



# Impact Assessment Methodologies: The perception of impact investors towards measuring social impact.

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## **Abstract**

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The purpose of this master thesis is to understand how impact investors can most effectively measure social impact. To achieve the desired value and to ensure impact, investors are tackling the world's most pressing social problem through impact investing. According to the literature, impact investment is defined as investments into organizations with the intention to generate social impact alongside a financial return (GIIN, 2022). With such purpose in mind, the research first builds on existing literature. After reviewing and clarifying the main characteristics of social enterprises, social innovation, and impact assessment, a presentation of different impact assessment methodologies will follow. A comparison of the most known frameworks of the impact investment industry will be highlighted in more detail.

Furthermore, the thesis builds on qualitative data by questioning impact investors' perceptions of impact assessment methodologies. Therefore, the perception of impact assessment tools is conducted, how they currently measure the social value, and what is missing in this field. Coherent with the literature, the research highlights the key challenges impact ventures are facing. Particularly when it comes to the definition of social impact, efficient data collection, and the perception of existing impact measurement methodologies. The main findings of the thematic analysis of 13 interviewed impact investors present the need for reliable, understandable, transparent, uniform, and ecosystem-wide standardized impact assessment methodologies.

## **Resumo**

O objetivo desta tese de mestrado é compreender como os investidores de impacto podem medir o impacto social da forma mais eficaz. Para alcançar o valor desejado e assegurar o

impacto, os investidores estão a abordar o problema social mais premente do mundo através do investimento de impacto. De acordo com a literatura, o investimento de impacto é definido como investimentos em organizações com a intenção de gerar impacto social juntamente com um retorno financeiro (Global Impact Investing Network, 2022). Com este propósito, a investigação baseia-se primeiro na literatura existente. Após revisão e clarificação das principais características das empresas sociais, inovação social e avaliação de impacto, seguir-se-á uma apresentação de diferentes metodologias de avaliação de impacto. Uma comparação dos quadros mais conhecidos da indústria de investimento de impacto será destacada com mais detalhe.

Além disso, a tese baseia-se em dados qualitativos, questionando as percepções dos investidores sobre as metodologias de avaliação de impacto. Por conseguinte, a percepção dos instrumentos de avaliação de impacto é conduzida, como medem actualmente o valor social, e o que falta neste campo. Em coerência com a literatura, a investigação destaca os principais desafios que os empreendimentos de impacto enfrentam. Particularmente quando se trata da definição de impacto social, recolha eficiente de dados, e percepção das metodologias de medição de impacto existentes. As principais conclusões da análise temática de 13 investidores de impacto entrevistados apresentam a necessidade de metodologias de avaliação de impacto fiáveis, compreensíveis, transparentes, uniformes, e normalizadas a nível de ecossistemas.

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## **Table of Abbreviations**

SE: Social Enterprise

CSR: Corporate Social Responsibility

SI: Social Innovation

NEF: New Economics Foundation

SROI: Social Return on Investment

SAA: Social Accounting & Audit

GIIN: Global Impact Investing Network

IRIS: Impact Reporting & Investment Standards

GIIRS: Global Impact Investing Rating System

ESG: Economic, Social, and Governance

PRI: Principles for Responsible Investment

GRI: Global Reporting Initiative

SASB: Sustainability Accounting Standards Board

SDG: Sustainability Development Goals

## **1 Statement of the Problem**

The world is in a state of upheaval. The economy is constantly developing and changing. On the one hand, globalization and free markets have brought prosperity and abundance to a few developed countries. On the other hand, however, it has led to poverty and exploitation (Rodrik, 2011). The media, governments, and activists are increasingly raising awareness and changing attitudes toward the issue. As a result, society is increasingly pushing organizations to take more responsibility for economic activity's social and environmental consequences (Maas, 2009).

As a result, business ethics has become more critical, and the reputation for environmental behavior and social responsibility has become essential. Therefore, almost all companies have incorporated Corporate Social Responsibility (CSR) actions into their organizational activities. CSR can be defined as the voluntary organizational integration of social and environmental concerns into companies' business activities and the alignment with the interests of their stakeholders or, more broadly, with societal interests. (Buchholz, 2022).

In the wake of these developments, a new form of organization has emerged in today's business world: social enterprises (SEs). Social enterprises are businesses set up to fulfill social purposes while being financially sustainable. They are income-generating enterprises that pursue higher social, environmental, and ethical goals (Barone, 2022). As SEs become more relevant to society in shaping the business environment, organizational impact investors increasingly show interest in philanthropic engagement for social causes (Siemens, 2019). Impact Investments are investments made alongside a potential financial return to generate positive, measurable social impact (GIIN, 2022).

Accordingly, impact investing is recently rapidly growing. However, potential investors currently face problems when measuring social impact and comparing organizational performance. This needs to be revised as the importance of CSR in general, SEs are increasing, and investors ask for greater accountability and transparency when becoming involved in such businesses (Epstein & Yuthas, 2017).

## **2 Research Question**

The problem investors face is, in particular, that the assessment of social performance is a very complex issue involving several levels. It is often based on subjective, hardly measurable indicators, and until now, there has been little consensus on the best measurement method (Epstein & Yuthas, 2017). Approaching this matter, this thesis aims to explore the research question of how impact assessment methodologies can be used more effectively by investors. Primarily, this thesis explores prior research in academic literature related to available assessment methodologies. Secondly, the impact assessment processes will be compared to specific criteria. Thirdly, the choice of qualitative research design to answer the research question is described as a framework developed for practitioners. Fourthly, interviews with impact investors were conducted to assess how investors perceive the need for impact assessment tools, whether existing tools measure the desired social value, and what is missing in this area. Finally, the thesis derives a conclusion, indicates the limitations of the dissertation, and ends with recommendations for further research.

### **3 Literature Review**

In order to answer the research mentioned above question, the literature review focuses on different aspects of the existing literature on the given issue. The definitions of social innovation, impact assessment, and impact investment will follow with the clarification and interpretation of social enterprises. Subsequently, existing impact assessment methodologies are presented, and finally, the different measurement methods are compared and evaluated based on various criteria. The purpose of this review is to reveal the most critical aspects contributing to this thesis as well as current research gaps. This research will then further lead to the resulting research question.

#### **3.1. Definition of Social Enterprises**

Over the past decades, the meaning of impact has evolved into a high-quality standard for economic behavior. This trend has developed into a market opportunity for entrepreneurs: the transformation of maximizing profit and fulfilling social needs (Arena, Azzone, & Bengo, 2015). Organizations not only began to align economic interests with stakeholder interests but also voluntarily aligned those of society to improve the impact of organizational activities on pressing social problems (Maas, 2009). While well-established companies implement corporate

social responsibilities (CSR) departments in their organizational structure, a rising number of young entrepreneurs broke up existing business models, fully incorporated CSR practices in their administrative activities, and declared social change as their primary goal - social enterprises (SEs).

Known as hybrid organizations, SEs can be positioned between profit and non-profit organizations. Compared to profit organizations, they give a subordinate status to economic value by relying substantially on commercial revenue to sustain operations in order to pursue a social mission. On the other hand, compared to non-profit entities, the SEs must compete in a market with profit companies and require an economic value to be financially sustainable and viable (Arena, Azzone, & Bengo, 2015). The SE managers must simultaneously pursue multiple targets by continuously managing trade-offs between increasing productivity for economic sustainability and social gain (Arena, Azzone, & Bengo, 2015). By combining social impact with financial performances and, thus, creating synergies between their objectives, a new economic environment was established (Doherty, Haugh, & Lyon, 2014). Hence, existing literature describes social enterprises as bottom-line businesses with social and commercial goals, working to solve societal issues through business ventures (Vaccaro & Ramus, 2022).

### **3.2. Definition of Social Innovation**

Next to social enterprises, the research on SEs and social innovation (SI) has grown dramatically in the past decades.

Even if social enterprise and social innovation may cross paths in several cases: SEs are differentiated because they are a hybrid of a social and commercial entity. To qualify as social innovation, a social enterprise must solve social problems through its unique and novel organizational model, strategy, and operations (Vaccaro & Ramus, 2022).

On the other hand, social innovation might differ significantly from a social enterprise because it can take the shape of any entity, the form of a product, service, or social model that addresses a specific societal need. Hence, social innovation is no organizational form or legal structure (Soule, Malhotra, & Clavier, 2022). Social innovation relates to the implementation of novel goods, services, organizational systems, and business strategies superior to existing ones in terms of effectiveness, efficiency, and sustainability (Phills, Deiglmeir, & Miller, 2008). Social innovators' work involves organizational, inter-organizational, and intra-organizational responsibilities. Organizational activities are the process of building a venture where the primary goal is to address social problems. The process of intra-organizational action addresses

social challenges from established organizations. Lastly, inter-organizational action facilitates different combinations of people, products, ideas, and places to address social problems (Tracey & Stott, 2017).

On the contrary, the primary distinguishing factor of social innovation is the novelty of the goods, services, and organizational solutions they provide to address one or more social concerns. Social enterprises should be able to engage different stakeholders in creating and developing social innovation - for example, impact investors, as described subsequently (Vaccaro & Ramus, 2022). However, it is crucial to assist the growth of social innovation efforts by establishing a conceptual framework that enables an assessment of impact (Jorge & Benneworth, 2020).

