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Master of Science in Management Engineering

*Social Impact Evaluation Models:
State of the Art and Classification*

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IV. Abstract

In the past three decades, the awareness about the pressing social issues the world is facing and the effects that organisations' activities have on them has increased. On one hand, stakeholders demand more transparency, on the other, managers want to improve their social performance. This led to the diffusion of the measurement of the social impact resulting from the actions of organisations across all sectors. However, due to the elusive nature of the concept of social impact itself, the variety of types of organisations, and the information requirements of different actors, it seems impossible to find a one-size-fits-all approach to measure impact, and a plethora of methodologies have emerged instead. Therefore, scholars and practitioners made several efforts to classify this large variety of measurement models with the purpose of organising them by using different variables.

Nevertheless, none of the classifications made so far manages to organise the models based on the strategic role they can offer to the entities applying them.

Through the selection of a large number of existing measurement approaches and a coding process performed on key documents and articles that describe their functioning, this thesis generates an original classification of said approaches, based on the strategic functions they are able to fulfil.

Furthermore, the results of an analysis of the development of these methodologies over time show trends that suggest an increase in the complexity of the new ones being developed in recent years, first of all in terms of their ability to actually measure the final impacts of organisations' activities on society at large, and also in their comprehensiveness, intended as the number of functions that a single model is able to satisfy.

V. Abstract – Italian Version

Negli ultimi trent'anni, la consapevolezza delle urgenti sfide sociali che il mondo sta affrontando e gli effetti che le attività delle organizzazioni hanno su di esse è aumentata. Da un lato, gli stakeholder richiedono maggiore trasparenza, dall'altro, i manager vogliono migliorare la loro performance in ambito sociale. Questo ha portato alla diffusione della misurazione dell'impatto sociale risultante dalle azioni delle organizzazioni di qualsiasi settore. Tuttavia, a causa della natura sfuggente del concetto stesso di impatto sociale, della varietà di tipologie di organizzazioni e delle esigenze di informazione dei diversi attori, sembra impossibile trovare un approccio standard per misurare l'impatto sociale, ed è emersa invece una pleora di metodologie. Pertanto, studiosi e professionisti hanno fatto numerosi sforzi per classificare questa grande varietà di modelli di misurazione, con lo scopo di organizzarli utilizzando diverse variabili.

Tuttavia, nessuna delle classificazioni prodotte finora riesce a organizzare i modelli in base al ruolo strategico che possono offrire alle entità che li applicano.

Attraverso la selezione di un grande numero di metodologie di misurazione esistenti e un processo di coding effettuato su specifici documenti e articoli che descrivono il loro funzionamento, questa tesi genera una classificazione originale di tali metodologie, basata sulle funzioni strategiche che sono in grado di svolgere.

Inoltre, i risultati di un'analisi dello sviluppo di queste metodologie nel tempo mostrano trend che suggeriscono un aumento della complessità dei nuovi modelli sviluppati negli ultimi anni, innanzitutto in termini di capacità di misurare effettivamente gli impatti finali delle attività delle organizzazioni sulla società in cui operano, e anche della loro completezza, intesa come numero di funzioni che un singolo modello è in grado di soddisfare.

0. Executive Summary

0.1. Introduction

All types of organisations around the world began, in the last decades, to take into account progressively more the impacts resulting from their activities on the people and the planet, shifting the focus from the pure economic aspect to considering also the social and environmental ones. Although at the time, methods to evaluate social performance were still to be developed, contrarily to the ones used for the financial performance which had already a solid base behind. Thus, social impact measurement methodologies started to proliferate, coming from both the academic and, especially, the practitioner worlds.

The diffusion of this kind of practices was due to different reasons. It was, first of all, a matter of legitimacy; in fact, external stakeholders pressured organisations to increase their transparency and accountability regarding important social and environmental issues and the effects that their activities had on them.

Secondly, managers used impact measurement approaches also for enhance the social performance of their organisations and improve the impact on society.

There were also specific initiatives that stimulated the flourishing of impact evaluation methodologies. Among them, the Millennium Development Goals and the Sustainable Development Goals stand out for importance and consisted in a series of goals regarding modern social and environmental issues, to be pursued by all nations and organisations across every sector, the progresses of which should be monitored through the use of some form of impact measurement.

All these elements brought then to the flourishing of hundreds of impact measurement models. In fact, due to the variety of types of impact, organisations, and information needs, it is extremely difficult to find a standard. Hence, the way taken by many scholars and practitioners is the classification of the existing measurement models in order to organise them by using different variables and characteristics.

The objective of this thesis is to develop an original classification based on the strategic functions the various approaches can serve, and then analyse which functions are and have been the most satisfied over time to identify possible present and future trends.

0.2. Literature Review

The first developments regarding social performance measurement were made in the 1970s, when two main practices were starting to take hold: social accounting and social impact assessment.

Social accounting emerged as a practice to capture and show how organisations belonging to the social sector create value for society, since traditional accounting resulted to be too limited to achieve such function. It was initially mostly focused on the organisations' effects on the environment, but with time it gradually incorporated the social dimension too, which gained more and more importance. It was thus an account on the organisations' interactions with the community and stakeholders and its activities' effects on them.

