.	Perceptible affordance–existing usage that is known in agriculture (Gaver, 1991)
Impact	Desired change occurs at a higher level, thus improving livelihoods and well-being	A cryptographic hash function can be used to check the integrity of a TOC and authenticate if the impact achieved aligns with the impact that was intended by the theory.	Hidden affordance–although there is an existing use, there is not enough information or knowledge suggesting that this could properly capture this function. A similar principle (i.e., tracing an entry or, in this case, a change to the original change suggested by the TOC) or use is an example covered under blockchain products of this paper, which shows how blockchain can connect different blockchain ledgers as digital wallets. This transaction can be traced back to the users, thus making the system completely transparent.

2.5.6 Conclusion

In practical terms, a blockchain solution involves multiple stakeholders within the chain. For instance, a blockchain ledger functions akin to a record-keeping book used in business transactions. The advantage of using blockchain technology lies in its ability to reach a consensus on the state of the network without requiring trust in the integrity of other network participants or administrators (Kalfoglou, 2021). This aspect underscores blockchain's sustainability because key data contributors are integral nodes within the network.

Although the nature of blockchain use and data collection is collaborative due to its decentralised structure, it is important to address concerns regarding digital identities. In

instances where blockchain data involves consumer or beneficiary information, there is an imperative to protect individual privacy and communicate intentions for data use transparently. Blockchain technology addresses this concern by encrypting and hashing identity data before storage, ensuring that it remains secure and unalterable (Shrier et al., 2016).

Moreover, cryptographic identity functions on blockchain offer robust privacy protection, maintaining anonymity and preventing the linkage of inputs or identities (Shrier et al., 2016). A notable innovation in this area is the Chain Anchor, designed for permitted blockchains being developed by various financial institutions and trading platforms. This architecture adds an identity and privacy-preserving layer atop the blockchain, incorporating an anonymous identity verification step. This feature allows for the verification of transactions while keeping participant identities concealed or anonymous. This characteristic of blockchain technology positions it as a promising tool for impact evaluation, particularly pertinent in assessing diverse qualitative and quantitative outcomes of various initiatives.

In this thesis, I address a critical and previously unexplored knowledge gap in the realm of impact investing, specifically within the South African context. It provides a nuanced understanding of how South African impact fund managers engage with impact evaluation and looks into the perspectives of investment professionals based in South Africa on evaluation tools and frameworks. A key focus of the study is on assessing the ease with which traditional investment professionals in South Africa transition to more innovative investing approaches, of which impact investing is a critical part. It also explores their willingness to embrace new technologies in their practice. By doing so, the thesis bridges the gap in understanding the interconnectedness of impact evaluation and the use of advanced technologies.

3 Methodology

3.1 Aim of Study

The overarching research objective is to evaluate the readiness of investment professionals, with a particular focus on those in South Africa, to effectively utilise impact evaluation tools within the realm of impact investing. Additionally, the study aims to survey the potential role of blockchain technology in revolutionising these evaluation methods, thereby potentially enhancing the accuracy and efficiency of impact assessment. To achieve this aim, the research conducted qualitative interviews with investment professionals working within a large South African asset manager offering a range of impact funds to understand their perceptions of potential innovations (Baker et al., 2019).

3.2 Study Setting

The South African asset manager chosen for this study is one of South Africa's largest asset management companies, responsible for managing approximately 1.3 trillion R in assets. In response to the socioeconomic challenges posed by the COVID-19 pandemic, the company launched its first range of impact funds in June 2020. These funds were designed to generate positive social outcomes in addition to financial returns, with a specific emphasis on job creation and preservation.

This range of impact funds was launched to support the recovery of South African businesses affected by the crisis, ranging from small and medium enterprises to large corporates. The strategies employed aimed to assist resilient businesses that were adversely affected by the pandemic while also projecting sustainable cash flows in the future. Furthermore, at the time that the interviews were conducted for this study, the investment professionals had been working in impact funds for a maximum of two years. This relatively short period indicates that they were still acclimating to the unique demands and considerations of impact investing.

Given this context, the primary goal of this study was to assess the readiness of investment professionals working within the impact funds range to effectively evaluate and measure the impact of these funds and the investments they made. The research aimed to identify challenges, opportunities, or areas for improvement in their understanding, implementation

and evaluation of impact investment strategies. By examining the experiences and perceptions of investment professionals who transitioned from managing commercial funds to impact funds, this study provides valuable insights into their readiness, challenges faced and potential avenues for growth in impact investing at this large South African asset manager.

3.3 Study Design

Robson (2002) described a case study as a strategy for doing research that involves empirical investigation of a particular contemporary phenomenon within its real-life context. According to Saunders et al. (2009), case studies are especially interesting for those who wish to gain a rich understanding of the context under which the research question is being asked. Thus, for this study, I wished to understand how the investment professionals working in impact funds perceived their current evaluative tools and processes and if they were ready to use sustainable innovation to improve efficiency around impact evaluation.

In this study, I explored investment professionals' readiness for efficient impact evaluation using sustainable innovation. Given the contextual nature of the research area and the emerging nature of impact evaluation, a qualitative research design was deemed most appropriate. Qualitative research is a valuable tool for exploring complex phenomena, such as the attitudes, beliefs and perceptions of individuals, which can be difficult to capture using quantitative methods (Saunders et al., 2009).

In this study, a qualitative research design was adopted to gain an in-depth understanding of investment professionals' perceptions and understating of sustainable innovation in impact evaluation. According to Miles et al. (2014), qualitative research is particularly useful for exploring complex and nuanced phenomena, such as the feelings and practices of individuals, in their natural contexts. My aim was to capture the richness and diversity of investment professionals' experiences and perspectives that could not be fully captured through quantitative methods (Collis & Hussey, 2014).

Furthermore, qualitative research provides flexibility in data collection and analysis, allowing for iterative and exploratory approaches to data collection and analysis. This was particularly relevant for this study, as the field of impact investing is dynamic and evolving. Therefore, qualitative research allowed us to adapt the data collection and analysis approaches to capture

the evolving landscape. Additionally, qualitative research allowed us to capture the subjective experiences and perceptions of investment professionals, which are valuable for understanding the underlying reasons and motivations behind their responses.

Through open-ended interviews, we were able to gather rich and nuanced data on investment professionals' challenges and opportunities related to impact investing, impact evaluation and sustainable innovations for impact investing. The intention was to show participants how the TOC can be used on the blockchain through an illustrative diagram.

It is essential to clarify that although Root Capital, the impact fund used as an example in the interview protocol, currently does not utilise blockchain technology, it has a well-defined TOC framework in place. This study, however, leverages my knowledge and insights gleaned from the existing literature on blockchain to create an illustrative representation. The diagram serves the purpose of offering study participants a conceptual view of how blockchain could potentially be employed within the context of impact evaluation.

During the study sessions, participants were presented with a tangible use case for blockchain within Root Capital's agricultural value chain, despite the organisation not currently implementing blockchain technology. This approach was taken to bridge the gap between theoretical understanding and practical relevance. I explained the primary aim of blockchain adoption in Root Capital's agricultural value chain. The research methodology integrates both theoretical and practical components. The visual representation of blockchain concepts, even though not presently implemented by Root Capital, serves as a valuable tool to convey the transformative potential of blockchain in enhancing the transparency and effectiveness of impact assessment processes. The purpose of this illustration primarily lies in data collection and validation, bridging the gap between theoretical knowledge and its practical application in the context of impact evaluation.

3.4 Data Collection

Data collection for this study involved conducting semi-structured in-person interviews with 14 participants. This approach was chosen as it allowed me to ask predetermined questions while still maintaining flexibility to explore topics beyond the set questions (Saunders et al.,

2009). The interviews were recorded and transcribed. They lasted an average of 40 minutes. Although some were brief, I continued conversations with colleagues outside the scheduled interviews because we all worked in the same office. I had ongoing access to these individuals throughout my study, enabling me to clarify points and gather additional insights as needed.

As a member of the organisation, my role required me to discuss the TOC for our funds beyond the scope of this paper. These interviews were part of our ongoing discussions and included the introduction of blockchain technology. In-person interviews were deemed essential for establishing rapport with the participants, enabling me to investigate the subject matter through probing and follow-up questions. Additionally, observing non-verbal cues, particularly participants' reactions to the blockchain exercise, added valuable insights to the data collection process. The face-to-face interaction facilitated a more comprehensive understanding of the participants' perspectives and ensured a rich and nuanced exploration of their experiences and attitudes towards the blockchain solution.

Table 3: List of Participants C

Participant #	Age	Position	Years of experience	Length of discussion
Participant 1	34	Portfolio Manager	10	21:00
Participant 2	54	Portfolio Manager	27	33:00
Participant 3	24	Investment Analyst	2	26:00
Participant 4	35	Portfolio Manager	9	45:00
Participant 5	26	Investment Analyst	4	40:00
Participant 6	39	Distribution	15	34:00
Participant 7	33	Investment Analyst	8	43:00
Participant 8	37	environmental, social, governance (ESG) and Impact	8	52:00
Participant 9	45	Distribution	24	45:00
Participant 10	42	Portfolio Manager	20	57:00
Participant 11	29	ESG and impact Analyst	5	22:00

Participant 12	26	Investment Analyst	5	41:00
Participant 13	39	Investment analyst	15	33:00
Participant 14	42	Distribution	22	47:00

An interview guide (see Appendix A) was developed for conducting interviews with investment professionals working in a large South African asset management company. The questions were carefully crafted to facilitate a conversational approach, enabling participants to express their perceptions using their own terminology. The majority of questions were open-ended, enabling participants to freely discuss their understanding and views on suggested sustainable innovations related to impact evaluation.

The interview guide consisted of three main parts. The first part aimed to assess the investment professionals' understanding of impact investing. Through targeted questions, participants were encouraged to elaborate on their knowledge, experiences, and insights on impact investing. The second part of the interview guide focused on discerning whether investment professionals could differentiate between impact measurement and impact evaluation and whether they believed there was a more effective approach to assessing the impact generated by South African asset managers' impact funds. By exploring their perspectives, this part aimed to gain insights into the participants' ability to critically evaluate impact measurement and evaluation methodologies.

The final aspect of the interview guide aimed to gauge the participants' openness to innovation in the context of impact measurement and evaluation. As part of this assessment, a diagram illustrating a proposed blockchain solution was presented to the participants. The diagram was specifically designed to showcase how the blockchain solution could be applied to an impact fund. In this regard, an impact fund that possessed a clear impact strategy with a well-defined TOC and predetermined impact outcomes was selected as an ideal representation for exploring the potential of the blockchain solution.

Within the context of Root Capital, the participants were presented with a specific use case for

blockchain. I explained the primary objective of implementing blockchain in the agricultural value chain.

During the interviews, participants were given the opportunity to react and provide feedback on the proposed blockchain solution, allowing for a rich and dynamic discussion. The intention was to assess their receptiveness to innovative approaches and gain valuable insights into their perspectives on the practical application of the blockchain solution within the impact investing context.