### **3.3. Impact Assessment**

In order to understand the term impact investing, impact itself is further explained. Existing literature defines impact as "the strong effect something has on someone/something" (Oxford Advanced Learner's Dictionary, 2022). Alternatively, as Impact Frontiers explains: "Impact is a change in an outcome caused by an organization. An impact can be positive or negative, intended, or unintended." (Impact Frontiers, 2021). However, in recent years the term has become part of the social sector. It refers to "the generation of increased (or decreased) levels of social, cultural, and human capital within the constituent communities in which an organization operates" (Onyx, 2014). On the other hand, "assessment" is the method of measuring the effectiveness of organizational activities. In combination, impact assessment refers to an organization's specific and quantifiable part in influencing a social outcome that needs to be compared to a counterfactual for evaluation (Ebrahim & Rangan, 2014). In addition, impact assessment attempts to answer what impact (causal effect) a program has on a particular outcome. (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2016). The ensuing consensus offers a common logic to assist enterprises and investors in understanding their impact on people so they can lessen the negative and boost the positive (Impact Frontiers, 2021).

The impact assessment methodology varies with the field of application and the objective. The approach to identifying relevant impacts can be ex-ante (in the sense of a forecast) or ex-post (in measurement and assessment).

Additionally, the tools can differ between quantitative and qualitative methods. Quantitative impact assessments describe the measurement of quantifiable impact and give numerical

output. Quantitative tools can produce data that can be aggregated and analyzed to describe intercorrelations (Garbarino & Holland, 2009). A very simplified example is how much time was spent for each patient at this particular hospital with the number of innovative technology alongside the specific number of investments.

On the other hand, qualitative research can probe and explain relationships and contextual differences in the quality of those intercorrelations. Thus, patterns and trends can be found, such as analyzing socially differentiated outcomes and examining health as a dynamic process rather than a static outcome (Garbarino & Holland, 2009). An oversimplified example is the patient’s perception of quality in healthcare through the digitalization of processes in the same sector.

In any case, it is essential to have a systematic and sufficiently documented procedure. This allows impact investors to understand the assumptions, methods, results, and conclusions and evaluate them based on the criteria defined in advance (Remer, 2022).

**3.4. Impact Investment**

If investments are driven by the intention to create social value, it is an impact investment (Wendt, 2018). Thus, the goal is to generate a positive social return alongside a financial return (Barber, Morse, & Yasuda, 2021). Even if impact investing can appear in different forms of investment, like traditional venture finance, they differ in their intention: impact investing hopes to generate social impact by financing companies’ purpose-driven activities and financial returns through market-rate exit proceeds. Hence, impact investors can be characterized as hybrid organizations pursuing social and commercial missions (see Figure 1). In addition, they are facing the challenge of balancing and controlling trade-offs between both objectives (Botha, 2020).



Figure 1: The space for impact investing. (Browning, n.d.)

However, like the term social impact, impact investing is controversial. Only recently has the term gained traction (Agrawal & Hockerts, 2019). Like traditional venture financing, impact investing can occur in different forms, such as equity, grants, or debts. Impact investor

structures range from impact funds to social banks or crowdfunding platforms (Block, Hirschmann, & Fisch, 2020). Equity investors are the most common of the three types of investments: investing in shares of start-ups, and companies, hoping to create social impact by funding purpose-driven activities and financial returns through market-driven exit proceeds (Barber, Impact Investing, 2021). Previously, early-stage investments have been less popular as they require a higher risk appetite, but they are currently gaining momentum (Abdellatif, Tran-Nam, Ranga, & Hodzic, 2022). Due to the higher risk appetite, measuring these investments' social impact is crucial to the new approaches. Impact Investors aim to achieve quantifiable social and financial returns (Brandstetter & Lehner, 2015). In answering the research question, we will only examine the Impact Investors willing to take this type of risk.

### **3.5. Impact Assessment Methodologies**

As mentioned before, the performance management issue in SEs has increased relevance among researchers and practitioners. The evaluation of intangible performance often is subjective and, therefore, difficult to benchmark because of the difficulty regarding the legitimacy of accountability and comparison of performance across sectors (Tsoutsoura, 2004). To overcome the problem, measure the impact, and incorporate the results, an explosion of innovative measurement methods to capture the performance more effectively has been displayed in the academic literature (Ebrahim & Rangan, 2014). The program's operational parameters, particularly the resources available, the eligibility requirements for choosing recipients, and the timing of program execution, should influence the SE's impact evaluation technique choice (Gertler, Martinez, Premand, Rawlings, & Vermeersch, 2016). However, this occurs with little systematic methods analysis (Arena, Azzone, & Bengo, 2014). Deciding on a practical evaluation method is hampered by the number of models already available (Arena, Azzone, & Bengo, 2014), and the high level of complexity and cross-cutting issues such as the inconsistency of defined inputs and impacts on society (Epstein & Yuthas, 2017). Demonstrating the diversity and complexity of individual impact measurement tools, the New Economics Foundation (NEF) published several frameworks for Social Impact measurement in 2009. The complete list of those tools can be found in Appendix E. According to Gibbon and Dey (2011), the most famous impact measurement tools are selected because they have been most commonly adopted. Social Return on Investment (SROI) and Social Accounting & Audit (SAA).

The basis for different measurement approaches is the Social Return on Investment (SROI) (Kah & Akenroye, 2020). SROI is a technique used to measure the social and environmental return on investment in a project or initiative. It calculates the financial, social, and environmental value generated by a project and its associated investments. SROI aims to balance financial, social, and environmental returns, enabling investors to measure the actual value of their investment beyond traditional financial metrics (Social Return on Investment Network, 2017).

Social Accounting & Audit (SAA) is an organization's process of identifying and measuring its social, environmental, and economic impacts and ensuring that they operate ethically and responsibly (Beugré, 2017). SAA involves assessing an organization's financial and non-financial performance, identifying areas of risk and opportunity, and developing strategies to ensure that the organization meets its commitments to stakeholders. It also involves reporting an organization's sustainability performance to external stakeholders, including regulatory bodies, investors, customers, and other interested parties (Richards & Nicholls, 2021).

Despite the seemingly significant overlap between SAA and SROI, there are substantial differences. Besides calculating the financial share, SROI focuses on the perspective of expected or actual changes for different stakeholders due to the activity (Gibbon & Dey, 2011). SROI produces more quantitative and reductive results, while SAA, in particular, comprises a more typical combination of narrative and quantitative disclosures (Rahim & Idowu, 2015). In contrast, SAA starts from the stated social goals of the organization. In SAA, verification is explicitly required, while some level of validation in SROI is only a recommendation. Another key difference lies in the core objectives. SAA aims to evidence and improve the organization's goals through social disclosure and emphasizes 'embedding' in the organization's life cycle. In contrast, current attempts at SROI tend to provide one-off snapshots at a point in time (Gibbon & Dey, 2011).

Nevertheless, social enterprises are under pressure to quantify and demonstrate their social impact to meet stakeholder demands for transparency and accountability. Mainly, impact investors demand the measurement of impact at various points of the investment process, such as when they include them in their investment strategy or when they use them to verify impact as part of their due diligence and investment decision-making (Hand, Dithrich, & Nova, 2020). Hence, impact measurement has been a crucial tool for impact investors, in particular, to monitor, oversee, and ensure the portfolio company's desired social impact (Glänzel & Scheuerle, 2015). However, there is no globally accepted standard tool to measure impact. Therefore, impact investors use different competing impact assessment methodologies (Chen

& Harrison, 2020), individually having strengths and weaknesses (McLoughlin, Kaminski, Sodagar, & Khan, 2009).

The following focuses on current standards of social impact measurement methodologies used in the Impact Investing industry (Sarmiento & Herman, 2020). These are developed by Global Impact Investing Network (GIIN) according to an Impact Database in 2018 with 237 impact-focused investment funds. According to this, most impact investors use IRIS and GIIRS. Other impact investors adopt specific standards, such as economic, social, and governance (ESG) metrics, the Principles for Responsible Investment (PRI), the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Sustainable Development Goals (SDGs) (Sarmiento & Herman, 2020). A further and more detailed explanation of the individual impact assessment tools is presented in Appendix F.

	Key Characteristics	Main strengths	Main weaknesses
ESG metrics	Environmental, social, and governance indicators; (inputs, outputs, outcomes); tracking impact on people, trust, and planet	Simplicity, transparency, the possibility of matching directly with client’s values and link to cash flow, profit, financial return, and risk	barriers to measuring impact
IRIS+	Six performance areas—financial, operational, product, sector social, and environmental—are divided into an easily accessible taxonomy of standard measures.	practicality and simplicity, comparability, accessibility, useful for numerous different industries, free resource	no measurement of impact, difficulty in judging whether the result is "good" or "bad"
SASB Standards	Set of metrics to help businesses provide investors with very relevant and material	Transparency, cost-effective, free resources, validated by experts in the sector	no measurement of impacts or outcomes, difficulty in judging whether the result is "good" or "bad"

	sustainability information		
SDGs	The UN established 17 universal goals (objectives) and 169 targets (metrics) centered on the three pillars of sustainable development: economic, social, and environmental improvement.	measurement of outcomes, impacts, outputs, attention to environmental and ecological issues, uniform global accounting, customization possible to individual geographies, sectors, organizations	trade-offs in choices, lack of data reporting, ensuring accountability and responsibility for progress toward meeting the SDGs
PRI	Six principals that offer possible actions for putting ESG into practice	support and drives best practices	no measurement of outcomes, outputs, or impacts
GRI	Reporting guidelines that assist firms in comprehending and communicating how their operations affect significant sustainability concerns	transparency, global standards, free resource, medium comparability: sector-specific, not only in quantitative terms	no measurement of impact or outcomes, time-costly: extensive data gathering, detailed reporting, reliability: self-reported, relevance: social impact amongst much other information

GIIRS	standards for ratings and an analytics platform. The attributes highlight four performance areas: environment, community, customers, and workers.	Transparency, comprehensive, build track report, comparability	no measurement of impact or outcomes, costly: time-costly and labor-intensive
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Figure 2: Impact Measurement Standards' Characteristics, Strengths, and Weaknesses based on Sarmiento & Herman (2020).