Social impact assessment (SIA) instead, was at first a procedure to any federal agency that was going to take actions potentially affecting the quality of the human environment, to firstly assess the potential impacts of said actions. It includes the processes of analysing, monitoring and managing the intended and unintended social consequences of planned interventions, and it was initially part of the broader Environmental Impact Statements, until 1993, when the International Association for Impact Assessment released the first Guidelines and Principles for SIA.

In more recent years, the growth in interest for measuring organisations' social and environmental performances and the impossibility to find a "golden standard" to do it, allowed to a proliferation of approaches which belong either to the category of "social accounting and audit" or of "SIA", or both.

One of the reasons why practitioners and academics struggle to measure social impact is because of the elusiveness of its definition, which in the past decades found many different interpretations and still today is not completely agreed upon. In fact, several scholars provided various definitions, also depending on the field to which they belonged, like SIA, psychology, or the non-profit sector, where the practice of social impact measurement firstly started to diffuse. This happened because of a rationalisation process that occurred in the sector and a professionalisation of the managers of the organisations, and due to funders, that requested proof that the money they donated was indeed used to effectively battle social issues.

More recently, also social enterprises (SEs) got interested in social impact measurement, hybrid organisations with a strong focus on their social mission, but that apply a revenue model to earn income with which they keep improving their activities to deliver social value;

this allows them to not rely completely on funders and investors. Similarly to the non-profit sector, SEs can use impact measurement on one hand, for proving the achievement of positive social impact to donors, investors, and other stakeholders so as to receive funds; on the other hand, managers use these models to improve their processes and the delivery of the resulting social value.

In addition to non-profits and SEs, also impact investors contributed to the diffusion of impact measurement approaches. Impact investing aims to increase the effectiveness in allocating capitals for the provision of social services by making investments in organisations that generate both financial returns and social and environmental impacts, and a survey conducted in 2020 by the Global Impact Investing Network showed the rapid diffusion of impact evaluation practices, used for various reasons, such as proving the progress towards social goals, report results to stakeholders, or improve the impact.

The aforementioned Millennium Development Goals and Sustainable Development Goals contributed to the spreading of social impact measurement across all these sectors and types of organisations. Along with it, different kinds of actors might be interested in these practices, such as capital providers (donors and investors), institutions and governments involved with policy making, and decision-makers of organisations and companies.

All this variety of organisation types, information needs of the involved actors, and typologies of impact impedes the development of a standard for impact measurement and therefore allows the flourishing of many methodologies, which can confuse both academics and practitioners that have to deal with them. Hence, in the past decades many scholars and practitioners made efforts to develop different classification methods for the existing models, each one utilising a variety of regarding either the functioning and characteristics of the model itself (e.g. time frame considered, type of impact measured, type of approach), or the characteristics of the entity performing it (e.g. size, sector).

0.3. Research Gap

As determined in the literature review the rapid diffusion of social impact measurement in the last decades resulted in the development of an abundance of evaluation methodologies, prevalently utilised by organisations with a strong focus on the delivery of social, crucial feature of their business models. Performed for a variety of reasons, spanning from gaining

legitimacy in the eyes of stakeholders to improving social performance, impact measurement is nowadays extremely important from a strategic point of view.

However, among the numerous classifications developed by scholars and practitioners to organise these models, none of them uses the strategic role they serve to classify them. Thus, the main objective of this thesis is to develop an original classification of social impact measurement approaches based on the strategic value they provide to the entity that applies them. Moreover, through analysis of the diffusion of the models over the decades, this work aims to answer to additional questions such as:

- What are the most and least satisfied functions over the years?
- Which models have the most comprehensive strategic roles, that can better contribute to the organisations' strategies from several points of view?
- What are the differences (if any) between the methodologies developed by practitioners and the ones developed by academics over the years, in terms of number and types (i.e. strategic functions)?

0.4. Methodology

To develop the classification, in order to be as inclusive as possible when selecting the models, I adopted a broad definition of social impacts, which are the intended and unintended, positive and negative effects on the individuals, the broader society and the environment, that happen as a consequence of an organisation's actions. The models had to be applicable anywhere in the course of action by any type of entity, serve a variety of functions, measure impact on several dimensions, and had to have enough public information available to perform the coding process on. To search the measurement models, I consulted both academic and grey literature sources. For the academic research I used the database Scopus, on which I used keywords that covered the theme of non-financial performance measurement, to look for articles made from 2016 onwards. For the grey literature search instead, I utilised three sources: the NEF Consulting Resources & Tools, the GIIN Impact Toolkit, and the GO Lab Impact Wayfinder.

The initial academic literature analysis resulted in 606 papers, from which I excluded 350 not covering the theme of impact evaluation. In the second step, I distinguished between the articles discussing specific measurement models from the ones that did not mention any, and excluded the latter. From the 160 papers remaining, I identified the ones that provided an in-

depth description of one or more methodologies from the ones that just briefly mentioned them, in order to later use the former articles in the content analyses. Finally, from the 160 selected articles, I identified 71 different measurement models.

From the grey literature analysis instead, I selected 115 models.

From the merging of the two literatures, a total of 148 approaches were identified, which, after a selection based on the characteristics I was looking for, were then reduced to 78.

Once the models were selected, I performed the content analysis through a coding process to find patterns in the application and functions among the different models and eventually group them into clusters that would describe what strategic functions the models within are able to satisfy. Overall, the coding process performed in this work consisted in three steps.