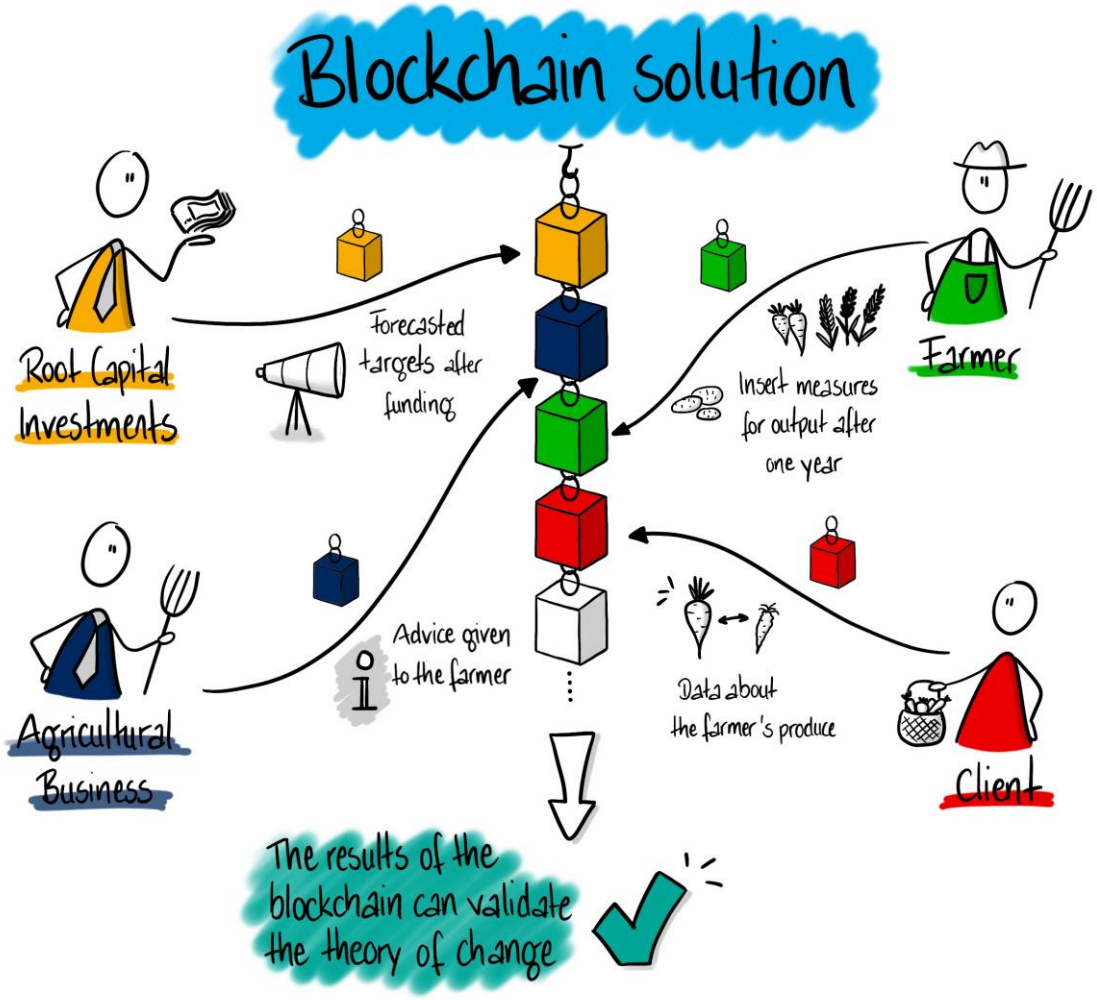


Figure 2: Blockchain Solution - Utilising Blockchain Technology for Impact Evaluation: An Innovative Solution

Figure 2 includes a comprehensive explanation of how blockchain technology can be

employed as an innovative and efficient solution to implement a TOC within the Root Capital fund. The potential benefits and applications of blockchain in the context of impact evaluation were elaborated upon to enhance the understanding of the interviewees.

This illustrative example was meant to show participants how the utilisation of blockchain technology holds a significant promise for enhancing impact evaluation within the Root Capital fund and the broader agricultural value chain. Its intrinsic qualities of transparency, immutability and traceability provide a robust foundation for improving supply chain management and validating impact outcomes. I demonstrated how the integration of blockchain as an innovative tool within impact evaluation processes fosters trust, accountability and operational efficiency within the realm of impact investing.

By structuring the interview guide to cover these three key areas, the research aimed to capture the investment professionals' understanding, discernment and openness to innovation in relation to impact measurement and evaluation. This comprehensive approach ensured a thorough exploration of their perceptions, ultimately contributing to a deeper understanding of their readiness for embracing sustainable innovations in impact evaluation.

3.5 Sample

For this research, a total of 14 in-depth interviews were conducted with investment professionals who held roles as impact analysts, investment analysts and portfolio managers within impact funds. These individuals were purposefully selected based on the funds they worked on. I note that this sample size of 14 interviews is considered substantial given the specific unit of analysis, which focused on individuals directly engaged in impact investing within the organisation. The selection of these 14 participants was based on their involvement in impact investing such that they could provide valuable insights and perspectives related to the research topic. As there are only 16 individuals working in these impact funds at the large South African asset management company, interviewing 14 out of the 16 individuals demonstrates a high level of engagement within the organisation and provides a comprehensive understanding of the experiences and perceptions of those directly involved in impact investing.

Previous studies have shown that sample sizes ranging from 10 to 20 participants are often

considered sufficient for qualitative research when the focus is on individuals directly engaged in a specific domain or practice (Morse, 2000; Smith et al., 2018). Morse (2000) argued that determining an appropriate sample size should be based on the specific research aims and the richness and depth of data required. Additionally, Smith et al. (2018) highlight that qualitative research aims to capture nuanced and contextually grounded insights, making smaller sample sizes most suitable.

By conducting 14 in-depth interviews with investment professionals involved in impact investing in one single large asset management company, this study aligns with the recommended sample size range for qualitative research. The chosen sample size allows for a comprehensive exploration of the experiences and perspectives of individuals directly engaged in impact investing within the organisation, providing valuable insights into the research topic.

3.6 Data Analysis

I conducted data analysis using an inductive approach informed by Gioia and Corley (201) and the recommended data structure. An inductive data structure was utilised, which involved identifying first-order themes, second-order themes and third-order themes, as guided by the research objectives and interview transcripts. This approach allowed for a systematic exploration of recurring patterns and emerging themes in the data.

The Gioia and Corley (2002) approach was deemed appropriate for this study as it aligns with the research objectives of exploring potential innovations around impact evaluation and assessing the readiness of investment professionals to effectively evaluate and measure the impact of their investments. This approach allowed for a thorough examination of qualitative data gathered from interviews with investment professionals working within a South African asset manager's impact funds, enabling the capture of rich, contextually grounded insights. My chosen approach emphasised the importance of understanding the context in which data is collected, which is crucial for studying the experiences and perceptions of investment professionals transitioning from managing commercial funds to impact funds. Additionally, the Gioia and Corley (2002) approach facilitated the exploration of challenges, opportunities and areas for improvement specific around sustainable innovation in impact investing at a large South African asset manager.

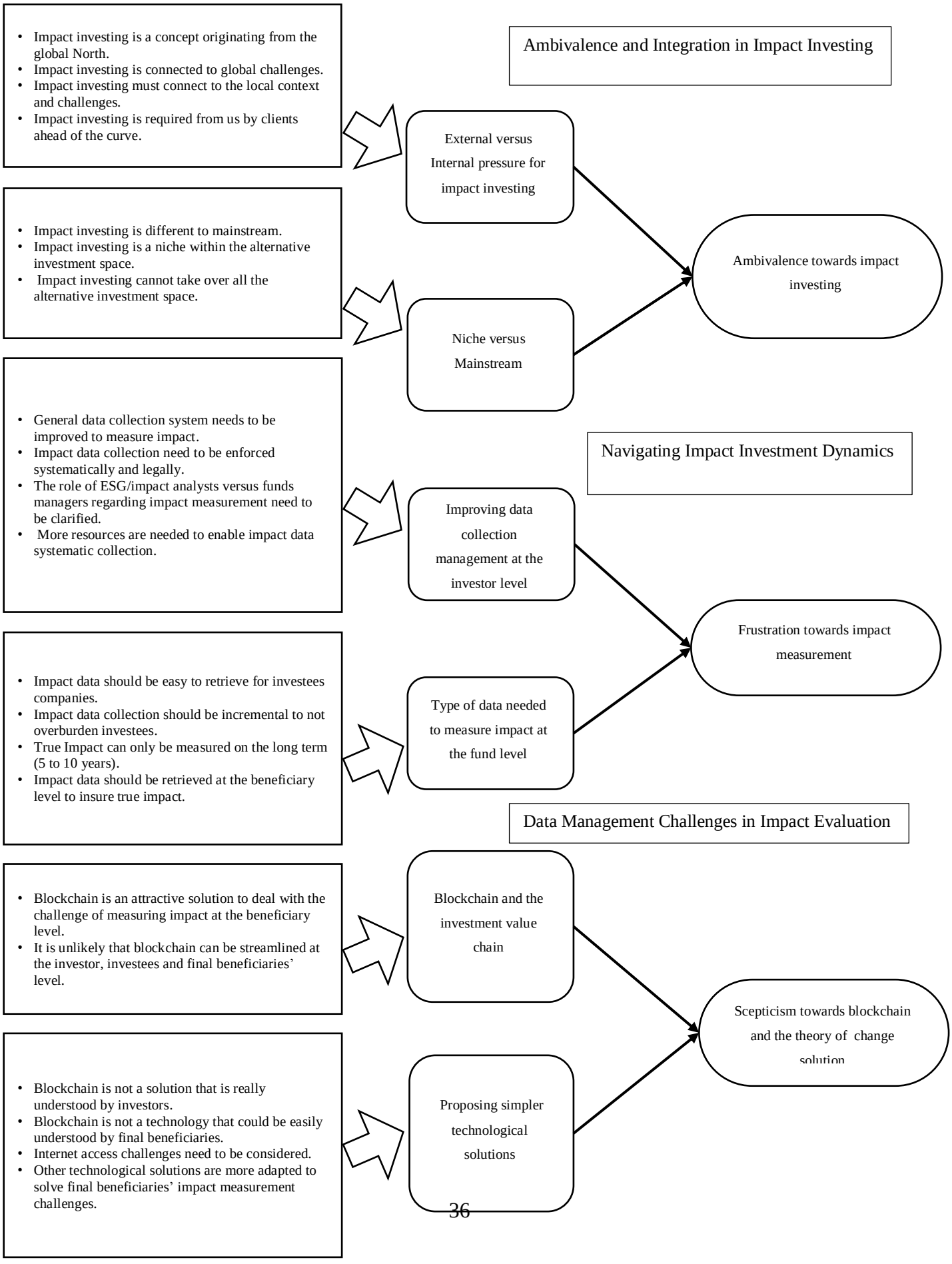
The application of the Gioia and Corley (2002) approach contributes to the existing body of knowledge on impact evaluation and impact investing. This approach has been successfully utilised in prior research, demonstrating its effectiveness in analysing qualitative data and generating meaningful insights (Gioia, 1998; Gioia et al., 2012). By using this approach, the study aimed to provide valuable insights into the challenges, opportunities and areas for improvement in impact investing.