### 3.6. Challenges and Limitations of Impact Measurement

Past literature highlights many challenges that exist within the process of measuring social impact. Similar to social impact, social impact measurement is somewhat ambiguous, and defining it inherently fails to create a universal and coherent understanding of the terminology and what should be measured (Rawhouser, Cummings, & Newbert, 2017). The tricky part of measuring is figuring out what to measure and how to measure it, especially regarding the so-called causal chain of impact measurement frameworks (Kah & Akenroye, 2020). At the same time, scholars highlight the difficulty of understanding causality and the challenge of measuring external and interlinked effects (Ebrahim & Rangan, 2014). Ebrahim and Rangan (2014) question the causality of impact measurement frameworks from input, output, impact, and outcome. While output is easier to measure, existing tools' weaknesses are more complex regarding the accounting of outcome and impact (see Figure 2) (Molecke & Pinse, 2017). Regarding measurement, social enterprises and impact investors prioritize financial data, as it is quantifiable and easier to measure because the metrics are standardized (Hertel, Bacq, & Lumpkin, 2020). On the other hand, measuring social impact is an abstract reality that usually extends into the future, has numerous unforeseen side effects, and is difficult to quantify (Cronin & Dearing, 2017). In addition, the challenge of converting qualitative data into quantitative due to the need for more standardization and comprehensibility (Hazenberg & Paterson-Young, 2022).

Due to the lack of standardization, Ebrahim and Rangan (2014) also highlight the potential friction caused by the different stakeholders and the variety of available frameworks. It becomes challenging when impact investors ask for different frameworks from the same social enterprise (Ebrahim & Rangan, 2014). The numerous amount of different approaches is highlighted by

the list of New Economics Foundation (2009), as seen in Appendix E, and the other standards in the field of impact investing (Sarmiento & Herman, 2020). Nevertheless, there has yet to be conformity for standardized measurement tools that can capture the impact (Maas & Liket, 2011). Researchers, therefore, recommend that social enterprises define a uniform, universal assessment units that process comparisons over time between organizations or develop unique assessment units that specifically cater to Social Impact measurement to the needs of the stakeholders (Kah & Akenroye, 2020).

## **4 Methodology**

This chapter outlines the methods used to find answers to the research questions. The study focuses on (1) SEs and their core characteristics, (2) what social innovation is, (3) the definition of impact and impact assessment, (4) the main characteristics of impact investing, and (5) different impact assessment tools, classified according to different criteria. However, previous literature has not identified the surplus of methods, how impact investors perceive the need for impact assessment tools, or whether previous methods are sufficient for evaluating measurement methods. Considering the preliminary findings and unsatisfactory implications, this thesis aims to expand.

To develop a theory and not test it, a theoretical sampling is chosen for this master thesis (Eisenhardt & Graebner, 2007). Therefore, primary data is considered to answer the research question. More specifically, this thesis uses interviews as a qualitative research method. Generally, this research method offers expert knowledge and information (DiCicco-Bloom & B. and Crabtree, 2006). The qualitative research approach makes individual values, attitudes, patterns of interpretation, or processes visible. In order to gain access to these subjective perspectives, qualitative interviews are predestined as a form of data collection, as they offer the interviewees room to respond and tell their experience and to communicate their knowledge and perception of impact measurement tools (Aspers & Corte, 2019). The tone of the words used, how they are utilized, and the body language conveys what the other person is trying to say (Rugg & Petre, 2006). As the research focuses not only on challenges but also on the perception of impact measurements, a total number of 13 semi-structured interviews with impact investors were conducted (see Appendix B for details of participators). The semi-structured interviews are structured around a series of predefined open-end questions based on key challenges derived from the literature (see Appendix A) (Wilson, 2014). Flexibility and

identifying patterns can be encouraged by coming up with more questions naturally throughout the interviewer-interviewee interaction (Tegan, 2022). In order to ensure that answers were unbiased, the interviewees did not have access to the questionnaire beforehand (Rugg & Petre, 2006). Additionally, it can react variably to incomprehensibility or the need for more detail. The one-on-one in-depth interview allows the interviewer to delve extensively into social and personal issues (DiCicco-Bloom & B. and Crabtree, 2006). It is precisely this aspect, being able to influence the course of the conversation according to the situation, that reflects the advantage over standardized survey methods (Riesmeyer, 2011).

Thematic analysis is used as an approach to analyzing qualitative data. This approach helps to discover people's views, knowledge, experiences, and opinions of the data (Caulfield, 2022). The data is gathered by questioning alongside a predefined semi-structured questionnaire. Key challenges and questions building the framework for this thematic analysis were derived from the literature to answer the research question of how investors can use impact assessment methodologies most effectively: (1) Impact Investor experience problems when measuring social impact. (2) Impact investors feel limited priority for impact measurement methodologies. (3) Impact investors feel the need for standardized impact assessment tools.

The framework is structured as follows: First, the study set out to understand what impact investors are looking at when selecting the companies they invest in, followed by questions about internally used measurement tools and the most seen in their portfolio. Subsequently, the frameworks and how they perceive the need for impact assessment tools were analyzed. After that, the interviews validated how current tools solve the problem of measuring social value and acquiring data. The interview ended with a conversation about what is missing in the field of impact measurement and their opinion of how it could be solved.

In order to answer the questions and to collect relevant knowledge, experiences, opinions, and views, a purposive sampling of the thirteen participants is demanded by the exploratory nature of the research (Eisenhardt & Graebner, 2007). Thirteen, as Guest et al. (2006) found that data saturation in the thematic analysis is almost reached after only 12 interviews (Braun & Clarke, 2021). Purposive sampling is used when the participants are a group that has not been randomly selected (Nikolopoulou, 2022). The subjects are chosen according to the characteristics of their employers. The employer, in this case, Impact Ventures, should invest in the early stage, as there is a higher risk appetite and measuring social impact is therefore crucial (Abdellatif, Tran-Nam, Ranga, & Hodzic, 2022). The employees interviewed are selected to be involved in acquiring the portfolio companies or to accompany them initially, so they should use impact measurement methods.

Due to the geographic distribution of the interviewees, the meetings were conducted online. Furthermore, the interviews got recorded and transcribed (example in Appendix C). The transcribed version makes it possible to get familiar with the data and take first notes (see Appendix C, highlighted in yellow). It follows an inductive approach, a so-called "bottom-up" analysis strategy. This involves the creation of codes as the data is analyzed. A common practice of inductive analyses is called "in vivo coding", which is used for this paper. This involves creating codes from the participant's own words (Bingham, 2022). Codes were conducted to highlight sections and describe the content (Caulfield, 2022). Code patterns were identified and summarized into themes (see Appendix D). This helped identify important and vague factors that could be discarded afterward (Caulfield, 2022). After analyzing if the themes are an accurate and valuable representation of the data, the interoperability and, finally, captions were conducted to build a diagram to present the findings of the interviews (see Figure 3). The most relevant and unique participant quotes are then used to support the analysis (Bingham, 2022). The different observations and findings are discussed in the following sections.

## **5 Analysis**

The following analysis aims to test the previously stated key challenges and questions and the overall research based on a thematic analysis of the 13 semi-structured interviews with impact investors. The diagram below highlights the two main problems the literature has identified and which the interview partners faced. Furthermore, what approach to solving these problems led to, which could also be found in the literature. The different observations and findings are discussed in the following sections.

First, to examine the impact investors experience problems when measuring social impact, the interviews aim to analyze the use of different measurement tools, how they perceive them, and how they gather the data for them.

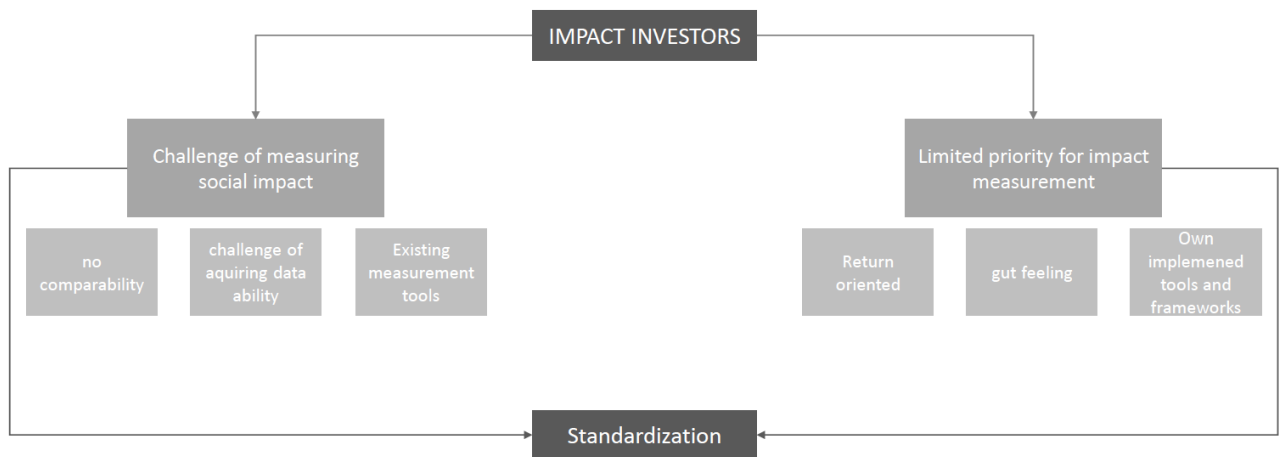


Figure 3: Key challenges, and impact investors are facing.