Firstly, I had to select the documents to use for the coding. Some models were covered in detail in the academic papers on which I performed the literature analysis; for the remaining ones however, I researched in the web reports and/or articles that would offer a thorough description of the models. Once the necessary material was gathered up, the first step of coding consisted in reviewing the documents for each model and select key phrases and keywords that described the features of the models.

0.5. Results

After having identified the codes describing the models, the second step consisted in finding the first similarities and patterns among the keywords and phrases that would explain the functions and roles served by the measurement methodologies. This resulted in the identification of ten categories:

- a) Increase transparency and legitimacy
- b) Report performance externally and improve communication
- c) Provide guidance on principles to follow for a company to operate sustainably
- d) Establish performance monitoring
- e) Support decision making about strategy and allocation of resources
- f) Assess how well an organisation fulfils its mission and keep its activities aligned with it
- g) Identification and ranking of impacts by priority
- h) Identification of causal links between a company's activities and the impacts
- i) Measure social impact of a company's activities
- j) Estimation of attribution/deadweight/drop-off/displacement

In the third step of coding, I merged the categories based on the type of strategic contribution that they would provide to an organisation and obtained three clusters: proof of sustainability to external stakeholders, impact management and decision-making support, measurement of the final impact on beneficiaries and society at large. Lastly, I located each of the 78 models in the categories first, based on the codes describing them, and then in the clusters.

The “Proof of sustainability” cluster allows organisations to demonstrate how sustainably they operate and how sustainable the effects of their operations are. Organisations can thus use these methodologies to generate proof of their legitimacy to show to different kinds of interested stakeholders like, for example, capital providers so as to obtain funds.

The “Impact management” cluster allows to manage impact on society in a variety of ways, by gaining crucial information that, through these methodologies, can be utilised as decision-making aid in order to help them pursue a positive social impact and to keep improving it over time. They offer functions such as: providing generic guidelines to follow for operating in a sustainable way, establishing a monitoring system for the social performance of an organisation’s activities, supplying information useful for assisting in decisions about resource allocation for impact improvement, and so on.

The “Measurement of the final impact” cluster instead, contains models that enable organisations to truly assess the final impact their activities have on the affected stakeholders and society at large. They can offer more or less precise estimations of the impacts generated, depending on the number of details and the thoroughness of the process that an organisation has to follow, which can either stop at the identification, or offer an accurate (and quantified) measurement of said impacts.

0.6. Discussion

After assigning the models to their respective cluster, I analysed their population to determine which functions, represented by the clusters, are overall more satisfied and which ones are more neglected. Most of the methodologies can perform more than one function at a time, and many of these can serve all three of them. Almost the entirety of the models (93,6%) can satisfy the “impact management” function, while the “measurement of the final impact” one is the least populated cluster, in fact 44,9% are able to actually measure the long-term impact of the companies’ activities on the beneficiaries and society at large.

If we consider the “level of advancement” of a measurement methodology, it can be stated that the models only satisfying the function of “proof of sustainability” are at the base level, since they cannot actually help companies to measure and/or manage their outcomes and impacts but can only be utilised to disclose information about them. Next, a bit more advanced are the methodologies that arrive to serve the function of “impact management” thanks to their utility of keeping track of the social performance of a company and use the gathered information to improve it. Finally, the models that arrive to fulfil the function of “measurement of the final impact” are the only ones that really provide organisations with reliable and solid data on how their actions affect society on the long term.

The models belonging to the first level are just 3 out of 78, the ones that arrive to the second level are 40, and the remaining ones attain the most advanced level.

Further observation can be made by looking at the development of the different models over the years. It is clear how their diffusion has been extremely rapid and sustained in the past decades, especially between 2001 and 2010, when 48,7% of the total number of approaches were developed.

I plotted the models’ development along the years by also taking into account their level of advancement, meaning the most advanced function they arrive to serve. Despite the overall higher numerosity of methodologies serving the “impact management” function, the cluster of “measurement of the final impact” has seen a strong growth recently; in fact, the models that are part of this cluster developed from 2015 to 2020 account for the 58,8% of the total number of models created in these years. Furthermore, 60% of these models can also fulfil the other two strategic functions.

I also plotted the methodologies’ creation over time by distinguishing by the type of developer, which could be of academic nature or a practitioner one. This visibly shows how the academic-developed measurement approaches are clearly fewer (only 23,7%) than the ones originated from the practitioners’ field (76,3%). However, the approaches of academic origins had a considerable boost during the last years, with 8 of them (the 44,4% of the total) being developed from 2014 to 2019.

Furthermore, 70% of the methodologies developed by practitioners from 2015 onwards fall into the “measuring the final impact” cluster, with the majority of them also being able to satisfy the other two strategic functions.

0.7. Conclusion

This thesis adds to the numerous attempts, made by scholars and practitioners, to give an order and classify the myriad of social impact measurement approaches that proliferated in the past decades. The novel classification of models developed here bases on the strategic functions they manage to serve, identified by the three clusters named: “proof of sustainability to external stakeholders”, “impact management and decision-making support”, and “measurement of the final impact on beneficiaries and society at large”. This both contributes to the still developing, but rapidly growing, scientific literature about social impact measurement, and also benefits the practitioners’ field by offering criteria based on which an organisation could select the best fitting measurement approach for its strategic needs. Moreover, the analyses conducted on the development of measurement methodologies over the years offer several valuable insights.