I followed the approach outlined by Braun and Clarke (2006), consisting of data familiarisation, generating initial codes, searching for themes, reviewing themes and defining and naming themes. After conducting interviews and becoming familiar with the transcripts, a preliminary coding tree was developed to guide the analysis process. The coding tree served as a framework to identify, refine and synthesise emergent categories and themes. This approach facilitated the identification of patterns or themes within the data, shedding light on investment professionals' perceptions of potential innovations in impact evaluation and improving efficiency. Themes and categories emerged from the data rather than being predetermined by the research questions (Gioia & Corley, 2002). For example, NVivo codes such as 'impact investing is a concept originating from the Global North', or impact investing must be connected to local challenges were clustered into the second-order 'external versus internal pressures for impact investing'. This initial second-order was clustered through axial coding with the second-order 'niche versus mainstream' and led to the induction of the aggregate construct 'ambivalence towards impact investing' (Corley & Gioia, 2011).

As common issues and themes surfaced, the I revisited past empirical sources and theoretical claims, enriching the analysis and deepening the understanding of the research topic. The iterative process allowed for constant refinement and revision of the coding tree, ensuring a comprehensive exploration of the data. I engaged in critical reflection, challenging my own assumptions and biases throughout the analysis. This reflexive stance promoted a rigorous examination of the data and increased the credibility of the findings. By employing an inductive coding approach, this study probed the perceptions of investment professionals regarding potential innovations in impact evaluation. The research process adhered to established qualitative analysis techniques, promoting rigour and generating fresh insights in the field of impact investing.

First-Order Concepts | Second-Order Themes | Aggregate Constructs

Figure 3: Data Analysis Structure



3.7 Ethics

Ethical considerations played a fundamental role in ensuring the integrity and confidentiality of this research project. I obtained written informed consent (Appendix A) from each participant. The consent form explicitly stated the purpose of the study and informed participants that the interviews would be recorded. Participants were assured that their identities would remain anonymous, and only I would have access to the raw data, including audio recordings and written transcripts of the interviews.

Each participant was assigned a unique participant number to further ensure the anonymity of their data during transcription and data analysis. I made it clear to participants that no personal identifying information, including names or specific details, would be disclosed in any publications resulting from this study.

I also obtained consent and clearance from the large South African asset manager to utilise the data collected from individuals within the organisation for the purpose of this study. The ethical guidelines and practices outlined in the GSB guideline were followed throughout the research process to ensure adherence to professional standards and protect the rights and privacy of the participants. By adhering to these ethical principles and guidelines, I maintained the highest standards of research integrity, thus contributing to the trustworthiness and credibility of the findings.

3.8 Positionality

As a newly appointed Head of ESG and Impact at the large South African asset manager studied, I brought a fresh perspective and expertise to the study.

3.9 Reflexivity

Reflexivity played a crucial role throughout the research process, considering my positionality and its potential influence on the study. Reflexivity involves self-awareness of the my biases, beliefs and values, as well as an understanding of how they may shape the research process and interpretations of findings (Alvesson et al., 2008; Weick, 2002).

To establish my positionality, it should be noted that I am an ESG and impact implementation

specialist. As such, my central role in impact implementation, evaluation, measurement and reporting means that I have access to the information collected from the investment professionals as well as unique insights into the topic. As the Head of ESG and Impact at the time that the interviews were conducted, my role included overseeing impact measurement for impact funds. This personal motivation influenced my interest in understanding how investment teams perceive impact measurement and investing within the business, highlighting potential gaps for improvement.

To ensure reflexivity, I maintained an open-minded and non-judgemental approach during the interviews, actively listening to participants' responses while being aware of my own biases and prior knowledge. Regular self-reflection allowed me to manage potential biases and account for their potential impact on the data collected. Member checking was conducted to enhance the trustworthiness and credibility of the findings, enabling participants to review and provide feedback on the accuracy of their responses. Peer review and debriefing sessions with other researchers and colleagues further supported objectivity in the research process and interpretation of findings.

Throughout the analysis and write-up, I remained reflexive, considering my involvement in designing impact funds, establishing impact KPIs, improving due diligence templates, monitoring impact performance, and reporting impact outcomes to investors. This reflexivity ensured a comprehensive exploration of the interrelations between these responsibilities and their implications for the analysis and understanding of participants' responses.

By acknowledging and addressing reflexivity, I contribute to the theoretical understanding of impact funds within the large South African asset manager as a business. Furthermore, my professional identity within the organisation adds depth to the discussion and conclusion sections of the report.

4 Discussion and Findings

4.1 Introduction

In this section, the themes and sub-themes that emerged from the data collected through the semi-structured interviews are presented. It must be noted that the impact funds referred to in this context are specialised funds within the large South African asset manager studied focused on intentionally creating and measuring social and environmental impact

4.2 Findings

The following section contains a structured overview of the key themes and sub-themes that emerged from the analysis. The first theme examines factors that contribute to participants' attitudes towards and perceptions of impact investing. The second theme explores areas of opportunity and improvement in the participants' current process of impact measurement and evaluation. In the final theme, I investigate sustainable innovations that can help improve impact evaluation according to the participants.

4.2.1 Ambivalence Towards Impact Investing

4.2.1.1 External Versus Internal Pressure for Impact Investing

Some interviewees stressed that impact investing and sustainable investing, in general, are practices originating from Europe and the UK, which were later introduced to South Africa. They highlighted that frameworks, legislation and guidelines on impact investing mostly come from the Global North and are then adopted in South Africa. The perception is that some South African investment companies with a global footprint, were early adopters of sustainable investing while locally based asset managers were slower to embrace the concept.

One participant stated *"I think I would like to believe that X and Y [names of large South African fund managers] because they had a global kind of footprint. They were exposed to, okay, asset owners who were a lot more forward-thinking, a lot more demanding in terms of what their capital can do. And then they felt a need for this is what's happening in the world*

and it's going to come here and so let's prepare for it" (Participant 14)

Furthermore, interviewees observed that the Global North leads discussions on sustainability, with South Africa expected to follow suit. This trend is exemplified by South African fund managers aligning themselves with United Nations SDGs while the country has its own NDPs that address local needs. Additionally, the launch of the South African Green Finance Taxonomy on April 1st 2022, which is modelled after the EU green finance taxonomy, further reinforces the influence of the Global North on impact investing in South Africa.

One participant noted, *"Some of these frameworks [EU Green Finance Taxonomy], whether they be materiality framework or double materiality frameworks, the ultimate outcome, whether it's a listed or an unlisted vehicle, is the call by the United Nations and a call perceived to have real-world outcomes"* (Participant 9)

The perception of impact investing as a concept from the Global North was also associated with a perceived focus on environmental aspects rather than addressing social issues specific to South Africa. However, several interviewees appreciated impact investing and its potential to tackle contextual issues such as inequality and high unemployment in South Africa

One participant explained, *"I think impact investing is effective if there is a connection with what is happening in the overall economy. You can decide to look at Cape Town, Johannesburg, or wherever. If you want to create jobs, that speaks to an impact that would make a difference in South Africa, particularly in the financial services sector which contributes the most to GDP"* (Participant 11)

4.2.1.2 Niche Versus Mainstream

Although some participants raised questions about the origins of impact investing, others stated that impact investing was a key driver of change in South Africa because it was different from mainstream investing. However, there were concerns about the extent to which impact investing should replace mainstream investing in the local industry.

The findings show a general fear of impact investing becoming the order of the day. One participant noted that "*The question I have is whether impact investing is meant to take over*

mainstream investing as we know it" (Participant 6). Even though participants work on impact funds, they are not yet convinced that impact investing can generate comparable returns to mainstream investments.

"*I definitely think that there's a place (for impact funds but not to replace other funds in business). I don't think it should be at the expense of other deals that may benefit our investors. Unless the investors are specific about creating impact, we should not assume they require it, they may be investing in a specific fund that necessarily doesn't have an impact mandate. We shouldn't be following things or substituting better deals for impact deals. If the yield doesn't justify it, in my mind, we should not invest"* (Participant 7)

Although impact investments may not always produce the same level of financial returns as traditional investments, as the field of impact investing continues to mature, innovative financial models and investment strategies may emerge that can generate financial returns comparable to mainstream investments while also generating environmental and(or) social impact.

4.2.2 Frustration Towards Impact Measurement

In this section, I explores the frustration expressed by participants regarding impact measurement within the business. The following subtopics are discussed: improving data collection management at the investor level, the type of data needed to measure impact at the fund level, the role of ESG/impact analysts versus fund managers, the need for more resources for impact data collection, and the importance of measuring true impact on a long-term basis. Prior to the launch of the range of impact investment funds, the investment professionals at the large South African asset manager primarily focused on managing commercial funds. This study marks their first experience of investing in an impact fund. As such, it is expected that there may be some teething issues as they navigate this new terrain.

4.2.2.1 <u>Improving Data Collection Management at the Investor Level</u>

Participants expressed frustration with the current impact data collection process, emphasising the need for a system that facilitates coordinated and systematic data collection. They

suggested that impact data requirements should be included in legal contracts during the signing of documents. All key stakeholders, including investors, investment professionals and investee companies, should agree on impact data requirements in advance, with any changes communicated ahead of time. Participants also highlighted the importance of integrating impact data collection with existing financial data submission processes rather than treating it as a separate and disconnected process.

Participant 3 stated, "*We need to enforce data collection in legal ways for it to work. If we do not, then we will not be able to get the data we need."*

Participants raised concerns about the undefined relationship between ESG/impact analysts and investment professionals. Although ESG and impact analysts were introduced as new members of the investment teams to facilitate the ESG and impact aspects of investments, participants noted that investment professionals possess deeper knowledge of company operations and have established relationships with investee companies. They suggested that a clearer delineation of responsibilities and collaboration between these roles would enhance impact measurement efforts.

Participant 5 emphasised this point, stating, *"ESG and impact specialists may have a better understanding of which impact metrics are required for evaluating a particular impact objective. However, investment professionals have been collecting and analysing financial information for longer."*

Participants acknowledged the time and resources required to implement impact measurement effectively. They expressed the need for budget allocation specifically for measuring impact, alongside lending activities. Some participants questioned whether the challenges in impact data collection were solely related to data collection itself or whether other factors were hindering progress. They emphasised the importance of allocating adequate resources to impact data collection to ensure its success.

Participant 2 shared their perspective, stating, "*When you start off wanting to do something greater, you would have to put aside in your budget the cost of measuring, in addition to lending, and time required to put that extra lens on your impact field."*

4.2.2.2 Type of Data Needed to Measure Impact at the Fund Level

Participants advocated for impact data that is easy for investee companies to retrieve. They suggested the establishment of a periodic and systematic approach to collecting impact data from investee companies, rather than relying on ad hoc processes. To avoid overwhelming investee companies, a staggered approach to requesting impact data was recommended, granting them time to record new data points required by investors. Additionally, participants highlighted the importance of gradually incorporating more advanced data points that would help calculate social KPIs, which are often challenging to quantify.

Participant 4 emphasised the need for a systematic approach, stating, *"Impact data should be easy to retrieve for investee companies. Impact funds should have a periodic and systematic way of collecting impact data from investee companies. It should not be an ad hoc process."*

Participants expressed the belief that impact investing requires a long-term focus to achieve lasting and meaningful impact. They emphasised the necessity of setting impact targets for a prolonged period (e.g., 5 to 10 years) and measuring milestones along the investment tenure. Participants recognised that impact measurement immediately after investment might yield different results compared to impact measured in subsequent years. They emphasised that true impact is often visible over a longer time horizon, and attempting to measure impact too soon after deployment may not capture the full extent of the intended impact.