## 5.1. Challenge of measuring social impact

The different impact investors experience challenges when measuring social impact—starting with the process, which most do manually, in gathering from the portfolio companies and the clients (portfolio companies) themselves. Most interview partners dedicate that they collect data through a chat with their clients, while others provide internally provided spreadsheets. It became apparent that the respondents struggled with measuring the impact, perceiving the process as challenging, and craved a rather trustworthy, transparent, and easy-to-use method for measuring social impact.

The challenge of social impact assessment can therefore be summarized as (1) the challenge of acquiring data, (2) the difficulty in comparing the data, and (3) the numerous approaches of impact measurement tools.

### 5.1.1. Challenge of acquiring data

The thematic analysis made it apparent that the challenge of measuring impact starts with the definition. Most interviewees (9/13) highlights that no guidelines or borders exist for the definition, and subsequently, they are struggling to define it; as Respondent Four mentions, *I think it is very, very difficult to define impact because every person I know defines impact differently*. As different interview partners face the challenge of defining social impact, it became apparent that impact investors are defining impact themselves to measure it.

*This definition does not yet exist so clearly on the social impact side. That is why we must cobble it together ourselves a bit, and that is also really difficult because we do not have any clear metrics* (Respondent Three).

Regardless of how the impact is defined precisely, it is inevitable that social entrepreneurs still must demonstrate greater accountability and transparency, based on the literature that they offer better performance legitimacy (Nicholls A. , 2009).

This means that SEs need to have a strategy for accurately monitoring and informing investors about the outcomes of their work.

However, portfolio companies are facing the challenge of the early stage. Consequently, the social impact is difficult to measure as it has not been available initially and is less obvious. Start-ups still need to create the desired social impact due to the small number of customers and the ongoing changing business model.

*“You cannot measure in the early stage because there is no impact stadium, [...]when we talk about impact measurement, we talk more about it more likely impact forecasting. [...]There is much uncertainty linked to it.”* (Respondent Seven)

Similarly, another interview partner states:

*“Since we have a big problem in data gathering, the biggest problem I have experienced throughout the years is that the data we are working with is only forecasted. So, we cannot rely on this because data will change for sure.”* (Respondent Ten)

According to the challenge of working with forecasted data, the impact investors mention the difficulty *for early-stage investors to select companies according to measurement, from Pre-Seed to Series A, because that is also constantly changing* (Respondent Five).

Next to the issue of the early stage, the interviewees state that they *see the difficulty in adequately measuring the impact in the social sector* (Respondent One), as impact, in general, is *a personal perception* (Respondent Four), like another interview partner stated.

Finally, the problem of quantifying the data became apparent, as it is also found in the literature. Respondents mention the oversimplification of impact measurement and the limited impact measurement that this entails.

*“Quantification of impact where I think there is a sliding scale to balance where on one side it is too fluffy and on the other side it is too complex and onerous like just not scalable”* (Respondent Six).

These arguments are just a few examples of the different challenges of impact investors regarding social impact assessment. Based on the interviews, the main challenges that reflect the difficulty in the early-stage impact investors face when measuring social impact are

identified. These are working with (1) forecasted data, (2) needing more clarification of social impact, and (3) difficulty in measuring social value.

### **5.1.2. No comparability**

Next to the challenge of acquiring data, the interviewees express a limited perception of comparability - comparing measurements globally, over sectors, and even within a sector. The reasons for the lack of comparability merge with the difficulties also encountered in data collection: the need for more clarification of defining the terms of impact and the issue of working with forecasted data.

One interview commented: *“the most challenging issue with the data is that you cannot compare the different countries in terms of data gathering”* (Respondent Ten). Regarding the global level, another impact investor states that *there are too few scales applied in a relevant way that they are comparable (Respondent Four)*. Narrowing down: during the interviews, the respondent demonstrates that comparing cross-sectors in terms of impact is not possible, so Interviewee Four, *if you approach the industry agnostically, you cannot measure impact (Respondent Four)*. In the same context, the lack of definition and the associated lack of standardized metrics, which do not even exist on a sector-specific basis, were also mentioned. *You would have to measure sector-specific impact, which would be interesting, but even if you compare them, it is tough to define impact (Respondent Four)*.

Even though standardized metrics are used in some cases, *“there is a lack of benchmarking data,”* according to Respondent Eleven. The problems associated with the existing measurement methods are described in the following section.

To summarize, the problem that confronted the most was the stadium of the early stage, the imprecise definition, and, in addition, the already existing measurement methods that need to measure the expected value and make it possible to compare the different portfolio companies.

### **5.1.3. Measurement tools**

It becomes apparent that impact investors need help with social impact measurement, perceive it as challenging, and wish for a time-efficient, transparent and standardized way to use impact measurement frameworks.

This is consistent with the research, which presents choosing a social impact measurement method as complicated (Maas & Liket, 2011). They all struggle with choosing a suitable framework for measuring their desired social value, especially in the early stage. So does impact investors repeat the *limited readiness level they are investing in* (Respondent Three), the changing business model, and the challenge of finding a suitable framework according to this stage.

Generally, only a few are in use of an already existing framework. They describe the tool on one side as

*“comprehensive, scientific, data-driven, and accepted, but on the other side define it as complex and very time intensive, and in addition to that, not the best tool to assess companies.”* (Respondent Seven)

So does Respondent Ten state “[...] *that (measurement tools) are good focusing tools, but these tools are not trustable at all.*” So does another impact investor highlight that tools *are more or less the framework, but not hard limits* (Respondent Four).

Furthermore, the thematic analysis highlights that already existing measurement methodologies are not trustworthy or missing out on other features. So did one impact investor state; already existing tools *are a good start. [...] And then there will be iterations and improvements to get to something that makes sense* (Respondent Six).

Given the increasing pressure for social impact disclosure (Hand, Dithrich, & Nova, 2020), the impact measurement could be tailored to investors only, as the impact would be primarily weighted against the investment input. Hence, the measurement is rather generic, and the impact value could be mismeasured.

Consequently, standardized frameworks of impact investors are used instead because of the rising pressure of accountability and transparency, impacting investors’ demand. These tools are primarily designed for impact investors, and perhaps that is partly the problem that they are partially developed for start-ups. Respondent Five mentions that the

*founders have to think about it more than me as an impact investor. The tools do not work when investors impose them on SEs: otherwise, start-ups would have to bend and spend more time on something they do not want and cannot do.*

To sum up, why do impact investors face the challenge of measuring social impact: They all face the limited possibility of acquiring data, mainly due to the early stage, the uncertainty about the definition of impact, and the not measurable impact itself. In addition, the difficulty in comparing the different portfolio companies is because of country-specific perceptions of impact, that impact is across sectors not comparable, and due to the failure of gathering

benchmarking data. Finally, the number of existing measurement tools, the use of many different tools individually, and the uprising pressure for performance disclosure of social impact make it more difficult for impact investors to measure the desired social value.

However, the next section will highlight how the awareness translated into an overall tendency to give impact measurement a limited priority.

## **5.2. Limited Priority for impact measurement methodologies**

Secondly, impact investors were interviewed about their perception of the need for impact assessment tools. In combination with the above-indicated challenges of measuring social impact, comparing data, and facing challenges of measuring impact, it became evident that the impact investors are experiencing a limited priority for impact assessment methodologies due to the priority of (1) return, (2) the decision-making process based on gut feeling, and (3) the use of their own implemented tools.

### **5.2.1. Orientation quantifiable data**

As well as the social entrepreneurs, the impact investors are inspired to drive economic growth and are somewhat in line with the social impact. Nevertheless, the thematic analysis highlights the prioritization of the market and financial data, as

*“at the end of the day, this is a commercial business, and people are trying to make money, and we are just trying to do that in a way that's good for society”* (Respondent Thirteen).

Mainly, the impact investors agree that the focus should be on running their daily operations. Especially for early-stage start-ups, in which the impact investors indicate the founder's priority should be to prove the feasibility of the business model, the right market fit, having the right team, and an impact metrics component. Driving economic growth is preferred, as having a *“solid return on investment. Otherwise, they could not raise another fund”* Respondent Eight. Therefore, most interviewed impact investors first look at the team, market, financial, and lastly at impact data. The reason for the limited prioritization of impact measurement is the repeated challenge of measuring social impact.

*This reveals in the prioritization of cross-industry and quantifiable data, such as market data, financial data, income, and jobs* (Respondent Five).

However, the validity of such claims is questionable, and in keeping with the literature, assessment depends on how the impact is defined, understood, and measured.

### **5.2.2. Deciding on gut feeling**

Next to the first impression through the market and financial data, most impact investors decide on a relatively intuitive feeling, the gut feeling. So does Respondent Four states the prioritization of a gut feeling instead of measuring the value of social impact:

*With the gut feeling, we give our first screening. Moreover, with quite a bit of common sense, we do a tick in the box; then it is the impact for us or just not otherwise* (Respondent Four).