The constant proliferation of models from the 1990s to today reached its peak during the decade between 2001 and 2010; this flourishing might have been stimulated by the introduction of the Millennium Development Goals which encouraged countries and organisations to start measuring their social performance.

Furthermore, it is shown that the function of “measurement of the final impact” is currently the least satisfied, hence it would be useful and probably even necessary in the future to develop more approaches that could serve this function. The research, in fact, shows several trends that seem to be directing this way.

Most of the methodologies developed after the 2015 are indeed able to satisfy the advanced function of “measurement of the final impact”, especially among the ones generated by practitioners. Additionally, while the models developed by scholars have been lagging behind in these decades, in the last few years there has been a considerable increase in the number of approaches designed by academics. Moreover, in recent times the focus on the creation of more comprehensive models seems to have incremented, since most of the approaches developed from 2015 to 2020 can fulfil all three of the strategic functions identified in this thesis.

All these elements suggest an increase in the level of complexity of the new social impact measurement models being designed nowadays and that will most likely diffuse in the next years. This could be, at least partially, due to the Sustainable Development Goals established in 2015, which require nations and organisations worldwide to monitor their progress towards

the achievement of the goals; thus, the diffusion of complex measurement models can help in bringing tangible positive change for society and the planet.

The main limitation of this thesis resides in the exclusion of methodologies that did not have enough publicly available information to perform the coding process on; their inclusion might or might not have changed the results of the work. Nevertheless, the numerosity of the models' sample is still relevant and comparable with the past works of various scholars.

For future research, it would be interesting to perform again this same process by taking into account the new models that will be eventually developed; in this way it would be possible to explore the evolution of the trends regarding the complexity and functions served by the models. It would also be useful to conduct interviews with organisations that adopt impact measurement practices, in order to verify which are the models that are most frequently chosen and consequently the most performed functions; this would give an "on-field" perspective to the research and possibly increase its relevancy.

1. Introduction

1.1. Research context and objectives

With the world facing critical social and environmental challenges, organisations belonging to all sectors and nations started, in the last decades, to increasingly take into consideration their positive or negative contribution on these issues. In fact, since the very beginning of this capitalistic society and for a long time, the main focus of companies has been exclusively the maximisation of profits and to bring financial returns to their shareholders; however, it is no longer possible for organisations now to consider only these aspects, instead many of them are also prioritising their results from a social and environmental point of view. Nevertheless, while the procedures to evaluate the economic performance are well established and standardised, at the time of this transformation of intents there were none for the assessment of the social conduct.

This brought to the advent of the practices of social impact measurement, which have been developing at a high rate in the past years by both practitioners, starting from the non-profit sector, and academics, especially in most recent years.

There are several reasons behind the diffusion of these practices. There are first of all external pressures exerted by a variety of stakeholders; in fact, customers, governments, communities, and many others, each one with their own information requirements, started demanding organisations of all types to increase their transparency and accountability concerning the effects that their activities have on the society and environment, therefore pushing managers to measure these effects in order to avoid the companies to get a negative image.

Furthermore, managers began to apply impact measurement models not only for a matter of accountability, but also to increase organisations' social performance and improve their impact on society.

There have been also specific and prominent actions taken internationally that aimed to tackle social and environmental issues and stimulated the adoption of impact measurement methodologies to keep track of the progresses made.

The most remarkable ones were the institution of the Millennium Development Goals in 2000, and their successors, the Sustainable Development Goals in 2015. Both were established by the United Nations and consist in a worldwide commitment concerning more than 190

countries. They are composed of several goals and sub-goals that strive to build a better society for the people and the planet, by tackling matters regarding education, hunger, economic growth, and many other topics. The Sustainable Development Goals, in particular, address a great number of these problems and also provide some indicators to monitor the progress in each of them. However, it is necessary for governments and organisations to implement additional ways to measure how they contribute to the different goals and therefore impact measurement models are needed to fulfil this requirement.

As mentioned, these events and needs stimulated the birth of social impact measurement practices; however, the vast variety of impact typologies, sectors, types of organisations, and information requirements makes it impossible to find a standard and hence led to the flourishing of hundreds of approaches.

The difficulty to find a standard for the measurement of social impact brought instead academics and practitioners to classify these practices so as to give an order to the multitude of existing methodologies. This has been done in the past years by several authors and institutions, that selected different variables in pursuance of classifying the models based on the various characteristics of their application.

The objective of this thesis is to develop an original classification for social impact measurement methodologies that could help to organise them based on the strategic functions they serve. The work also aims to perform analyses to evaluate which of these functions have been more fulfilled over the decades and why, and possible future trends. This will contribute to the scientific literature on the topic of social impact measurement by bringing more order to it and by further highlighting the great potential of its application, but it could also be useful for practitioners who need to choose the most fitting measurement model for their needs.

1.2. Structure of the thesis

The thesis is divided into seven different chapters.

The Introduction chapter presented the broader context of the study and the main objectives that it aims to realise, explaining what contributions the thesis wants to bring to the academic and practitioner world.