Participant 11 shared their perspective, stating, *"I think impact has complexities. We're dealing with systems that have complexities in South Africa. Especially for our job creation impact funds, which mainly target job creation as an impact measure. You're not going to just start a company and immediately hire workers. So, I think this is a problem. Maybe the measurement itself is trying to measure something so quickly."*

4.2.3 Scepticism Towards Blockchain and the TOC Solution

Supported by the review of literature, I was firmly rooted in the potential of blockchain technology to enhance impact evaluation particularly when coupled with a measurement tool used in the business already like the TOC. My entry into the organisation coincided with its initial steps towards establishing its first range of impact funds, guided by the expertise of an

ESG and impact consultancy firm. I noticed that the impact fund range documents, accessible on the shared drive, incorporated the TOC as a strategic foundation, suggesting a readiness for dialogue about leveraging this theory as an evaluative mechanism through blockchain technology.

Despite the foundational hypothesis posited in the introduction–H2: "Blockchain technology has the potential to significantly improve the accuracy and efficiency of impact assessments in South Africa"–showcasing a firm belief in the transformative capacity of technology in impact evaluation, the reception among my colleagues was different. The intention behind using Root Capital as an illustrative example was to showcase how blockchain could be seamlessly integrated into the data collection and evaluation processes of our impact funds to enhance efficiency. Nonetheless, some colleagues overlooked the TOC component, dismissing the blockchain aspect as impractical.

Participant 3's scepticism was emblematic of a broader hesitation, stating, "*I do not think everyone will participate or buy into the concept of blockchain, for example, is something that is not even understood by a lot of young people my age. And you keep on learning that the young people are going to be the pioneers of this kind of technology and really take this technology to the next level in terms of what you're able to do with it. But a lot of people haven't actually heard of it yet in 2023. I think it's a bit of a reach.*" This sentiment underscored a perceived gap in understanding and acceptance of blockchain technology, even when attempting to discuss the TOC in isolation from blockchain.

Acknowledgement of the importance of evidencing impact from beneficiaries was noted, yet concerns about the practicality of blockchain implementation, such as digital platform access and trust issues, were predominant. Moreover, the TOC itself seemed to be a novel concept to most colleagues, suggesting that awareness and understanding of the existing documents and methodologies for measuring impact within the organisation were limited.

The interviews, primarily with colleagues who are investment professionals without a background in impact investing, illuminated a significant gap in understanding impact investing terminology and concepts, including the TOC. The discourse indicated that the specialised language and methodologies of impact investing, particularly those associated with evaluative tools like the TOC, were not commonly integrated into their professional

vernacular.

This gap in understanding fostered scepticism towards blockchain technology and elicited recurring discussions on the essence of 'true impact' evaluation, revealing divergent interpretations of the TOC and impact assessment methodologies that, as indicated by the literature, aim to tackle the challenge of accurately measuring true impact.

In contrast, a singular voice of enthusiasm emerged from the ESG and impact analyst, who expressed support for blockchain's potential, stating, "*I like it. So, the thing with blockchain is what it allows you basically to fancy Excel spreadsheet where different people can input can get involved in the same spreadsheet… And what I love is that the end results of the project can validate your theory of change*" (Participant 11). This stance highlighted the recognised benefits of blockchain in creating a collaborative platform, enabling a variety of stakeholders to participate and track data throughout the impact investment process. Such an optimistic outlook underscores the analyst's confidence in blockchain's ability to meticulously record and confirm impact achievements while also demonstrating a keen grasp of how the TOC can be applied within this innovative context.

4.2.3.1 Blockchain and the Investment Value Chain

In contrast to the overall positive take on the role of blockchain technology that I gathered during my literature review and my own personal positive mindset on the topics, the empirical findings revealed quite a strong scepticism among the respondents regarding the practicality and feasibility of using blockchain as a measurement solution.

During the interviews, I presented a diagram (Table 3) that I created showcasing the potential affordances of blockchain technology in the impact evaluation process. I attempted to demonstrate to my colleagues how the blockchain solution could establish trust, transparency and traceability in impact evaluation. In my view, adopting blockchain technology in impact investing could facilitate improved supply chain management and evaluation of impact. For instance, I suggested investment professionals working for Root Capital, an impact fund with great impact investing credentials could in principle leverage blockchain to record funding activities, creating an auditable trail of financial transactions. In parallel, I tried to demonstrate how farmers could input crop production data on the blockchain, enabling the improved tracking of food origin, quality and market prices.

One of the 14 investment professionals interviewed initially engaged with the idea and acknowledged the benefits of continuous tracking and verification that blockchain offers, stating, *"blockchain can maintain databases at different nodes instead of a central location. Any of the stakeholders can capture the growth data"* (Participant 5). However, concerns arose regarding the implementation challenges and the required participation of multiple stakeholders in accessing and filling in data on the blockchain. Another participant expressed concern, saying, *"There is a need for technological literacy among investment teams to effectively utilise blockchain technology for impact measurement"* (Participant 8).

One major concern raised by the respondents was the practicality of implementing such a solution. They questioned the feasibility of involving all stakeholders and highlighted the need for technological literacy among investment teams. One participant shared their doubts, stating, *"The practicality of using blockchain technology in impact measurement is questionable. Investment teams need to understand and have the skills to work with this technology effectively"* (Participant 12). Additionally, concerns were raised about data security and the potential sharing of beneficiaries' information with investors. Another participant expressed doubt, stating, "*Data security is a significant concern when it comes to using blockchain for impact measurement. We need to ensure that beneficiaries' information is protected and not shared without their consent*" (Participant 10). The potential affordances I could see for blockchain technologies were not shared by the majority of my colleagues.

4.2.3.2 Proposing Simpler Technological Solutions

Furthermore, the respondents emphasised the limited accessibility of such solutions to the end beneficiaries, particularly those in rural areas and townships. They highlighted the importance of considering the technological constraints and the high cost of data in South Africa. One participant suggested alternative innovations, stating, *"We need to think about solutions that are accessible to all beneficiaries, even those in remote areas. Technologies like WhatsApp, drone surveys, and beneficiary-accessible apps could be explored as alternative data collection methods"* (Participant 3). These suggestions aimed to address the limitations posed by limited internet access and smartphone penetration among underprivileged populations. Another participant echoed this sentiment, saying, *"We need to find solutions that are cost-effective and can capture impact data from the end beneficiaries effectively. Technologies like WhatsApp and beneficiary-accessible apps can play a crucial role in this regard"* (Participant

6).

Overall, the majority of participants were not convinced by the blockchain solution presented and did not share my enthusiasm for the blockchain affordances I attempted to showcase, citing various reasons such as lack of familiarity with the technology and concerns about its practicality and understandability among investment teams. One participant emphasised the need for alternative solutions, stating, *"We should investigate other approaches that are accessible, cost-effective, and can capture impact data directly from the end beneficiaries"* (Participant 1).

To summarise, although my literature review demonstrated that blockchain technology could offer potential affordances for improving impact evaluation, the empirical findings indicate scepticism towards its practical implementation and resistance to embracing the potential affordances I presented to them through the Root Capital example. In contrast, participants emphasised the importance of considering the technological constraints, cost-effectiveness and accessibility for end beneficiaries. Alternative innovations such as WhatsApp, drone surveys, videos of interviews, and beneficiary-accessible apps were suggested as potential solutions that align with the specific context and challenges faced by impact funds in South Africa.

4.3 Discussion

4.3.1 Making Sense of Impact Investing Ambivalence

Bridging Divides: Global Influence and Local Action in Impact Investing

The ambivalence towards impact investing among South African investment professionals offers a comprehensive exploration of the complex interplay between global standards and local nuances. This section explores the dual influence of global trends in SRI and the unique socioeconomic landscape of South Africa, echoing Giamporcaro and Viviers' (2014) observation of the country as a nexus of internal and external forces shaping SRI practices. The shift from traditional philanthropy to impact investing underscored by the transition to investments that deliver both financial returns and social impact, reflects a broader mindset change. Although the shift was influenced by global movements, it is deeply integrated with South Africa's historical and ongoing initiatives like Black economic empowerment and the NDP (Giamporcaro & Viviers, 2014; Viviers et al., 2011). This observation aligns with the insights gleaned from the Rockefeller study, which employed a comprehensive methodology

to investigate the state of impact investing.

The Rockefeller study, which served as a crucial point of reference, primarily gathered its data from a combination of online and hardcopy documents, alongside conducting interviews with over 100 leaders in the field of impact investing across 11 different countries. Although the study did encompass a diverse array of nations, it is essential to note that a significant proportion of the data sources and interviewees were concentrated in the Global North, particularly in the United States and the United Kingdom (GRIIS, 2010). This geographical skew raises the possibility of an inherent bias towards the perspectives and practices prevalent in the Global North.

This further highlights the critical role of South African practitioners in adapting impact investing to local contexts. Their deep understanding of the country's challenges enables them to tailor impact investing strategies with which to meet specific local needs, leveraging local frameworks for impactful collaboration within the country. Their expertise in mobilising private capital for local issues suggests that impact investing can be effectively tailored to address the specific needs of the South African context, leveraging localised frameworks for meaningful collaboration with impact professionals within the country (McCallum & Viviers, 2020)

To bridge the Global North/Global South divide, it is crucial for South African investors to actively engage in aligning existing policies with global standards without losing sight of local realities. The integration of global impact investing trends with local socio-political values presents a nuanced landscape where impact investing can contribute positively to societal change, provided there is a concerted effort towards understanding and mitigating the inherent challenges of implementation and widespread adoption. An example is the adoption of the South African Green Finance Taxonomy, which was launched on 1 April 2022, inspired by the EU model. This is a testament to the influence of global standards on local practices.

However, the involvement of the large asset manager being studied played a crucial role in piloting the South African green taxonomy, serving as a significant proof point cited by the participants of how global frameworks are transferred to the local context. The "Briefing Paper on the Development Process for the South African Green Finance Taxonomy" provides a detailed account of this initiative, underscoring the pilot's objectives and the subsequent

insights gained. These insights are critical in understanding how the South African financial ecosystem can leverage global standards to foster a more sustainable investment landscape that is responsive to the unique challenges and potentials within South Africa (Development Bank of Southern Africa, 2022). Such initiatives underscore the significant role of local actors in interpreting and implementing global standards to suit regional contexts, a crucial step in overcoming the ambivalence towards impact investing (Giamporcaro & Viviers, 2014).

In addressing these challenges, the profound local expertise and initiatives showcased by South African practitioners emerge as pivotal. They emphasised the importance of localised strategies in mobilising private capital for social and environmental goals, reinforcing the argument for a nuanced approach to impact investing that bridges the global-local divide (Ducastel & Anseeuw, 2020).

4.3.1.1 From Niche to Mainstream: The Evolution of Impact Investing

The concept of impact investing has undergone a transformative journey, initially emerging as a promising private sector solution to address social and environmental issues, surpassing the efforts of government and civil society actors (Barman, 2015). However, the findings of this study indicate a palpable tension between impact investing as a niche practice and its potential to make significant strides towards becoming widely accepted.

Amidst the growing interest in impact investing, some participants raised concerns about its potential to overshadow traditional mainstream investing within the local industry. The question of whether impact investing should entirely replace mainstream investing emerged as a point of contemplation.