Hence it became apparent that there is a limited priority for measuring the impact due to the security that the gut feeling is enough and preferred in measuring impact. As already mentioned, some impact investors use approved frameworks as guidelines, so do they use them to support their gut feeling, as Respondent Five states:

*We start with the SDGs, then we look at these subtitles, where they fit into and make a bit of a box-ticking.*

Hence, impact investors are deciding under conditions of uncertainty in the early stage with rather an intuitive feeling than a proven impact measurement tool. When choosing an impact assessment tool, they use it as a guideline but primarily decide on the intuitive feeling towards the portfolio company or the financial and market data mentioned beforehand. In addition, well-known impact investing ventures chose to create their tool – a mixture of first impressions, market data, and already existing measurement methodologies.

### **5.2.3. Own tools**

The impact investors claim that the decision-making process is made under conditions of uncertainty in the early stage. Therefore, they “*decide on the first guess at first, and we only go in depth later on*” (Respondent Twelve). Nevertheless, they might underestimate the potential of deciding on an intuitive feeling. Therefore, some Impact Ventures combined the first impression with market data, financial data, and existing measurement tools. With the individual internal framework, the priority of impact measurement tools became less, as discussed in the following.

*We have 6 Impact Guidelines. A framework that we established internally. It is not scientifically proven, but we have always looked at it iteratively, and it works very well on all metrics in the case of impact (Respondent Three).*

So mention the first and fifth Respondents:

*So essentially, it is a 6-stage model of what we have come up with. This starts with a general screening of the business model if that is geared to a specific SDG target (Respondent One).*

*; We have built our tool, which is a mixture of IMP and SDG (Respondent Five).*

Compared to Respondent Three, the others include existing frameworks in their measurement method to guide them. Nevertheless, already existing tools are not only used to measure the impact. It is much more advanced in terms of environmental impact measurement. However, due to the challenge of measuring social impact and deciding on the right tool, the interviewees need to be using measurement tools for social impact. Hence, their priorities in selecting portfolio companies and their impact creation are financial and market data, the decision based on gut feeling or a combination of both, designed as their own guideline.

### **5.3. Standardized tools**

Finally, the semi-structured interviews led to the question developed from the literature on the need for a uniform and standardized impact assessment tool.

Besides of two interview partners, the impact investors agree that in order to improve the use and the efficiency of impact measurement, common metrics should be defined, and industry standards should be set. Even if they already have touchpoints with international frameworks or even built up their framework, the value in increasing ecosystem-wide standardization is seen. Primarily to have *better positioning and branding* (Respondent Two) and *to improve the impact investments* (Respondent Three).

In order to build a better framework for the individual use cases and the higher number of foundations, Respondent Eleven states that *“it would be perfect to have more industry standards.”* Again, it starts with a simple, tangible definition *that can be explained to the masses, raising more awareness of the actual problem. Moreover, thereby, more is founded and financed* (Respondent Four).

Furthermore, the industry standards could facilitate a better quantification of impact data that

*more and more investors are looking for. Creating that sense of data layout helps to facilitate more and would lead to more investments because you know what you will get in terms of an impact perspective (Respondent Seven).*

Additionally, with a uniform, standardized process,

*“We could look at it in more detail, which is less time-consuming. And then the outcome is that we can focus on and further focus on the more interesting impactful startups” (Respondent Eight).*

Next to more impactful foundations, a higher number of investments, and the prioritization of more impactful start-ups, standardized processes lead to a higher priority of impact measurement tools. As the priority is getting less on the orientation on financially driven data, gut feeling, or own-created frameworks due to ecosystem-wide definition and quantifiable data. With easily measurable data and, in addition, the proof of financial performance, the unreliability of early-stage investors can diminish, as one interviewee states:

*“You cannot understand what impact is and what it is not. So, there is much ambiguity, which might drive away some investors. [...] If you prove that you have data that is social impact and this is translating into financial performance, that would be a super turn-on for some investors” (Respondent Eleven).*

Most impact investors validate the overall assumption that a standardized process in terms of impact measurement is preferable. All in all, the interview partners agree that the lack of standardization led to misalignments of interpretation and the challenge of acquiring data. Moreover, the difficulty of comparing the results among organizations and sectors is stated. As the different impact investors use various tools, it makes it even more complicated, even in terms of interoperability between the other frameworks.

The perception towards a uniform, standardized tool of impact measurement was validated by the fact that by the better quantification of impact data, the number of funds would increase, and so does the positioning and branding of the portfolio companies. In addition, the decision-making based on gut feeling could diminish, and decisions can be made based on quantifiable data. The need for own developed frameworks would decline because of the ecosystem-wide definition, comparability, the more time-efficient process, and the facilitation of data-driven decision-making. Hence, a higher priority for measuring social impact and enhancement of measuring it, and generally, the higher number of impact investors and more social entrepreneurs, as described in the next section.

## **6 Conclusions and limitations of the dissertation**

### **6.1 Conclusion**

The study focuses on analyzing available and standard impact assessment methodologies. Moreover, the thesis highlights the most common standards used by impact investors and their strengths and weaknesses. Past studies highlight the challenges of measuring social impact, as it is challenging regarding what to measure and how to measure it (Sarmiento & Herman, 2020). Impact assessment still needs to be debated, particularly regarding its definition, efficient data collection, and the perception of existing impact measurement methodologies (Garbarino & Holland, 2009). As measuring comes with uncertainty, no agreed impact assessment methodology is used as a standard one. However, many impact investing companies use frameworks such as IRIS+, PRI, SDGs, etc.. These measurement tools are used to evaluate social impact to ensure transparency and credibility, offering a common logic to assist enterprises and investors in understanding their social impact (Kah & Akenroye, 2020).

However, the literature ignores the perspective of investors toward impact assessment tools. A qualitative study was conducted to address the literature gap and better understand the perception of the use of frameworks within the impact investor industry. Therefore 13 early-stage impact investors are interviewed through a semi-structured interview. With the thematic analysis, it is discovered how the perception of impact investors towards impact measurement and its frameworks is and what is missing in the area. It becomes apparent that the respondents are facing, in line with the literature, challenges when it comes to measuring social impact. The analysis indicates the difficulty of acquiring data due to the early stage and the controversial definition of social impact. Furthermore, the analysis illustrates the limited possibility of benchmarking impact data globally, cross-sectoral, and even sector-specifically. According to the impact assessment methodologies, impact investors demonstrate the challenge of choosing the appropriate impact assessment tool in order to measure the desired social value.

Additionally, it becomes apparent that impact investors feel limited priority for impact measurement tools, as financial and market data is somewhat measurable. Due to the lack of impact measurement, investors instead decide on an intuitive feeling, which results in a limited priority of measuring impact. Finally, 3 out of 13 respondents mentioned using their own implemented tools, the mix of quantifiable data, gut feeling, and already existing tools used as frameworks.

Through the thematic analysis, it is discovered that impact investors need an understandable, reliable, transparent, uniform, and ecosystem-wide standardized impact assessment methodologies. Coherent to the literature, 11 out of 13 impact investors surveyed believe that a global, standardized framework could ensure that the market for impact investing is more attractive, less time-consuming, and less costly. It could also lead to better comparability with more foundations and higher investment amounts.

## **6.2. Limitations of the dissertation and future research**

Initially, the study was constrained and limited by the research design, methodology, and data collection. In order to better compare the evaluations and assessments, impact investors investing in pre-seed and Series A were used. However, a more comprehensive range was included by demanding purposive sampling. Nevertheless, it would be interesting to see how later-stage investors measure impact, especially since they do not face the problem of forecasted data. However, the number was unfortunately limited, and comparability would have been more challenging to assess.

However, it would be interesting to interview later-stage Impact Ventures for future research. Those impact ventures invest in larger companies with already collected data (not forecasted) and have already reached a specific market volume where impact measurement would become a priority. This could answer whether impact investors are more inclined to conduct thorough impact measurements at that stage. Moreover, this would have allowed a better assessment and evaluation of the measurement methods.

The qualitative nature of the study allowed for personal perceptions of impact measurement methods. At the same time, thematic analysis brought subjective and detailed rationales to the forefront of the research. The qualitatively oriented research did not serve the purpose of measurement but aimed to capture and understand the process and perceptions of social impact assessment. With this in mind, it would be interesting to include the perspective of portfolio companies in future research to get their perceptions and experiences with impact measurement tools.

Furthermore, the qualitative character of the study can be complemented, and further research questions can be answered by measuring the correlation between impact measurement and fundraising. For this purpose, a quantitative survey of social enterprises and impact investors is recommended. However, such databases were unavailable and would have been difficult to create within the given timeframe of the study. Therefore, qualitative data collection with

impact investors was used to capture perceptions and experiences in their full depth to answer how impact investors can most effectively measure social impact.

Gathering details of the different measurement methods proved to be complicated. Only limited literature describes the instrument's functioning and definition for the other measurement methods. Finally, it would have been desirable to have a better and more careful piece of literature. Additionally, more respondents using impact measurement methods would have been preferable for further research. This would have allowed for a better assessment and evaluation based on the data from the literature review.