The Literature Review chapter goes in depth of the scientific literature that lies behind the main concepts of the research and explains the main findings that resulted from its analysis. It firstly describes how the practice of social impact measurement originated, then goes in detail of the various definitions of what actually is the Social Impact. It later elucidates how the measurement of social impact have spread among the sectors and what stimulated its proliferation, and finally it illustrates some of the efforts that so far have been made to classify the measurement models by scholars and practitioners.

The Research Gap chapter draws from the literature review to identify the gaps resulting from it and formulate the questions that this work attempts to answer.

The Methodology chapter explains the process followed to generate the final classification and it is divided in two main parts. The first part displays the various phases for the selection of the social impact measurement methodologies on which the content analysis was performed; said analysis is presented more in depth in the second part of this chapter, where it is illustrated the first half of the coding process.

The Results chapter continues the delineation of the coding process and its results. It presents the identified smaller categories and then the final clusters that form the classification.

The Discussion chapter performs various analyses on the population of the clusters identified and on the evolution of the development of the models over the years.

The Conclusion chapter draws from the analyses performed to provide useful insights and answer to the research questions. It then illustrates the limitations of this research and proposes possible opportunities for future studies.

2. Literature Review

The core concepts and background of this work are presented in this section, in order to provide a clear view of the literature behind social impact and social impact measurement and the process that leads to the research question that will be addressed later.

2.1. The origins of social impact measurement

For decades the purpose of economic behaviour has been to maximise profit achieved by managing scarce resources in the most efficient way, therefore performance assessment of economic results has been initially focused on an efficiency point of view, measuring the relationship between outputs and inputs and comparing the results to pre-established goals (Maas & Liket, 2011).

Through the years performance measurement acquired new functions and dimensions, broadening its scope to departmental budgets firstly, and flexibility and integrating customer satisfaction's related dimensions at a later time (Arena et al., 2015). This all brought to a standardisation of accounting and performance measurement systems over time, with the primary focus being always profit maximisation.

Instead, when it comes to the measurement of social performance, developments were made starting from the 1970s. In particular, two trends can be identified in impact measurement: on one hand there is "social accounting and audit", on the other hand "social impact assessment"(Dufour, 2015).

The former is a practice that helps to better capture and show the value generated for society by organisations of the social sector, for which conventional accounting would have been insufficient to fully express said value because of the limited range of items considered, the exclusion of items that cannot be monetised, and its focus solely on shareholders, while leaving out other types of affected stakeholders (e.g. employees, consumers, local communities, government, volunteer, etc.) that do not provide finances to the organisations (Mook & Quarter, 2006). Social accounting origins in the early 1970s, and initially was typically part of or referred to as either environmental accounting or social and environmental accounting, which indicates that the focus of the accounting was directed more on organisations' effects on the environment. Nevertheless, the emphasis successively shifted towards effects concerning a larger variety of social problems and not only environmental

ones, and a broader array of stakeholders which experience the consequences of organisations activities. These aspects can be found in the definitions that scholars assigned to the practice of social accounting, for example Gray (2000) delineates it as “the preparation and publication of an account about an organisation's social, environmental, employee, community, customer and other stakeholder interactions and activities and, where, possible, the consequences of those interactions and activities. The social account may contain financial information but is more likely to be a combination of quantified non-financial information and descriptive, non-quantified information”(Gray, 2000). Moreover, Mook and Quarter (2006) define social accounting as “a systematic analysis of the effects of an organization on its communities of interest or stakeholders, with stakeholder input as part of the data that are analysed for the accounting statement”. It is hence clear how both definitions highlight the broader array of social concerns and stakeholders considered compared to environmental accounting or social and environmental accounting.

Social impact assessment (SIA) instead is defined as follows: “Social Impact Assessment includes the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment”(Vanclay, 2003). The foundations of SIA are associated with the passage of the United States of America National Environmental Policy Act (NEPA) of 1970, which required any federal agency that was going to take actions potentially affecting the quality of the human environment, to firstly assess the potential impacts of said actions. This was done through the preparation of an environmental assessment (EA) or environmental impact statement (EIS), which incorporated approaches that are based on natural and social sciences. The social science components were referred to as social analyses, socio-economic assessments, community impact assessment, or, of course, social impact assessments. The term SIA first appeared in a EIS performed in 1973 to gauge the effects of the construction of a pipeline in Alaska on the indigenous population in the area (Burdge & Vanclay, 1996), and from this event it became clear how important it was to assess the social aspects along with the environmental ones in EIS. During the following years there has been a flourishing of SIA methodologies developed by federal agencies, each one assessing the social component of NEPA in different way; until 1993, when the International Association for Impact Assessment

released the first Guidelines and Principles for SIA, that would assist public- and private-sector organisations in complying with the NEPA requirements (Burdge et al., 2003). An updated, more comprehensive version of the Guidelines, which expanded the focus of the assessments from only projects to also plans, policies, and programs, was released in 2003.

Even though SIA was initially thought for ex-ante analyses of potential impacts in order to mitigate or avoid them before-hand, later these kinds of methodologies were also used for evaluating ex-post the impacts that already happened.