Although impact investing has witnessed substantial growth and is now recognised as one of the fastest-growing responsible investment strategies globally (McCallum & Viviers, 2019), it seems unlikely that it will fully replace mainstream investing in South Africa anytime soon. Scepticism prevails among participants regarding impact investing's ability to generate comparable financial returns to mainstream investments. Notably, one participant underscored the importance of distinguishing between impact and non-impact deals, asserting that impact investing should not sacrifice potentially more lucrative opportunities merely to fulfil an impact mandate. This emphasises the need for impact investments to demonstrate their

capacity to deliver favourable returns while aligning with the specific objectives and preferences of investors.

Instead of entirely replacing mainstream investing, the path forward lies in integrating impact principles into mainstream investment practices. As impact investing continues to mature, it holds the potential to bridge the gap between the niche and mainstream, acting as a catalyst for positive change within the broader investment landscape (Bugg-Levine & Goldstein, 2009). The concept of market-based solutions to address social and environmental challenges is not entirely new, as previous funding innovations, such as microfinance, community development, and clean technology, have pursued similar goals (Godeke & Pomares, 2009; Monitor Institute, 2009; Morgan et al., 2010)

The evolving societal interest in leveraging enterprise and investment resources to tackle social and environmental challenges presents an opportune moment to integrate impact investing principles more holistically. By striking a balance and acknowledging the unique value propositions of both impact and mainstream investing, impact investing can pave the way for a more sustainable and inclusive investment landscape.

Unravelling the Intricacies of Impact Measurement and Evaluation - Enhancing Impact Data Management: Strategies for Investors

Within the realm of impact investing, the question of how to effectively manage data collection at the investor level has generated significant debate.

The discussion around the delegation of impact evaluation to dedicated ESG and impact specialists versus integrating impact considerations into investment processes is nuanced and multifaceted. The article by Zhang and Wu (2023) offered insights that can be leveraged to strengthen this argument. They explore the role of investment analyst coverage in enhancing corporate ESG performance, indicating the importance of external governance mechanisms in shaping corporate non-financial behaviour and promoting sustainable development. This suggests that both dedicated specialists and integrated approaches have roles in improving ESG outcomes, highlighting the complexity of optimising impact evaluation in investment processes.

It is worth noting that for investment professionals to engage comprehensively in the TOC

process, they must possess not only the requisite knowledge but also the time and bandwidth to devote to this endeavour. The importance of data-driven decision-making in impact investing, as exemplified in the case studies presented by Verrinder, Zwane, Nixon and Vaca (2018), highlights the crucial role of these professionals in navigating complex impact evaluations. In situations where these conditions cannot be met, it becomes logical to consider the role of an impact or ESG analyst in carrying out the task of impact evaluation. Jackson (2013) further underscored the need for specialised expertise in evaluating impact investments where it matters most, interrogating the TOC in impact investing. Ultimately, the focus should shift from who performs the evaluation to ensuring its effectiveness. The literature review provides substantial support for the idea that impact professionals should play a pivotal role in integrating impact considerations into investment decisions, emphasising their expertise in this regard (Jackson, 2013; Verrinder et al., 2018).

However, the literature also sheds light on a critical constraint in this context; namely, the limited resources available for impact evaluation. Frequently, a single impact analyst is tasked with overseeing all impact investments within a fund (Bannick & Goldman, 2012). In recognition of this challenge, participants in the debate acknowledged the importance of striking a balance that considers various factors, including the fund's investment strategy, the expertise available and the resources at hand.

Based on the findings, a consensus emerged that impact investing is most effectively integrated into investment processes when investment analysts and portfolio managers are directly involved in the impact evaluation process (O'Flynn & Barnett, 2017). This approach is a seamless end-to-end integration that most participants agreed was not only efficient but effective. Furthermore, it transforms the impact data collection process into an extension of existing procedures rather than a distinct and burdensome task, thus simplifying the experience for both investment professionals and portfolio companies alike.

TOC: Lost in Translation?

Data collection in impact investing presents a significant challenge, compelling investment professionals to navigate not only financial returns but also the broader social and environmental impacts of their investments. This complexity is echoed in the sentiments of participants who voiced frustration with the fragmented approach to impact measurement,

underlining the intricacy of evaluating impact in investing scenarios. Despite the inclusion of terms such as impact outputs versus outcomes, the TOC and the distinction between impact measurement and evaluation in the interview guidelines, these concepts were notably absent in participants' responses. This gap highlights a prevalent ambiguity in distinguishing between impact evaluation and measurement, curtailing deeper discussions on the TOC (Bouri, 2011).

The divergence in understanding among investment professionals concerning key impact investing concepts underscores the challenge of bridging theoretical frameworks with practical applications. This disparity may stem from the complexity of impact evaluation tools, the drive for standardised metrics that may not fit the unique contexts of impact projects and the constraints of time and resources which prompt professionals to seek simpler evaluation methods. These factors collectively contribute to a preference for straightforward approaches, potentially overlooking the nuanced differences between outputs and outcomes, and the integral TOC (Antadze & Westley, 2012)

Drawing from my involvement in the 5th edition of the Investing for Impact Barometer (Giamporcaro et al., 2017), I observed first-hand the nuances of impact investing and the TOC in how African fund managers implemented these concepts, nuances that were not as apparent to my colleagues. This discrepancy in familiarity emphasises the need for a more inclusive and accessible approach to impact investing terminology and methodologies, questioning whether the current language and tools are as effective outside the specialised field of experienced ESG and impact investing professionals.

In conclusion, the journey through this research has illuminated the critical gaps in communication and perception within the field. Addressing these gaps requires a concerted effort to make impact evaluation more comprehensible and inclusive, encouraging the broader adoption of impactful practices across the investment profession. This endeavour calls for a shift from merely fitting impact investing within traditional frameworks to a transformative approach that aligns investment strategies with environmental and social results from the outset (Garland & Beach, 2023).

The Critical Timing of Impact Measurement in Investment Decisions

In the course of the discussions, the significance of considering the timing of impact measurement emerged as a central and resonant theme among the participants. Notably, participants displayed sagacity in emphasising that the realisation of impact often requires a substantial period of time and that hasty measurement can yield incomplete or even misleading results. To ensure the veracity of reporting and mitigate the risk of greenwashing, participants proposed the adoption of a more patient approach by postponing the collection of impact data. They suggested that the emphasis should be placed on evaluating impact outcomes that can be effectively assessed at least a year or two after the initial investment or intervention has been executed. This perspective aligns harmoniously with the findings in the existing literature, which contend that impact evaluation typically occurs at the exit stage of an investment (Ebrahim & Rangan, 2014). Such an approach allows investment professionals to comprehensively appraise the impact generated by an investment, as opposed to mere impact measurement, which may track outputs throughout the entire lifecycle of an investment. This alignment with the literature underscores the commonality of concepts between the perspectives of investment professionals and existing research, despite differences in the language employed to articulate these ideas. This linguistic divergence offers a plausible explanation for the apparent disconnect observed between the interview protocol and the resultant findings, highlighting the significance of precise language usage in academic discourse.

In my literature review, I delved into various evaluative tools for impact assessment, aiming to identify methodologies that suit the specific nature of long-term impact objectives. For instance, the South African asset manager specific impact funds entail objectives with prolonged timelines for materialisation, such as job creation, which typically occurs as businesses grow and mature. To capture the full range of outcomes and effects over time, the use of longitudinal studies, RCTs and other evaluation methods, as discussed in the literature review (Choda & Teladia, 2018), becomes indispensable.

By employing the appropriate impact evaluation tools, some of the frustrations expressed by participants can be effectively addressed. Certain evaluation methods are designed explicitly to deal with the challenge of measuring long-term impact accurately (Flynn & Barnett, 2017). By adopting these suitable tools, impact professionals can gain a comprehensive understanding of the outcomes and effects of their initiatives over extended periods, providing a more robust foundation for decision-making and reporting.

Overcoming Scepticism: Blockchain's Role in Impact Evaluation

The pursuit of 'true impact' and the demand for evidence that aligns with the experiences of end beneficiaries emerged as prominent themes during the interviews within the impact investing field. Participants highlighted the universal challenge of acquiring direct impact data from beneficiaries, often hindered by barriers such as limited digital access and trust deficits between beneficiaries and impact funds.

Blockchain technology offers features that can improve impact evaluation in impact investing. However, despite recognising blockchain's potential for transparent and secure transactions, participants expressed scepticism about its practical implementation. Concerns revolve around the technology's user-friendliness, cost-effectiveness, and contextual appropriateness, necessitating a closer examination of its affordances to fully realise its potential in impact measurement (Du et al., 2019).

Shin and Hwang (2020) provided valuable insights into this discourse by examining how the inherent features of blockchain, such as security and traceability, influence digital affordance and, consequently, user trust and satisfaction. Their results underscore the significance of blockchain's transparency and reliability in shaping users' trust, which is a critical factor in user experience that could play a substantial role in the acceptance and effectiveness of blockchain for impact evaluation (Shin & Hwang, 2020).

The findings of Shin and Hwang (2020) align with the practical concerns of industry professionals. The empirical data suggest hesitancy towards embracing blockchain solutions, reflecting apprehensions about the familiarity, practicality and understandability of blockchain technology among investment teams. This hesitancy underscores the need for accessible, cost-effective solutions capable of capturing impact data that beneficiaries can trust and directly engage with.

Giamporcaro and Kuk (2024) further illuminated this discussion by introducing the concept of "affordances-in-practice", which examines how blockchain's potential can be actualised through specific practices in sustainable investment. They identify three cross-level transparencies—verification, accountability and network efficiency—that blockchain can

provide, enhancing the effectiveness of sustainable investment practices. This perspective aligns with the practical concerns raised by industry professionals, as it highlights how blockchain can address issues of trust and transparency in impact evaluation. They emphasised that although blockchain technology offers significant potential, its implementation is contingent on overcoming socio-cognitive barriers and institutional hurdles (Giamporcaro & Kuk, 2024). These include educational inertia and the need for standardisation and regulatory frameworks, which are crucial to the technology's adoption in impact investing. This reinforces the need for solutions that are technologically advanced, practically feasible and contextually appropriate.

In light of these considerations, alternative technologies that are more aligned with the context and challenges of South African impact funds were proposed. These include mobile-based communication tools, drone surveys and user-friendly apps tailored to beneficiary needs; approaches that could offer more practical and immediate benefits in capturing and reporting impact.

In summary, although blockchain's theoretical affordances for impact evaluation are acknowledged, the discussions indicate a cautious approach to its adoption in practice. Participants emphasised the importance of integrating technologies that are mindful of costs, accessibility, and the direct inclusion of end beneficiaries. Alternative methods proposed in the discussion reflect a grounded approach to the technological challenges faced by impact funds in South Africa.

Future research should investigate the effectiveness of these alternative technologies and methods in impact evaluation. Such studies could illuminate the pathway for impact funds to effectively measure and demonstrate the social and environmental outcomes of their investments, considering the critical role of trust as highlighted by Shin and Hwang (2020).

The interplay between blockchain's perceived affordances and the practical realities of impact evaluation presents a complex challenge. These insights contribute to a nuanced understanding of blockchain technology's role in supporting impact evaluation within impact funds, striving for sustainable and responsible investment outcomes.

By integrating the perspectives of Mota's (2021) and Giamporcaro and Kuk's (2024) I show that perspective, the scepticism towards blockchain can be seen through the lens of affordances, which suggests that the properties of technology such as blockchain should not be considered static but dynamic, emerging through use and practice. This conceptualisation aligns with the practical, user-centred reality of human-technology interaction, emphasising the importance of understanding blockchain's affordances as fluid and context-dependent.