## Appendices

### Appendix A: List of frameworks compiled by NEF 2009

Tool	Area of focus
AA1000 AS	Social, Economic, Environmental
CESPIs	Social, Environmental
DTA	Development
Eco-mapping	Environmental
EMAS	Environmental
EFQM	Quality, performance and development
GRI Guidelines	Economic, environmental and social
iPS	Organisation performance
ISO 9001	Quality management
LM	Policy development or programme strategy
LM3	Local economy
PQASSO	Quality assurance
Prove It	Regeneration
Quality First	Organisational performance
SAA	Social, Economic, Environmental
SEBC	Social, Economic, Environmental
SIMPLE	Social Impact
SROI	Social, Economic, Environmental
ToC	Social and economic
The Big Picture	Organisational performance
TSPD	Organisational performance
VIAT	Organisational performance

Figure 4: List of frameworks compiled by NEF 2009 (Kah & Akenroye, 2020).

### Appendix B: Characteristics of standard impact measurement tools in the impact investing industry

#### ESG Metrics

ESG metrics are a collection of standards used to evaluate businesses regarding their ESG features. Based on corporate policies, they screen an investment's sustainability and relevant future risks and potential. ESG metrics allow fund managers to include non-financial variables in their investment strategy, portfolio design, and decision-making processes since they are transparent and easy to understand (Sarmiento & Herman, 2020).

Investment companies that use ESG investing frequently have their priorities. PWC, for example, the consultancy, are using ESG criteria, helping them identify companies for long-term performance (Brock, 2022). It is about disclosing metrics, data, and information that

explain the PWC’s impact and add value in environmental, social, and governance. By integrating ESG metrics, analysts set criteria for specific sectors, industries, and companies and identify the relevant issues. PWC includes ESG criteria, as shown in the figure (PWC, n.d.).

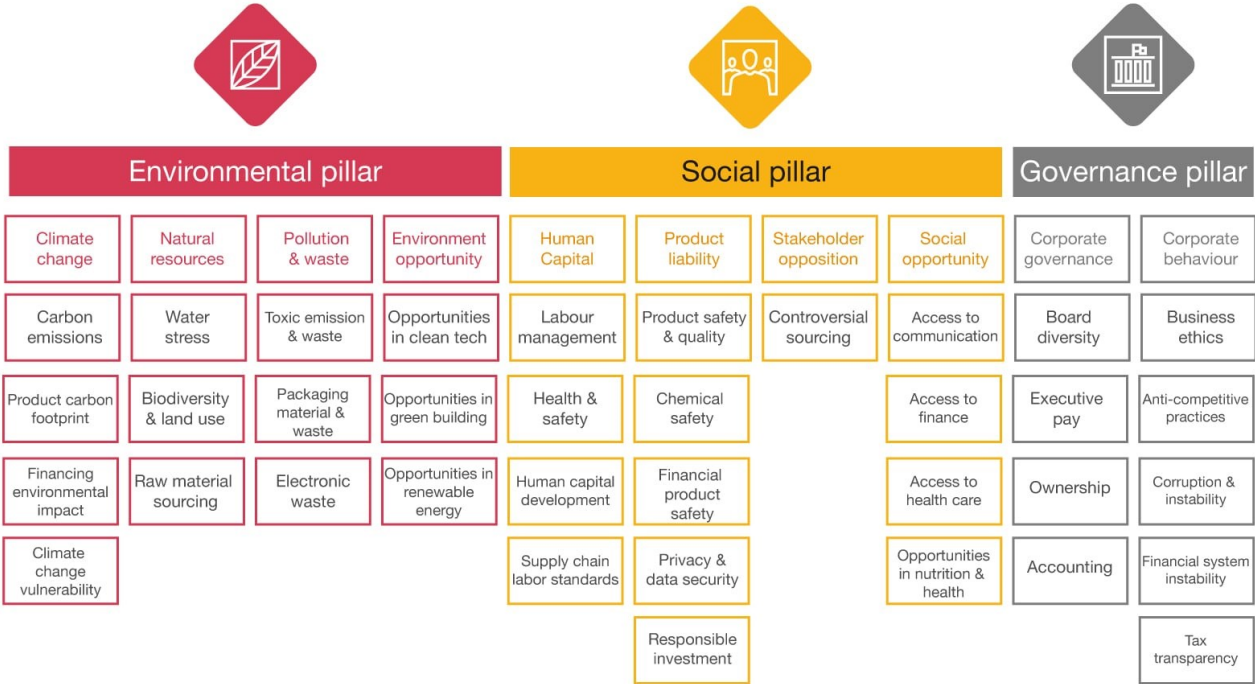


Figure 5: Environmental, Social & Governance. (PWC, n.d.)

Generally, ESG can be qualitative and quantitative. While quantitative approaches incorporate measurements and key performance indicators (KPIs) related to each area to assess progress against goals and report on achievements, qualitative reports typically discuss a company's strategy or policy around the relevant themes (PWC, n.d.).

According to impact investors, ESG can be a leading indicator of impact and profit (Sarmiento & Herman, 2020). ESG measurements and integration are linked to several economic advantages, and ESG disclosures are related to higher revenues, cheaper costs, and fewer capital costs and restrictions (Amel-Zadeh & Serafeim, 2018).

**IRIS+**

The “Impact Reporting and Investment Standards” (IRIS+) is known as a system that is generally accepted for “measuring, managing, and optimizing impact” (IRIS+, 2022). This approach helps investors and companies to integrate environmental and social factors into investment decisions alongside risk and return (IRIS+, 2022). Especially in the impact investing community, this approach provides tools to make metrics accessible and defines standard metrics for measurement as taxonomy (Sarmiento & Herman, 2020). Additionally, it includes

performance indicators that can be used across different sectors. Across six performance indicators, financial, operational, product sector, social, and environmental, IRIS+ comprises 559 generally accepted quantitative and qualitative metrics, like female full-time employees, occupational injuries, and environment impact objectives. (Sarmiento & Herman, 2020).

For example, the asset management firm Saron is an organization that targets social value alongside financial return, including IRIS+ metrics: 33% of the full-time jobs of Saron’s venture are represented by females. Regarding occupational injuries, 241 of all firms invested by Saron. Moreover, more than 110 billion liters of greywater are recycled yearly (Saron, 2019) (Sarmiento & Herman, 2020).

The simplicity and practicality, and cross-sector usability are advantages of this approach. Hence, it provides a common reporting language for impact-related analysis (IRIS+, 2022). Disadvantages come with not measuring outcomes or impacts and the difficulty of judging whether the core is “bad” or “good”.

**SASB**

Enterprise value risks and opportunities are disclosed by SASB using an industry-based sustainability framework. It offers a collection of metrics to assist businesses in providing investors with valuable and relevant sustainability information (SASB Standards, n.d.). For 77 industries, SASB Standards identify the subset of environmental, social, and governance challenges crucial to financial performance and organizational value (Sarmiento & Herman, 2020). The Standards were created through a strict and open standard-setting procedure, which included: unbiased oversight and approval from the independent SASB Standards Board, extensive and balanced input from businesses, investors, and subject-matter experts, and evidence-based research (SASB Standards, n.d.).

For example, the computer software company, Adobe adopted the SASB to report KPIs regarding their social, governance, and environmental activities (Sarmiento & Herman, 2020).

<b>Reference Indices</b>	<b>KPI</b>	<b>2017</b>	<b>2018</b>
SASB TC-SI-330a.3	% Female Employees	31%	32%
SASB TC-SI-330a.3	% White (Caucasian) Employees	63%	61%
SASB TC-SI-130a.1	Total Energy consumption (Gigajoules)	853,042	803,693

Figure 6: An example of an application of the SASB Standards of (Adobe, 2018) (Sarmiento & Herman, 2020).

**SDG**

Based on the seventeen Sustainable Development Goals (SDG) and the 169 sub-targets, practitioners value their impact and use it as a framework and guideline (SDG, 2022). Since each SDG's indicator is normalized and rescaled from 0 to 100 (optimal) for each SDG, the SDG Index makes it simple to compare various impact concerns and geographical areas. Since the SDGs include the world's global problems, suggesting specific targets and metrics and monitoring outputs, outcomes, and impacts, these standardizations and the corresponding capacity for comparison are a great plus. (Sarmiento & Herman, 2020).

Impact finance, for example, which invests in positive economic and social impacts for people in poverty, reports ten sub-strategies linked to six SDGs: SDG-1, SDG-2, SDG-8, SDG-12, SDG-13, SDG-15 (see figure 5). Individually, they monitor, specify, and report metrics across Impact Finance’s portfolio and in addition to some of their investments. Regarding one of their portfolio companies, for example, they reached a 52% share of women among full-time employees in 2019 (SDG8)(Impact Finance, 2019) (Sarmiento & Herman, 2020). This results in identifying opportunities and risks and how they can prioritize strategic actions. In addition, improvements and opportunities for systematic SDG approaches can be made (United Nations, 2022).



Figure 7: Sustainable Development Goals (SDG, 2022).

**PRI**

PRI assists in gaining an understanding of the financial consequences of environmental, social, and governance (ESG) factors. Hence, it supports its global network of investors in incorporating these issues into its investment and ownership decisions. PRI provides a list of potential steps for integrating ESG factors into investment practice – the six principles. Principal 1 helps to incorporate ESG issues into decision-making processes and investment analysis. The second principle supports active ownership and the integration of ESG problems into ownership practices and policies. Following the third principle, companies demand that their investment entities provide proper transparency on ESG problems. The fourth promotes acceptance of the principals within this industry. The fifth includes collaboration in order to increase the effectiveness of implementing the principles. Principle 6 consists of the progress toward implementing the earlier-mentioned principles and reporting on the activities. Principle 6 includes disclosing active ownership activities, how ESG issues are integrated within investment practices, and communicating with beneficiaries about ESG issues (PRI, n.d.).