In more recent years there has been a growth in interest for measuring organisations' social and environmental performances; however, standards for measuring and communicating social impact have not been created yet. The lack of a "golden standard" can be attributed to different reasons: the difficulty to find quantitative and qualitative indicators, the wide variety of the typologies of impact that activities can generate, the size of the many organisations that want to measure their performance (Arena et al., 2015; Grieco et al., 2015). Additionally, the concept of social impact itself is elusive and has been used in various contexts like poverty, healthcare, education, and more which can be difficult to compare (Rawhouser et al., 2019). This resulted in the difficulty for academics to find an agreement on the definition of social impact as well as on ways to measure it in a consistent and standard way (Kocollari & Lugli, 2020).

The struggle of defining social impact is reflected by the difficulty of elaborating and choosing a method to assess it, which gave rise, in the last thirty years or so, to a great number of impact measurement methodologies being developed; methodologies that can fall either in the "social accounting and audit" category or the "social impact assessment" one, or both.

2.2. The development of social impact definitions

As brought up in the last chapter, one of the main reasons why practitioners and academics find it difficult to determine ways to measure social impact, is that the concept of social impact itself is elusive. Indeed, through the years the definition of social impact has evolved many times, changing and acquiring more and more attributes, while becoming more precise and punctual. However, to this day there is still not one universally accepted definition of social impact among academics, that over time have been referring to it by utilizing terms with similar meanings, like social value (Emerson et al., 1998; Hlady-Rispal & Servantie, 2016), social

return (Emerson, 2003), or even simply impact (Clark et al., 2004; Ebrahim & Rangan, 2014; Hayes, 2017; Reisman & Gienapp, 2004). This latter, however, is especially utilized when linked to the concepts of impact value chain or Theory of Change, which are types of frameworks that identify a series of stages (typically: input, activities, output, outcomes, impacts) and causally link them to analyse the effects of an organisation's intervention. Thus, the term "impact" often refers to the last stage of an impact value chain or a Theory of Change and, therefore, some of the scholars that mention it offer definitions that are strictly related to the other stages of the chain (Clark et al., 2004; Ebrahim & Rangan, 2014).

The term "social impact" first appeared in the field of SIA, where it was initially described with a mostly negative connotation, as the consequences on human population of any sort of actions exerted by other individuals from private or public organisations (Burdge & Vanclay, 1996; Freudenburg, 1986). These actions, in fact, would alter the way people live and relate with each other for the worse; therefore organisations, with the aid of SIA, were supposed to estimate the effects resulting from them and to try to mitigate them as much as possible. Although, later on during one of the most recent developments of SIA, Vanclay (2003) updated the definition of social impact used in SIA practices by adding new attributes to it; in particular, social impacts additionally included both intended and unintended or unplanned effects, that could be either positive or negative. In this way the concept became more inclusive and lost its inherent negative connotation, also allowing the entities responsible for the interventions/actions to estimate not only the negative consequences, but also the positive change that they could bring (Vanclay, 2003).

Another domain where the term "social impact" was firstly utilised is the psychology one. Latané (1981) proposes a theory of social impact based on the effects of other persons on an individual and tries to develop a formula to estimate them. According to the author, when the impact is originated by a number of people on an individual target, impact should be a multiplicative function of the strength, immediacy, and number of people; moreover, the function describing impact should take the form of a power function and the marginal contribution of the single other persons exerting it should be decreasing with the increasing of the number of people. Lastly, when other people stand with the individual as targets of the impact, the effects should be divided among the targets in such a way that the resultant is an inverse power function of the strength, immediacy, and number of people standing together.

The specific definition of social impact that the author gives is “any of the great variety of changes in physiological states and subjective feelings, motives and emotions, cognitions and beliefs, values and behaviour, that occur in an individual, human or animal, as a result of the real, implied, or imagined presence or actions of other individuals”(Latané, 1981).

The concept of social impact was then also utilised in the non-profit sector due to the nature of this kind of organisations, the goals of which are exclusively directed at delivering social benefits to the recipients of their services. Emerson et al. (1998), in the document illustrating the guidelines of the Social Return On Investment (SROI) approach, directed their attention especially to non-profit organisations, but also to “new players entering the field of philanthropy”(Emerson et al., 1998) that began funding organisations and demanding greater accountability and proof of the value the investees delivered. The authors describe social impact from an exclusively positive point of view, defining it as the improvements, generated from the combination resources and processes, not only on the lives of the individual beneficiaries, but also on society as a whole.

There are then the definitions of “impact” that, as mentioned previously, come from the impact value chain developed by Clark et al. (2004), which is a framework that causally links the steps in the process of the creation of social value, starting from the resources an organisation uses and arriving to the resulting effects on society and the goal alignment that can be performed afterwards (Figure 1).

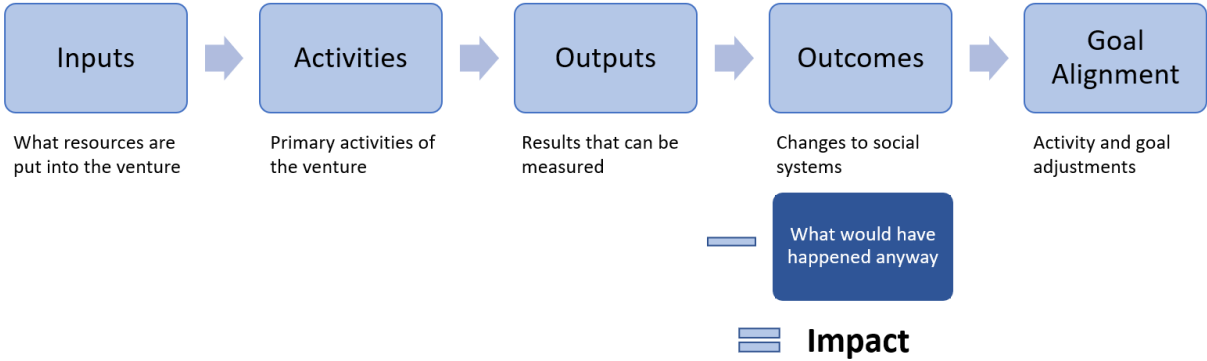


Figure 1: Impact value chain, adapted from Clark et al. (2004)