Therefore, when considering blockchain's role in impact investing, it is crucial to adopt a lens that captures the fluidity and context-dependent nature of affordances. Such a perspective can deepen our understanding of how blockchain's capabilities may be harnessed for more effective impact evaluation, aligning with a socio-material viewpoint that recognises the interwoven complexities of digital environments. In conclusion, Mota's (2021) insights into affordances and Giamporcaro and Kuk (2024) conceptualisation of affordance as practice in the specific context of blockchain and sustainable investment present a new perspective on how technology interacts with human efforts that can be applied further to the impact investment context studied here.

Change Management: Reorienting ESG and Impact Leadership

In addressing the initial question of how prepared investment professionals in South Africa are to effectively utilise impact evaluation tools within the realm of impact investing, this reflection digs into the crucial role of change management and the strategic position of the Head of ESG and Impact. Through the lens of the findings and insights gathered from the interview process, it becomes apparent that transitioning investment professionals into proper impact evaluation within impact investing requires a nuanced approach that transcends mere technological adoption.

The challenges encountered suggest that the crux of the matter lies not in the availability of proper impact evaluation tools but in a profound transformation of mindset and organisational culture. This echoes the insights from Buchter (2021), who illustrates the power of insider activists in using implementation resources to compel organisational change towards inclusive practices. Applying Buchter's findings, it is evident that as the Head of ESG and Impact, there is a unique opportunity to act as an insider activist, leveraging implementation resources to

foster a culture that embraces true impact investing underpinned by effective impact evaluation processes (Buchter, 2021).

Chandler's (2014) examination of organisational susceptibility to institutional complexity and the adoption of the Ethics and Compliance Officer position provides a parallel to the current scenario. Chandler's distinction between the adoption of positions and the depth of implementation underscores the necessity of embedding impact evaluation within the fabric of the organisation, rather than as a superficial addition to existing practices (Chandler, 2014).

Bringing in complex language and tools adopted from the advanced field of impact investing as someone who has been in that field for a long time can sometimes dilute transformative initiatives into conventional operations, which may not connect with the people who are only starting off in this field and need proper and slow transformation not just in process but in belief and thinking. A genuine transformational approach to impact investing would thus be one that integrates environmental and social results from the onset of fund design (Wright & Nyberg, 2017).

Sonenshein's (2016) exploration of the role of social change agents in overcoming issues of illegitimacy and equivocality sheds light on the importance of meaning-making tactics in gaining support for new initiatives. In the context of impact investing, the Head of ESG and Impact can employ similar tactics to navigate the perceived illegitimacy or equivocality surrounding impact evaluation, thereby fostering a supportive environment for change (Sonenshein, 2016).

Lastly, I incorporate Nigam and Dokko's (2019) study on career resourcing and the emergence of new professions, which offers a valuable perspective on the collective actions required to drive effective impact evaluation both from ESG and impact analysts as well as investment professionals. Effective collaboration where ESG and impact analysts are treated as equal members of the investment teams, with their advisory work carrying equal weight, will create an acceptable approach within the investment community. Their findings suggest that through deliberate career actions and the accumulation of resources, professionals can drive the emergence of impact investing as a legitimate and respected field (Nigam & Dokko, 2019).

In conclusion, the transition to impact investing requires a multifaceted approach that addresses both the technological and human dimensions of change. Drawing on the insights from the literature, it is clear that effective change management, insider activism and the cultivation of a supportive organisational culture are pivotal in transforming investment practices. This reflection underscores the necessity of a theory of transformation that fundamentally reimagines investment strategies to prioritise social and environmental outcomes alongside financial returns.

5 Conclusion and Recommendations

5.1 Introduction

This chapter serves as the concluding segment in which the key findings and insights gleaned from the research are synthesised into a cohesive conclusion. This chapter encapsulates the essence of the study and provides actionable recommendations and lays the groundwork for future research. In this chapter, I examine the effectiveness of impact evaluation methods, particularly focusing on the TOC framework and the emerging role of blockchain technology. I offer a critical analysis of how these tools and methodologies are currently utilised in the area of impact investing and how they can be refined and enhanced to improve efficiency and accuracy. This chapter also examines the challenges experienced by investment professionals and their readiness to adopt innovative technologies like blockchain, addressing the nuances of their integration into existing investment evaluation systems. The recommendations presented here are intended to augment the effectiveness of impact evaluation practices while the section on future research opens new avenues for inquiry, particularly in understanding the balance between traditional skills and the need for innovation in impact investing.

5.2 Conclusion

The findings of this study underscore the significance of rigorous impact evaluation methods. It is evident that while the TOC framework is extensively utilised, there are areas that necessitate further refinement and enhancement. The introduction of blockchain technology, as discussed, holds substantial promise in addressing these gaps. Blockchain's inherent properties, such as decentralisation, immutability and transparency, align well with the requirements of accurate and reliable impact evaluation, providing a new dimension to traditional methods. Moreover, this thesis has drawn a clear distinction between impact evaluation and impact measurement, emphasising the importance of understanding the difference between outcomes and outputs. This distinction is crucial for impact investors who aim to assess the real-world effects of their investments accurately.

The results also highlight the challenges and level of readiness of investors to adopt new technologies like blockchain. Although blockchain offers numerous advantages, its integration

into existing systems requires careful consideration of various factors, including technological literacy, data security and stakeholder collaboration.

In conclusion, this is a contribution to the growing body of knowledge in impact investing by providing insights into the effective implementation of TOC and the potential role of blockchain technology. It underscores the need for continuous innovation and adaptation in impact evaluation methods to keep pace with the evolving demands of the field. As impact investing continues to grow, it is imperative for professionals in this sector to embrace new technologies and methodologies to ensure that their investments create meaningful and measurable social and environmental impacts. This study paves the way for future research in this area, particularly in the practical application and scalability of blockchain in diverse impact investing contexts.

5.3 Key recommendations

My recommendations based on the findings of this study. are intended to help investment professionals and impact fund managers improve impact evaluation by using innovative technologies like blockchain while addressing practical challenges and specific needs. These recommendations are meant to be practical and flexible ways to assess the results of impact investments. In this study, I consider the different goals and challenges that investors encounter in the field of impact investing. The goal is to empower investors to use these tools meaningfully while respecting the diversity in values and objectives across the field.

Develop a Comprehensive Change Management Strategy: Create a change management plan that explicitly incorporates the TOC as a central component of your organisation's shift towards more impact-focused investing. This strategy should outline steps for sensitising the team to the value of impact investing, demonstrating how TOC aligns with and enhances the company's investment strategy. Include training sessions, workshops and regular updates to ensure the team understands the importance of impact investing and how TOC facilitates this transition without being a distraction. The goal is to foster a culture that sees TOC as a tool for enhancing the company's offerings and maintaining relevance in a changing market.

Communicate the Business Case for Impact Investing and TOC Integration: To ensure that the TOC is not viewed as an overwhelming undertaking, develop communication materials that highlight the tangible benefits of impact investing and TOC for the business. This includes showcasing success stories, potential for market differentiation, and how impact investing can lead to the discovery of new investment opportunities. Emphasise that integrating TOC into the business model is a strategic move that strengthens the company's value proposition and ensures long-term relevance and success in the evolving landscape of investment.

Enhancing Technological Literacy: There is a need to increase technological literacy among impact investing professionals, particularly regarding blockchain technology. Educational programmes and workshops should be implemented to familiarise these professionals with blockchain and its potential applications in impact evaluation.

Integrating Blockchain with Traditional Practices: There is scepticism towards the practical implementation of blockchain in impact evaluation. To address this, I recommend the adoption of a phased integration approach, where blockchain technology is gradually introduced and aligned with existing impact evaluation processes. This phased approach involves integrating blockchain into current evaluation frameworks and methodologies step-by-step to ensure compatibility and effectiveness. This will help in mitigating resistance and enhancing acceptance among professionals.

Developing Context-Specific Blockchain Solutions: Given the diversity of impact investing contexts, especially in regions like South Africa, blockchain solutions that are tailored to local needs and challenges should be developed. These solutions should consider factors like internet accessibility, data costs and local technological infrastructure.

Addressing Data Security and Privacy Concerns: Given concerns about data security and privacy, especially when dealing with sensitive beneficiary information, the establishment of stringent protocols and the use of encryption and anonymisation techniques in blockchain solutions to protect individual privacy are recommended.

Exploring Alternative Technologies: In addition to blockchain, other accessible and cost-effective technological solutions should be explored, such as mobile applications, SMS-based

data collection and drone surveys, especially for collecting data from beneficiaries in remote areas.

5.4 Future Research

In light of my findings, which focuses particularly on the transition of investment professionals towards more effective impact measurement, I identify an intriguing avenue for future research. It is posited that the reliance on existing skill sets and traditional investment methodologies might inadvertently hinder innovation within the impact investing sector. This thesis has uncovered a fundamental tension between the comfort of established skills and the necessity for innovative approaches in impact measurement. In the future, researchers could further analyse this dynamic, exploring whether the resistance to new methodologies, such as blockchain integration, is rooted in a dependency on familiar skills and traditional practices. This investigation could significantly contribute to understanding the interplay between professional expertise, adaptability, and innovation in the field of impact investing.

6 Bibliography

Abor, J. Y. (2017). Entrepreneurial finance for MSMEs. https://doi.org/10.1007/978-3-319-34021-0

Acre. (2021). Outcomes aligned investing - Acre whitepaper-2.

Monitor Institute. (2009). A design for Catalyzing An emerging industry. www.monitor.com.

Advisors, R. P., & Roadmap, P. (2019). Philanthropy.

Alkire, S., & Santos, M. E. (2013). A multidimensional approach: Poverty measurement & beyond. *Social Indicators Research*, *112*(2), 239–257. http://www.jstor.org/stable/24719184

Alvesson, M., Hardy, C., & Harley, B. (2008). Reflecting on reflexivity: Reflexive textual practices in organization and management theory. *Journal of Management Studies*, *45*(3), 480–501. https://doi.org/10.1111/j.1467-6486.2007.00742.x

Antadze, N., & Westley, F. R. (2012). Impact Metrics for Social Innovation: Barriers or Bridges to Radical Change? *Journal of Social Entrepreneurship*, *3*(2), 133–150. https://doi.org/10.1080/19420676.2012.726005

Arjaliès, D.-L., & Watson, T. (2022). Beware the convergence of SRI and impact investing. *Ivey Business Journal*. https://iveybusinessjournal.com/beware-convergence-of-sri-and-impact-investing/

Baker, E., & De Souza, R. (2019). Impact measurement and management in impact investing: A review of the literature. *Journal of Sustainable Finance & Investment*, 9(1), 1–23.

Bannick, M., & Goldman, P. (2012). Priming the pump: The case for a sector based approach to impact investing.

Barman, E. (2015). Of principle and principal: Value plurality in the market of impact investing. *Valuation Studies*, *3*(1), 9–44. https://doi.org/10.3384/vs.2001-5592.15319

Bennot, A. (2021, November 29). Finding exposure to impact themes on the JSE not as easy as you might think. *FA News*. https://www.fanews.co.za/article/investments/8/general/1133/finding-exposure-to-impact-themes-on-the-jse-not-as-easy-as-you-might-think/32796

Bouri, A. (2011). How standards emerge: The role of investor leadership in realizing the potential of IRIS. Innovations: *Technology, Governance, Globalization*, *6*(3), 117–131. https://doi.org/10.1162/inov_a_00088

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.