**GRI**

The GRI Standards reflect the industry standard for publicly disclosing economic, environmental, and social consequences. Information regarding an organization's good or negative contributions to sustainable development can be found in sustainability reporting based on standards. The GRI Standards are a framework of modular, linked standards. The reporting process is supported by three series of Standards: the GRI Universal Standards, which apply to all businesses; the GRI Sector Standards, which apply to sectors; and the GRI Issue Standards, which each list disclosures pertinent to a specific topic. Organizations can achieve sustainable development by using these standards to decide whether issues are relevant (GRI, n.d.). The figure is an example of how one of the GRI Standards, which is a specific topic in the 300 series (environmental topics), and how summarizes the disclosures and reporting requirements (GRI, n.d.) (Sarmiento & Herman, 2020).

GRI	Disclosure
306-1	Waste generation and significant waste-related impacts
306-2	Management of significant waste-related impacts
306-3	Waste generated
306-4	Waste diverted from disposal
306-5	Waste directed to disposal

Figure 8: GRI 306: Waste 2020 (GRI, n.d.). (Sarmiento & Herman, 2020).

## GIIRS

The “Global Impact Investing Rating System” offers Ratings and Analytics. In addition to the IRIS+, it provides a judgment function by aggregating IRIS-compliant data into numerical and star-based scores and ratings (see figure 7). With the developing ratings and the analytical approach, GIIRS provides a comparable rating of social and environmental impact, excluding the financial performance of funds and companies. In this way, it can compare impact investments across geography, industry, sector, and size. Due to diligence, individual reporting and analytical solutions, investment, and reporting processes, the tool is increasing efficiency (GIIRS, 2022).

Impact Area Rating	Governance Score	Worker Score	Community Score	Environment Score
★	0 to 2.9	0 to 17.9	0 to 12.9	0 to 4.9
★★	3 to 4.9	18 to 20.9	13 to 25.9	5 to 10.9
★★★	5 to 6.9	21 to 23.9	26 to 38.9	11 to 24.9
★★★★	7 to 8.9	24 to 28.9	39 to 69.9	25 to 39.9
★★★★★	9+	29+	70+	40+

Figure 9: GIIRS Impact area rating (GIIRS, 2022).

## Appendix C: Overview of respondents

Nr.	Type	Size	Portfolio	Geographic	Investment Scope	Interviewer
1	Early-Stage	unknown	unknown	Germany	Sector agnostic	Co-Founder
2	Pre-Seed	1 Mio.	680	Germany	Software/Hardware on Life Science	Analyst
3	Pre-Seed & Series A	1-5 Mio.	22	Germany/USA	Sector Agnostic	Impact Investor
4	Pre-Seed	250k. – 500k	52	Germany	Sector Agnostic	Impact Investor

5	Pre-Seed & Seed	500k.	3	UK	Sector Agnostic	Impact Investor
6	Pre-Seed & Series A	20 Mio.	unknown	Singapore	Sector Agnostic	Founder
7	Early-Stage	unknown	11	Germany	Sector Agnostic	Dealflow
8	Early-Stage	200k	32	UK	Sector Agnostic	Dealflow
9	Early-Stage	150k	58	Germany	Vertical Agnostic	Investment Analyst
10	Series A	20 Mio.	unknown	Singapore	Sector Agnostic	Impact Analyst
11	Early-Stage	500K. – 1 Mio	unknown	UK/ Portugal	Vertical Agnostic	Impact Analyst
12	Early-Stage	150	31	Netherlands	Energy&Circularity; Food &Agriculture; People Power	Impact Analyst
13	Early-Stage	500k+	unknown	USA	Sector Agnostic	Impact Analyst

#### Appendix D: Questions to the Impact Investors

Impact Investors characteristics	1	Who is company XY and in whom do you invest?
	2	Do you look for features of the SE when selecting, and what are they?
Already existing tools	3	What tools do you use to measure social value?
	4	How do you collect your impact data? Do you use any software for this?
	5	Why did you choose the qualitative/quantitative method?

	6	Do you and SE use different tools to measure social impact/value, and if so, which ones and why?
	7	What is the most common way of measuring the impact that you see with the companies you work with?
	8	Are you using the same KPIs for each company, or are you adding specific ones based on the industry?
Perception of tools	9	How important is measuring the SE's social impact/value?
	10	Why do you think impact assessment tools are necessary?
	11	What are the most important factors when choosing the tools to use?
	12	Do you think the tools that exist/are used so far measure the desired social value?
	13	Are you missing any important/meaningful features in these tools?
Limitations & Recommendations	14	What are the most challenging factors for you to measure? And how do you think this can be solved?
	15	In general, what are you missing in the area of impact assessment?
	16	Do you think a standardized/improved impact assessment methodology could lead to more inflow of investment on social issues?

#### Appendix E: Example of transcript

OK, the fund is called [REDACTED] It's a joint venture between mustard seed of venture capital fund in the UK and mice from Portugal. So technically the investment arm is called [REDACTED] And we invest in early stage startups from Europe, the European Union and the UK and our tickets range from 50K to €1 million. So precedent you'll see reside and we are vertical agnostic. So we don't invest in a specific industry, but we invest in companies that have an impact business model. So what we call lockstep model meaning. It's a model where the more financial performance you have, the more impact you create, and impacts can be social or environmental. You just need to be clear on which problem you are solving for society and how you are tackling it.

When selecting or for, what particular features of the portfolio companies are you looking for and what are they?

So I guess for usually the classical venture capital, they look at three factors, product, team markets and we have a fourth element which is impact. So I can go a bit deeper into each one. But market you look at like the scalability and growth of the market that's that the startup is in like is it going to grow exponentially, are they going to surf the wave of growth et cetera and how's the size of the markets? If it's big enough to like increase your financial performance exponentially in the future, then we look at products. Is the product innovative? Is the competition the competition scars? Is it very difficult to enter these markets? And like there's the business model, revenue model makes sense. And then most importantly the team like, are the founders, are the team the one that's going to take the start up to the next level? Why are the ones that are going to succeed and not the other teams? And do they have the experience, the knowledge in the industry to be successful and then the impact, we look at the impact story, the impact motivation of the Founders and if the impact is deep enough or scalable enough to make a change.

OK. Like you just mentioned, why is it so important to measure the impact of the portfolio company?

We already packed funds, so I guess it's relevant, but in practical terms.

First of all, we need to communicate to our LP so limited partners that we are actually investing in impact startups because they invested in our funds, because we are an impact funds, so we need to communicate how are the startups making a change.

So we need to report on that. We also internally we've created a fund also because of intrinsic motivation with this direction. And finally our performance as a fund, our carried interest or performance fee is linked to impact outcomes. So for every investment that we make, we define a KPI of impact. So let's go to emission saves that we put a target for 5-10 year time span and we only get our financial performance our performance fee as fund managers if these impact outcomes are achieved and when the incentives be aligned.

Very nice and what tools do you use to measure the impact?

So we use what we call, what the industry calls the impact management project. Yeah, now it has rebranded to impact management platform, which is basically a framework of how to frame your impact and how to measure in a consistent way throughout the companies. So the IMP basically answers 5 questions. What is the startup doing? What's the outcome? Who is benefiting from that outcome? Is it the planet? Is it unemployed people? Is it People with low mental health, etcetera. How much so scalability? How many people are being infected? How many area?

The quantity of area being affected and how much, so depth and scale then the contribution. So you measure impact outcomes, how do you make the casual relationship between the outcomes and your contribution to those outcomes? And finally the impact risk. So what's the risk that the impact outcomes are disruptive in the long or short?

OK. And how do you acquire the data for it?

Yeah, so the data is provided by the startups themselves.

duty, next to already existing time pressure

They need to do as a duty to the investors quarterly report. Usually they do monthly and in those reports they need to report on impact metrics. So it's a requirement.

Are there portfolio companies you're working with, are they using own measurement tools as well?

Say again?

Like other portfolio companies you're working with, are they using measurement as so impact measurement tools as well?

Uh.

I guess yeah I don't know you know I don't I I don't. But something interesting to to mention is that like startups have very busy schedule and they have lots of things trade-offs to look at your resources. So I guess like they measure their impact usually based on their metrics that are already tackling or tracking. So for example financial return usually link.

no time, still pressure from VC

Financial return metric with the impact metric so that it's easy to calculate. But I've never seen any startup using like a deep impact research or randomized control trials or anything like that just because like they move super fast, they even change business sometimes. So yeah.

would not do impact measurement because of time cost pressure

Are you doing the impact measurement for them or are they doing it their self with your tool?

Yeah, we kind of work together, um.

So we kind of went upon investment. We sit down with them and we decide the impact metric they need to track and like how they are going to measure it and which tools are they are going to use. And then depending on each startup they can be more deep into the impacts tracking or less deep. But for example I'm going to have a call this week or next week with the founder that's was asking for help in how to measure their impact. So I'm going to sit down with him and show look that's what we've done with other startups that we measure are supported and yeah, and we also have an impact advisor Amanda Feldmans with basically created the tool and she's always available also. So it's more like a formal support.

VC decides what to measure

own human resource for impact measurement

Are you using the same KPIs for each company or are you adding specific ones based on the industry?