The impact value chain is particularly useful to distinguish outputs from outcomes, and outcomes from impacts. The outputs are the concrete services and products provided by the activities of the organisation and can be measured right away, the outcomes are the ultimate changes that the organisation is trying to make on the beneficiaries and the society and are

more long term oriented and difficult to measure. For what concerns the impacts, Clark et al. (2004) introduced the concept of deadweight, calculating them by subtracting from the outcomes what would have happened anyway, in the case said organisation would not have existed.

Ebrahim and Rangan (2014) give different definitions of outcomes and impacts however, defining the former as results in the medium and long term on the individuals, and the latter as effects on the root causes of social problems that allow sustained significant changes to happen, measured in terms of communities, populations, or ecosystems affected.

To sum up the various perspectives coming from the different fields and authors, some definitions of social impact and similar terms are displayed in Table 1.

Term	Definition
Social impact (Latané, 1981)	Changes in physiological states and subjective feelings, motives and emotions, cognitions and beliefs, values and behaviour, that occur in an individual, human or animal, as a result of the real, implied, or imagined presence or actions of other individuals.
Social impact (Freudenburg, 1986)	Impacts (or effects, or consequences) that are likely to be experienced by a broad range of social groups as a result of some course of action.
Social impact (Burdge & Vanclay, 1996)	Consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organise to meet their needs and generally act as a member of society.
Social value (Emerson et al., 1998)	Improvements in the lives of individuals or society as a whole generated by the combination of resources, inputs, processes, or policies.
Social impact (Gentile, 2002)	Wider societal concerns that reflect and respect the complex interdependency between business practice and society.
Social impact (Vanclay, 2003)	Intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions.

Impact (Clark et al., 2004)	Portion of the total outcome that happened as a result of the activity of the venture, above and beyond what would have happened anyway.
Impact (Reisman & Gienapp, 2004)	Changes in people's lives, either at the individual or population level, which can include changes in knowledge, skills, behaviours, health or conditions for children, adults, families or communities.
Impact (Ebrahim & Rangan, 2014)	Lasting results achieved at a community or societal level.
Returns to society (Hlady-Rispal & Servantie, 2016)	Processes of value creation for society as a whole; they affect the region, and sometimes even the nation in which the organisation operates.
Impact (Hayes, 2017)	Difference between existing and future systems and conditions with and without the intervention of natural events or social actions, intended or unintended.

Table 1: Definitions of Social Impact and similar terms

2.3. The spreading of social impact measurement practices among sectors

The diffusion of social impact measurement started, in the first place, in the non-profit sector, and was widely adopted for several reasons. First of all, the non-profit sector experienced a rationalisation process, which led to the development of common administrative norms and practices, like the use of expert auditors to evaluate social performance, and an overall professionalisation of the managers and founders of the organisations. This process proved to be useful since it brought to an overall improvement of the performances, impacts and service delivery (Ebrahim & Rangan, 2014; Kato, 2021; Lall, 2017; Mook & Quarter, 2006; Thomson, 2011).

Furthermore, since the early 1990s, a variety of interested stakeholders began to demand a higher accountability and transparency to better understand what actual improvements non-profit organisations were bringing to society. Funders in particular wanted to know whether their resources were well allocated and if they were making an actual difference with their donations, or if it was necessary to move them elsewhere; this demand from donors was met

by an increase in the adoption of approaches for measuring long-term impacts by the organisations, that successfully used them to demonstrate their legitimacy (Kato, 2021; Nicholls, 2009; Ormiston & Seymour, 2011; Thomson, 2011). However, on the other hand, there has been a growing attention over the allocation of non-profits' resources on operational and administrative activities; in fact, some organisations are considered to be spending too much on fundraising activities, at the expenses of an insufficient focus on their mission and social value delivering. Thus, again, there is a need to demonstrate to donors that their money is being spent effectively for the good of their beneficiaries (Mook & Quarter, 2006).

Remaining on the concept of transparency and legitimacy, Mook and Quarter (2006) state that non-profit organisations started adopting market-driven practices and brand management activities for positioning purposes or to differentiate themselves from other non-profits with the same goals. While some organisations tackle more popular causes, others instead might be less known and, for this reason, suffer financially because of the difficulty to find funds or eventual corporations to partnership with that want to enhance their brand identity. However, if a non-profit is not well-marketed it does not necessarily mean it does not address an important social issue or deliver great social value and, on the other hand, the concept of social value could be distorted as a consequence of good marketing practices (Mook & Quarter, 2006). Therefore, by measuring social impact, these organisations could prove the actual value they provide to society and attract funds despite the lower popularity of the social problem they take care of.