Bugg-Levine, A., & Goldstein, J. (2009). Impact investing: 30–41.

Buchter, L. (2021). Escaping the ellipsis of diversity: Insider activists' use of implementation resources to influence organization policy. *Administrative Science Quarterly*, *66*(2), 521–565. https://doi.org/10.1177/0001839220963633

Camacho Garland, G., & Beach, D. (2023). Theorizing how interventions work in evaluation: Process-tracing methods and theorizing process theories of change. *Evaluation*, *29*(4), 390–409. https://doi.org/10.1177/13563890231201876

Casasnovas, G. (2023). When states build markets: Policy support as a double-edged sword in the UK social investment market.

Chandler, D. (2014). Organizational susceptibility to institutional complexity: Critical events driving the adoption and implementation of the ethics and compliance officer position. *Organization Science*, *25*(6), 1722–1743. http://dx.doi.org/10.1287/orsc.2014.0927

Chen, Y., & Volz, U. (2021). Scaling up sustainable investment through blockchain-based project bonds. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3839956

Chiappini, H., Marinelli, N., Jalal, R. N.-U.-D., & Birindelli, G. (2023). Past present and

future of impact investing and closely related financial vehicles: a literature review. *Sustainability Accounting, Management and Policy Journal*, *14*(7), 232–257. https://doi.org/10.1108/SAMPJ-09-2022-0471

Choda, A., & Teladia, M. (2018a). Conversations about measurement and evaluation in impact investing. *African Evaluation Journal*, *6*(2), 1–11. https://doi.org/10.4102/aej.v6i2.332

Collis, J., & Hussey, R. (2014). Writing up the research. In *Business Research* (pp. 297–330). Palgrave.

Corley, K. G., & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, *36*(1), 12–32. https://doi.org/10.5465/amr.2009.0486

Craig, B., & Wayne, H. (2016). Actant affordances: A brief history of affordance theory and a Latourian extension for education technology research. *Cristal*, *4*(1), 55–73. https://doi.org/10.14426/cristal.v4i1.50

Cunningham, W. M. (2018). William Michael Cunningham on impact investing [Blog post]. *Impact Investing*. https://www.impactinvesting.online/2018/11/william-michael-cunningham-on-impact.html

Department of Trade and Industry. (2003). Broad-based Black economic empowerment act 53 of 2003. *The DTI*. https://www.thedti.gov.za/economic_empowerment/BEEAct-2003-2004.pdf

Department of Trade and Industry. (2004). Codes of good practice. *The DTI*. https://www.thedti.gov.za

Development Bank of Southern Africa. (2022). Briefing paper: Development process for the South African green finance taxonomy.

Du, W. (Derek), Pan, S. L., Leidner, D. E., & Ying, W. (2019). Affordances, experimentation

and actualization of FinTech: A blockchain implementation study. *Journal of Strategic Information Systems*, *28*(1), 50–65. https://doi.org/10.1016/j.jsis.2018.10.002

Ducastel, A., & Anseeuw, W. (2020). Impact investing in South Africa: Investing in empowerment empowering investors. *Historical Social Research*, *45*(3), 53–73. https://doi.org/10.12759/hsr.45.2020.3.53-73

Ebrahim, A., & Rangan, V. K. (2014). What impact? A framework for measuring the scale and scope of social performance.

Espeland, W. N., & Stevens, M. L. (1998). Commensuration as a social process. *Annual Review of Sociology*, *24*, 313–343.

Fitzgerald, M. (2023, October 25). Rymedi raises $9M to expand healthcare data transfer software. *Upstate Business Journal*. https://upstatebusinessjournal.com/tech-design/greenville-sc-rymedi-raises-9m-to-expand-healthcare-data-transfer-software/

Flynn, P. O., & Barnett, C. (2017). Evidence report. 222.

Galen, D., Brand, N., Boucherle, L., Davis, R., Do, N., El-Baz, B., … Lee, J. (2018). Blockchain for social impact. Stanford GSB Center for Social Innovation, 1–80.

Gartenberg, C., & Prat, A. (2021). The economics of social impact measurement. *Journal of Economic Literature*, *59*(1), 98–139.

Gaver, W. W. (1991). *Technology affordances*. 79–84.

Giamporcaro, S., & Viviers, S. (2014). Socially responsible investment in the 21st century: Does it make a difference for society? Emerald Group Publishing Limited

Giamporcaro, S., Dhlamini, X., & Makhabane, T. (2017). The African investing for impact barometer 2017 (5th ed.). Bertha Centre for Social Innovation and Entrepreneurship, UCT Graduate School of Business. https://gsbberthacentre.uct.ac.za/researching/the-african-investing-for-impact-barometer-edition-5-2017/

Giamporcaro, S., & Kuk, G. 2024. Affordances-in-practice: Unravelling Blockchain-for-good in Sustainable Investment. *Information Technology & People*. https://doi.org/10.1108/ITP-05-2022-0349

Gibson, J. J. (1966). *The senses considered as perceptual systems*. Houghton Mifflin.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15–31.

Gladwyn, L. (2023, July 11). Seizing the moment: Impact investing and technology as a catalyst for change. *Ventureburn*. https://ventureburn.com/2023/07/impact-investing-and-technology-as-a-catalyst-for-change/

Gok, I. Y. (Ed.). (2021). *Handbook of research on global aspects of sustainable finance in times of crises*. IGI Global.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Sage Publications.

Hajda, D., & Zhang, J. (2018). *Blockchain for social impact*. https://blockchainforsocialimpact.com/members/ixo-foundation/

Halaburda, H. (2018). Blockchain revolution without the blockchain. *Communications of the ACM*, *61*(7), 27–29.

Han, C. S., Lotfi Ghahroud, M., Park, M. J., & Ghassemi Nejad, J. (2023). A new blockchain investment and energy certificate platform. Cogent Engineering, 10(2). https://doi.org/10.1080/23311916.2023.2260226

Höchstädter, A. K., & Scheck, B. (2015). What's in a name: An analysis of impact investing understandings by academics and practitioners. *Journal of Business Ethics*, *132*(2), 449–475.

In, N., & Andersen, B. S. (2017). *Community investment funds*. 1–80.

Jackson, E. T. (2012). *Accelerating impact achievements, challenges and what's next in building*.

Jackson, E. T. (2013). Interrogating the theory of change: Evaluating impact investing where it matters most. https://doi.org/10.1080/20430795.2013.776257

Johnson, R., Mans-Kemp, N., & Erasmus, P. D. (2019). Assessing the business case for environmental, social and corporate governance practices in South Africa. *South African Journal of Economic and Management Sciences*, *22*(1), 1–15.

Kalfoglou, Y. (2021). *Blockchain for business: A practical guide for the next frontier* (1st ed.). https://doi.org/10.4324/9781003170815

Karlan, D., & Appel, J. (2011). *More than good intentions: How a new economics is helping to solve global poverty*. Dutton.

Kshetri, N. (2017). Will blockchain emerge as a tool to break the poverty chain in the Global South. *38*(8), 1710–1732.

Leeuw, G. (2023, July 11). Seizing the moment: Impact investing and technology as a catalyst for change. *VentureBurn*. https://ventureburn.com/2023/07/impact-investing-and-technology-as-a-catalyst-for-change/

Luisa M, Strauss., & Norberto, H. (n.d.). A framework to analyze affordances when using big data and analytics in organizations: A proposal. https://doi.org/10.1590/1678-6971/eramr190182

Mathew, M. (2022). A case study of global agency innovation rankings: Implications on current definitions of innovation. https://doi.org/10.21511/ppm.16(3).2018.22

McCallum, S., & Viviers, S. (2019). Exploring key barriers and opportunities in impact investing in an emerging market setting. 1–11.

McCallum, S., & Viviers, S. (2020). Exploring key barriers and opportunities in impact investing in an emerging market setting. *South African Journal of Business*

Management, *51*(1), a1601. https://doi.org/10.4102/sajbm.v51i1.1601

Mikalef, P., Boura, M., Lekakos, G., & Krogstie, J. (2019). Big data analytics and firm performance: Findings from a mixed-method approach. *Journal of Business Research*, *98*, 261–276. https://doi.org/10.1016/j.jbusres.2019.01.044

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage.

Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, *10*(1), 3–5.

Morgan, J. P., Research, G., O'donohoe, N., Leijonhufvud, C., Saltuk, Y., Bugg-Levine, A., & Brandenburg, M. (2010). Global Research Impact Investments An emerging asset class Rockefeller Foundation.

Mota, S. (2021). Dispensing with the theory (and philosophy) of affordances. *Theory & Psychology*, *31*(4), 533–551. https://doi.org/10.1177/0959354320980534

Mougayar, W. (2016). The business blockchain: promise, practice, and application of the next Internet technology. John Wiley & Sons.

Nair, M., & Sutter, D. (2018). The blockchain and increasing co-operative efficacy. *The Independent Review*, *22*(4), 529–550.

Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. www.bitcoin.org

National Planning Commission. (2011a). Diagnostic overview. Pretoria, South Africa: The Presidency of the Republic of South Africa.

National Planning Commission. (2011b). National development plan: Vision for 2030. Pretoria, South Africa: The Presidency of the Republic of South Africa.

Nigam, A., & Dokko, G. (2019). Career resourcing and the process of professional emergence. *Academy of Management Journal*, *62*(4), 1052–1084. https://doi.org/10.5465/amj.2015.0038

Norman, D. A. (1999). Affordance, conventions, and design. *Interactions*, *6*(3), 38–43.

https://doi.org/10.1145/301153.301168

O'Donohoe, N., Leijonhufvud, C., Saltuk, Y., Bugg-Levine, A., & Brandenburg, M. (2010). *Impact investments: An emerging asset class*. J.P. Morgan Global Research.

Peersman, G. (2014). Overview: Data collection and analysis methods in impact evaluation. *Methodological Briefs: Impact Evaluation*, *10*.

Reeder, N., Colantonio, A., Loder, J., & Jones, G. R. (2015). Measuring impact in impact investing: An analysis of the predominant strength that is also its greatest weakness. 0795. https://doi.org/10.1080/20430795.2015.1063977

Saldana, J. (2014). *Thinking qualitatively: Methods of mind*. Sage Publications.

Saunders, M., Lewis, P., Thornhill, A., Lewis, S., & Thornhill. (2009). *Research methods for business students* (5th ed.). Pearson.

Schlütter, D., Schätzlein, L., Hahn, R., & Waldner, C. (2023). Missing the impact in impact investing research–A systematic review and critical reflection of the literature. *Journal of Management Studies*. Advance online publication. https://doi.org/10.1111/joms.12978

Schulaka, C. (2018). William Michael Cunningham on impact investing, blockchain, and crowdfunding. *Journal of Financial Planning*, *31*(9), 14–17. https://search.proquest.com/docview/2131568851?accountid=31562

Shin, D., & Hwang, Y. (2020). The effects of security and traceability of blockchain on digital affordance. *44*(4), 913–932. https://doi.org/10.1108/OIR-01-2019-0013

Shortall, J., & Chowdhary, S. (2008). *Introduction to understanding and accessing social investment: A brief guide for social entrepreneurs and development practitioners*. Virtue Ventures.