Definitely different KPI. We have startups ranging from, I don't know, wave energy or clean energy, blockchain carbon credits until social inclusion, female empowerment slacks, integrating disabled people like it's so broad that it's very difficult to maintain the comparable KPI.

Which one is more difficult to measure?

Definitely more relative kind of social impact. Yeah. So for example, we have a company computer box that they employ refugees. So kind of it's easy to track how many employees they, how many refugees they employ. Basically like to make the social well-being that increases by having a job or social inclusion. So this kind of more intangible social impacts. This area so difficult to measure and other example can be few million power moments like apps that financially education for women. Usually we do more outputs driven KPIs. So how many people are in the platform, how many people engaged base difficult to put in terms of out outcomes, so long term outcomes.

difficulty in measuring social impact

OK. And why do you think that impact assessment tools are necessary?

To bring consistency to the game like financial performance is very standardized nowadays in the industry, but impact is all over. So just kind of seeing the carbon credits market like you have a 2 billion voluntary market that's it's all over, people do whatever and there is no consistency. So I think having the same tool and applying the same rationale to all the ventures even though they work in different industries, it's relevant to ring. Consistence once again and even to compare with other startups and other portfolio companies in other VCs or even in the same portfolio or upon investment to choose the startup and not that one, it's important to have like a organized mindset, but we are still far as an industry and of course as funds we are very far from bringing that.

Are you are you missing any important or meaningful features in in the tool of the IMP?

Yeah, so the tool is kind of good because it gives the framework that you can go deeper into each one of the questions, but I think it's lacking a bit of benchmarking data. So for example you are measuring CO2 emissions. Like how can we compare with the standard in the industry, like saving 100 tons of CO2, is it good or bad? Is it effective in these industry or not? Like it's difficult we get these 100 tons of CO2 emissions sites per day. But like what? What does it mean in practice? Like if you put they do 100K monthly revenue, it's easy to know. OK, this is comparison comparing it's very easy to to know. The impact metrics is too far from being standardized and comparable, yeah. So I guess for the IMP to be complete, yeah, it would be perfect to have like a more industry standards. That's the keyword.

And when it came to measuring, would you say that like a mixture of quantitative and qualitative tools would be preferable?

Uh, yeah, qualitative, we kind of do have already just with answering the five questions. I think what's lacking is really the quantitative parts, like making sense of the numbers. I see lots of impact numbers, but I think it's like in quantitative and more, more than that is like, how do you say quality-quantitative assessment? Are those numbers truthful? Where are they

based on? What's the contribution to those numbers that you present? Like to understand if the impact logic is there and if it's good, robust enough.

And what are the most difficult, I am sorry, no, no, you mentioned that it's really difficult to measure like the social impact and the woman empowerment and so on. And how do you think this could be solved?

Uh, yeah, it's tough. I mean, imagine you are training a teenage girl that is 14 with the outcome to your life. Your outcome is to decrease the gap between women and men in tech, and you are training your product is training with teenage girls. Like, how the hell are you going to track all the way into adulthood? The effect of your intervention when they were teenagers. Like it's tough. I I mean I think it's the solution is to have a relevant story that is very strong based on data. So you cannot make the attribution that's discussed this. But you can go deeper into the problem and say the cause of the gap between men and women is because when they are teenagers, there is a cultural implementation in your head that makes these gender imbalances that then will reflect.

That they are adults. So if we intervene in this age then we can make the crash rule logic that then it will translate. So even though they cannot actually measure or it's very difficult to measure, they can like based on data and scientific evidence. That's this is the relationship. Of course they can fail. But that's an alternative I Guess.

Thanks. Do you think you already mentioned it, but do you think that a standardised impact assessment methodology could lead to more inflow of investment on social issues?

Yeah, definitely. I mean, I don't know about investors, but what happens nowadays is: **It's very all over like it's very, you cannot like understand what's really impact what it's not. So there is lots of ambiguity which might drive away some investors.**

Which don't believe or don't **don't care about this because it's not organized.** So you you have all kinds of stuff you have like mcorp assessment, theory of change, impact, **we're getting back the account, social impact returns. Like it's a mess.** So to if you give a turnkey solution to a like a regular investor or traditional investor to **make this impact change or impact transition to be easier, yeah, I think we'll bring more investors.** I think nowadays if you want to be an impact VC or an impact player, **you really need to navigate into this world, which still is a bit messy and ambiguous.**

And moreover, if you prove, sorry **if you prove that you have data to prove that actually this social impact or environmental impact is translating into financial performance.**

**Then like that would be a super turn on for some investors.**

Fenoff. But yeah, I think so. It's like my own opinion, it does nothing to do with the interview. I think the most difficult thing about it is that you can't really measure impact because people don't know what impact actually is because for everybody else, impact is something different. And it's crazy because every we see, I talk to everybody was like every impact investor I talked to was like, yeah, I don't know what is impact, so we can't measure it. Because we don't know what it is. It was crazy, was really interesting.

And people they have impacts, **lack of literacy** or I don't know if this makes sense to you, **but yeah like you need to be based on data to understand which impact area is more effective.** Like let's take reduction of CO2 emissions. You need to understand first where do the CO2 emissions come from? Is it from transportation? It's from energy production? Is it from food and feed? And then by looking at the bigger scope, where is the areas that have more impact potential and then how are the solutions changing the way you tackle each one of these?

Industries like for example energy protection, is it better to invest in renewables, is it better to invest in like carbon removals or is it better to, I don't know.

Like there's lots of financial elite impacted literacy. I think in impact this is still, but it's normal. Like it's still growing trend. So it's still new. So what I see in dangerous is kind of, OK, this kind of heaven has an impact. So let's look at the financial performance.

Um, instead of I want to go here to. This starts because they have an impact. Let's see if they have a financial performance. It's the other way around, so it's like a quick check.

I think this has potential for impact on the story makes sense. And that of course that has an influence on the kind of solutions that get funded, which is more software based, maybe software accounting solutions that are important, but then like the big change also needs to have hardware.

Big hardware solutions like to put in factories, to put in food and feed, to put in cow farms, to continue seaweed production.

And that's it's not so attractive for investors and because investors should they just want tick boxes. Maybe they'll look at financial performance startups that then kind of have this check. Yeah, my very personal opinion.

You know, it's fine. It's perfect. I love it.

Do you want to mention anything else in the Interview what we haven't discussed yet?

Yeah, I think the industry is changing and it will change as more pressure from public sector regulation comes into play, as more players come into the game like I think the normal evolution would be to and even the European Union, they just launched a couple of initiatives now in comp 27.

Yeah, so, so I let's see if this is on time. But yeah, let's see how the industry works. But there's clearly some improvements.

Amazing what you have said and amazing because I can use a lot of it. And yeah, it's perfect. It's really, really perfect. So you're the first company I met. It's really measuring.

Yeah, we kind of like I put lots of my time to this. So we kind of progressing but yeah still lots of to be done even for us like we are very, very very far from it.

## Appendix F: Code patterns

**Acknowledgement of missing features:**

- wish for another solution
  - space for more
  - interoperability
- not comprehensive enough
  - easier to use
  - comparability
  - comprehensibility
  - from beginning to end
  - metric aligned
- interoperability of frameworks
- interoperability qualitative/quantitative
- interoperability sideeffects
- better positioning/branching
- mission in vision aligned
  - definition
  - transparency
  - awareness
  - more funds
- a guideline to start with
- qualitative-quantitative assessment
- contribution of number you present
  - impact logic
- return investment growth rate

**Existing tools are**

- not implemented in beginning
  - good start...
  - rather tracking
  - rather screening
- SDGs, IRIS PLUS, Metriken (easy to influence → mistrust)
- Theory of Change, B Corp Certified, IMP, IRIS
  - not been implemented at scale
    - high investment
    - complex
  - time consuming
    - not accurate
    - sensible
  - only reporting
  - influenceable
  - good for environmental

**Use of tools:**

- different approaches
  - individually
  - 3 people internally
    - gut feeling
- collect themselves inserting it in diff. tool of VC
  - not specifically one
  - own methods

**Difficulties**

- difficulties in acquiring data
  - historically did not do it
- depending on sector and type
  - quantifying impact
- not money, time is missing
  - impact is changing
- no definition for what to measure
  - necessity for more data
- most relevant and up-to-date data
  - quantity of data
    - early-stage
    - future
  - to quantify it
    - interoperability
    - side effect
- too fluffy, too complex

**finance driven:**

- extent of possibility
- primary profit driven
  - control
- what is really measured (market size, competition, profit etc.)
- quantify data (only environmental impact)
  - easy to measure quantitative data
  - not ready to give up profits

**Pressure**

Social value is not pressing  
only direct impact  
only environmental issues  
rather investors instead of enterprises themselves  
if investors tell them to measure

**Missing**

no definition  
measurement for impact  
biodiversity (everything else can be measured)  
measurement for happiness  
tools for investors instead SE  
comparability between those who cannot be compared  
qualitative for VC  
"measure the feature"  
interoperability

**Positive about existing tools**

- first impression
- broad way
- "good start"
- measure waste of saving
- environmental impact
  - data driven
  - accepted
  - comprehensive
  - network
- where is space for improvement

**mistrust**

- already measured data is unreliable
  - greenwashing
  - measured impact
- investors towards the portfolio companies
  - SDGs, IRIS PLUS, Metriken
  - social impact as investing in environmental impact (only looking at numbers)
    - founders
    - time
    - gutfeeling

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