Shrestha, A. K., Vassileva, J., & Deters, R. (2020). A blockchain platform for user data sharing ensuring user control and incentives. *Frontiers in Blockchain*, *3*, 1–22.

https://doi.org/10.3389/fbloc.2020.497985

Shrier, D., Wu, W., & Pentland, A. (2016). Blockchain and infrastructure. *Identity, Data Security*. 1–18.

Sittig, D. F. (2017). Category definitions. In D. F. Sittig (Ed.), *Clinical informatics literacy* (pp. 1–170). Academic Press. https://doi.org/10.1016/B978-0-12-803206-0.00001-8

Smith, J. A., Flowers, P., & Larkin, M. (2018). Interpretative phenomenological analysis: Theory, method and research. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (4th ed., pp. 61–82). Sage.

Sonenshein, S. (2016). How corporations overcome issue illegitimacy and issue equivocality to address social welfare: The role of the social change agent. *Academy of Management Review, 41*(2), 349–366. https://doi.org/10.5465/amr.2013.0425

Stilgoe, J. (2020). Innovation is not self-driving. In *Who's driving innovation? New technologies and the collaborative state* (pp. 7–20). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-32320-2_2

Swan, M. (2015). *Blockchain: Blueprint for a new economy*. O'Reilly Media.

Tapscott, D., & Tapscott, A. (2016). *Blockchain revolution: How the technology behind bitcoin is changing money, business, and the world*. Penguin.

Tsotsotso, K. (2021). Is Programme Evaluation the Same as Social Impact Measurement?. *Journal of Social Entrepreneurship*, *12*(2), 155–174. https://doi.org/10.1080/19420676.2019.1683877

Verrinder, N. (2015). Evaluative tools in impact investing: Three case studies on the use of theories of change. 1–9.

Verrinder, N. B., Zwane, K., Vaca, S., & Nixon, D. (2018). Evaluative tools in impact investing: Three case studies on the use of theories of change. *African Evaluation Journal*, *6*(2), 1-9.

Viviers, S., Ractliffe, T., & Hand, D. (2011). From philanthropy to impact investing: Shifting mindsets in South Africa. *Corporate Ownership & Control*, *8*(3).

Weick, K. E. (2002). *The attentive organization: How to survive in the chaos of the modern workplace*. Harvard Business Press.

White, H. (2006). Impact Evaluation: The Experience of the Independent Evaluation Group of the World Bank.

Wiatt, R. G. (2019). The new management of recordkeeping. 1–8. https://doi.org/10.1002/jcaf.22426.

Wright, C., & Nyberg, D. (2017). An inconvenient truth: How organizations translate climate change into business as usual. *Academy of Management Journal*, *60*(5), 1633–1661. https://doi.org/10.5465/amj.2015.0718

Xu, Y. (2021). Research on Investment Environment Performance Evaluation of Blockchain Industry with Intuitionistic Fuzzy CODAS Method. *Scientific Programming*, *2021*, 1–8. https://doi.org/10.1155/2021/138706

Zhang, C., & Wu, X. (2023). Analyst coverage and corporate ESG performance. *Sustainability*, *15*(15), 12763. https://doi.org/10.3390/su151712763

7 Appendix

Interview/Survey Consent Form

Master of Commerce in Development Finance

INTERVIEW/SURVEY CONSENT FORM

Participant name: **……**

I volunteer to participate in a research project conducted by Teboho Makhabane as partial fulfilment of the requirements for the **Master of Commerce in Development Finance Degree** at the UCT Graduate School of Business. I understand that the research is designed to gather information on how **investment professionals' readiness for effective impact evaluation using sustainable innovation: A case study of a large South African asset manager.** I will be one of approximately 14 people being interviewed for this research.

Objective(s) of the research

The goal of this thesis is to assess how ready South African investment professionals are to use impact evaluation tools and blockchain technology effectively. It aims to identify their challenges and opportunities while offering recommendations to enhance impact assessment practices.

Ethics approval

The ethical clearance for this study was approved by the UCT GSB Research and Ethics Committee on (**insert date)**

Participation and confidentiality

I understand that my participation in this research is voluntary, that I will not be compensated and that I may withdraw at any time. The interview will take approximately 20 - 60 to complete and will be audio recorded

I understand that I will not be identified by name in any reports using information obtained from this interview and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

Should you have any questions or concerns please contact me (Insert your contact details here) or my supervisor (Insert supervisor's email)

Consent

I consent to participate in this interview, based on the terms outlined above and subject to the following additional condition of my own (if any).

Signed by interviewee **Date**

…….. …….

Signed by Student **Date**

Questions

Section 1: Information Recorded

1. Name of respondent:
2. Age of respondent
3. Length of interview
4. Years of experience
5. Current role in business

Section 2: Interview/Survey questions

Investment professionals' readiness for Effective impact evaluation using sustainable innovation: A case study on South African asset manager Alternative Investments

This is where I describe the study and let interviewees know that their participation is voluntary, and that the information provided is anonymous and confidential. At this stage I will also get consent (verbal or written) to participate as well as for audio recording

---

Title:

Date:

Time:

Place:

Interviewer:

Interviewee:

_____

_____

Researcher introduces themselves

6. What is your name?
7. What is your role at South African asset manager Investments?

8. How long have you worked for South African asset manager?
9. What is your background in investment? (Covers the question what you were doing before this)
10. How much of your time is dedicated to impact evaluation in a month? Please give a percentage split between impact related reporting vs. other investment work.
11.

Impact Investing

OP: How would you define impact investing?

OP: Does impact investment matter in the broader field of investing? (If yes, why? If no, why?)

OP: Could you explain why impact investing matters to you or not as an investment professional

OP What do you think an investment fund needs to achieve to be considered as an impact fund?

Impact Evaluation

OP: In your opinion, how can your impact fund create meaningful change in society.

OP: How would you evidence that your investments have resulted in a meaningful impact to society or beneficiaries of the funding

Explain the difference between impact measurement and impact evaluation practises to the interviewee and then ask the following questions.

OP: Do you currently evaluate impact in your fund? (If yes, how? If no, why?)

OP: Are you familiar with any impact evaluation methods or tools used to value impact in impact investing?

OP: Do you understand how evaluating the impact outcomes of an investment differs from collecting and measuring impact outputs?

OP: In your opinion is this process of valuing impact outcomes feasible?

OP: Would you give me examples of how this would apply in your impact fund?

Theory of Change

OP: Are you familiar with the theory of change and how it is used in impact investing?

OP: Does the TOC make sense to you as a guiding framework to come up with impact

outcomes? If yes, could you explain how so? If not here is an example (Use root capital application of TOC which is included in the research paper). Does that make sense for you?

Sustainable innovation

OP: In your opinion is it necessary (or even helpful) to use technologies to improve processes?
OP: Could you think of a technological innovation in the investment industry that you consider an unhelpful innovation? Has more disadvantages than advantages? And how about an example of a helpful innovation that has helped the investment industry?
OP: Do you think we can use some technology to implement the impact evaluation process innovation?
OP: Any thoughts on what that innovation would have to entail for it to really help this process of impact evaluation?
OP: Would it make sense to include the TOC process in that innovation?

Using TOC and Blockchain in Impact evaluation

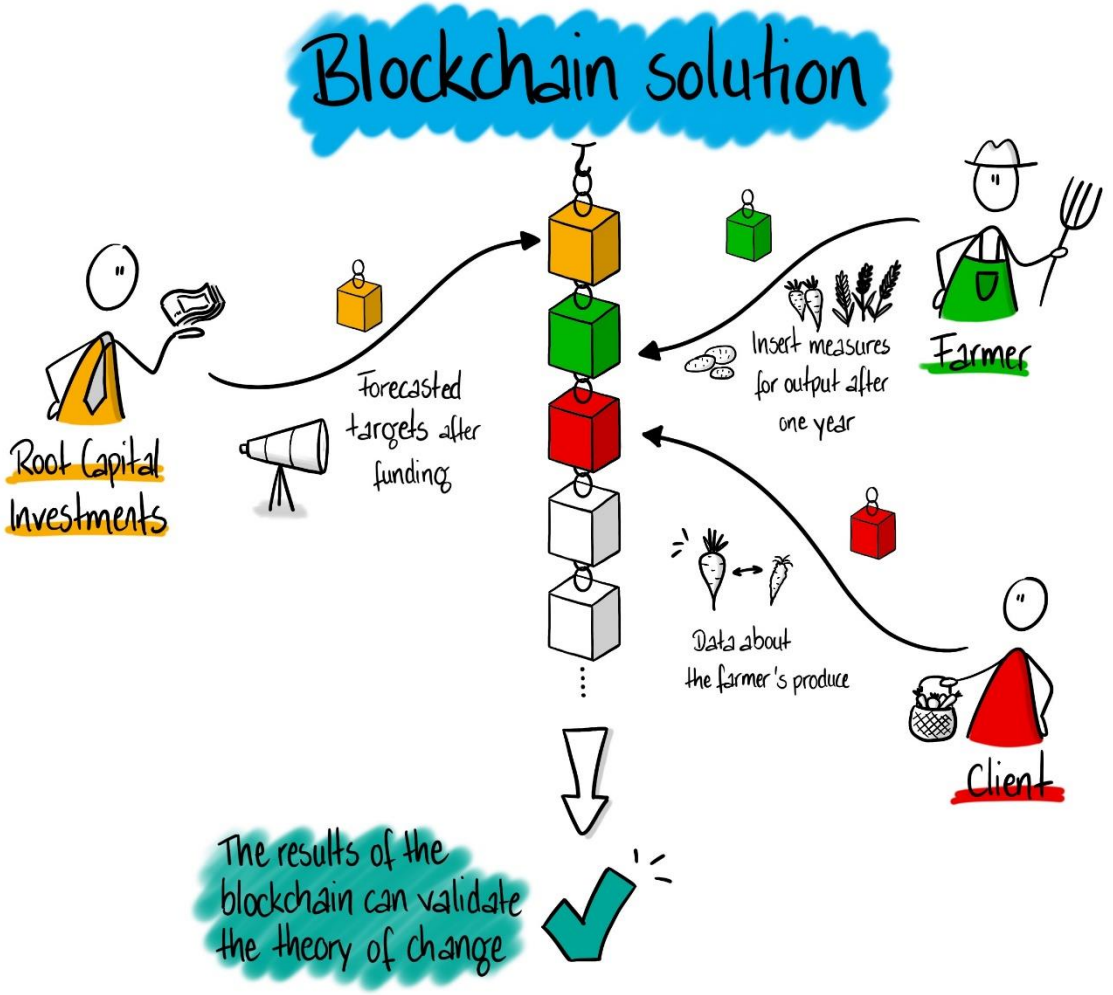

Blockchain solution
Root Capital Investments
Forecasted targets after funding
Insert measures for output after one year
Farmer
Data about the farmer's produce
Client
The results of the blockchain can validate the theory of change

Fig. 1. Functional diagram of a blockchain network- Using root capital to show theory of change application on blockchain.

Using blockchain technology in impact evaluation

OP: What you think of the above example of using blockchain as a solution for impact valuation for root capitals theory of change?
OP: Knowing the businesses you fund, would this solution of evaluating impact work for your investments?
OP: Using the example how would you use a similar process of implementing your theory of change on a blockchain solution?
OP: In your opinion would this type of solution improve the efficacy of impact evaluation?