A second type of entities of more recent development compared to non-profits got then interested in the field of social impact measurement: social enterprises (SEs). To define SEs, scholars seem to have come to an agreement on their hybrid nature and recognise them to have two main distinguishing features: 1) the presence of a social mission, and 2) the adoption of a revenue model, or more generally the ability to earn income (Bengo et al., 2020; Grieco et al., 2015; Hervieux & Voltan, 2019; Kah & Akenroye, 2020; Lall, 2017). Nevertheless, SEs' main focus lies in their social mission, which aims to bring positive social change to disadvantaged people and solve or mitigate social problems, such as climate change, poverty, poor education, aging, and so on.

To achieve their mission and keep their operations going, SEs rely on a revenue model that allows them to sell products and services to earn an income; this can help enterprises not to rely on financiers completely, even though this market orientation in SEs can be more or less pronounced depending on the individual cases (Lall, 2017; Maas & Grieco, 2017; Ormiston & Seymour, 2011). In highly market-oriented SEs, customers' satisfaction will of course be of greater importance to be able to compete in the market of interest, and as a consequence enterprises' accountability towards them will be given higher priority compared to financiers (Maas & Grieco, 2017); on the other side of the coin, SEs with lower market orientation that cannot firmly rely on earned incomes, will need a greater support from financiers and thus demonstrate their legitimacy to them.

Anyways, SEs worldwide face some limitations regarding the management of profits: in some cases they are forced to use possible profits exclusively for the pursuit of their social mission with no distribution to shareholders allowed (full asset lock), in other cases instead the profits have to be only *prevalently* reinvested into the pursuit for the social purpose and part of them can be given out to shareholders (partial asset lock) (Fici, 2017). In both cases, however, SEs can and must measure and be transparent about their social performance with external stakeholders to keep delivering social value and compete in their market in an effective way.

Another important characteristic for SEs is innovativeness, because in order to contribute to societal needs in the social, environmental and economic dimensions, they often provide innovative solutions and are celebrated as brilliant agents of change that create opportunities for less fortunate people. Ormiston and Seymour (2011) argue that to pursue an innovative strategy, SEs need to have an integrated strategy, that aligns mission, strategy, the external environment and impact measurement; and Maas and Grieco (2017) show in a study how there is a significant correlation between innovativeness and impact measurement, meaning that the more SEs affirm to be innovative in the products and services they offer or in the processes they use to deliver them, the more likely they are to measure their impact, which helps them to understand the effectiveness of their innovativeness and ways to further improve the delivery of social value.

Overall, Lall (2017) and Kato (2021) show how social impact measurement, similarly to the non-profit sector, can be crucial for SEs for two main reasons: to prove and to improve. On one side, due to their dual identity, SEs can be financed by both investors and donors, each

with their information needs, and therefore aim to demonstrate their social and economic performance to affirm their legitimacy. SEs can consequently be pressured by financiers to adopt social impact measurement practices, or, from the other point of view, can willingly adopt them exactly with the aim to attract the different kinds of financiers.

On the other side, the authors explain that the mentioned trend in the non-profit sector of rationalisation and professionalisation extended to the social entrepreneurship sector, so managers and founders would use social performance measurement practices to improve their processes and impacts on the beneficiaries. Specifically, Lall (2017)'s study shows that SEs are more likely to carry social impact measurement when their founders have had previous founding or work experiences in the non-profit sector; however, Kato (2021), which performed a similar study but with a different sample of organisations, did not obtain these same positive correlations. Nevertheless, it is unquestionable that many of the latest impact assessment practices have been developed specifically for SEs to assist them in improving their impact.

In addition to the non-profit and social entrepreneurship sectors, another actor, that emerged in recent years, contributed to the spreading and use of social impact measurement methodologies: impact investors. Born as a consequence of "the dissatisfaction with the bad habits of the financial system, the ineffectiveness of charitable models and the inefficiency of public spending" (Calderini et al., 2018), impact investing aims to increase the effectiveness in allocating capitals for the provision of social services by making investments in organisations, companies and funds that generate both financial returns and social and environmental impacts (Choda & Teladia, 2018). This kind of investments can happen as debt, private equity, deposits, and other instruments, but the driving motivation when choosing where to allocate resources is consistently the realisation of social impact. The Global Impact Investing Network (GIIN) conducted a survey in 2020 that reached 278 impact investors and asked them about practices of impact measurement and management adopted by the respondents during the two years prior. Results showed the multiple reasons for which investors engage in measuring and managing impact; for example, and most importantly, to better understand whether their impact proves progress towards their social goals, to proactively report performance to key stakeholders, and to improve their impact and overall business performance. Investors also demonstrated an increase in willingness to integrate impact data in the investment process,

most predominantly for the stages of due diligence, investment screening, to identify social and environmental needs to address, and to design an investment or portfolio strategy.

Another key take-away from the survey is that, while the market of impact investing grows and the competition within it rises, investors demand insights into their impact performance, the ones of their competitors, and the performance of their potential investees, in order to compare results, collect quality data, and analyse those data for strengthening their impact measurement and management practices. On another note, these kinds of practices obviously require investors to allocate resources to perform them, but at the same time these practices generate financial benefits and business value for both them and their investees (Global Impact Investing Network, 2020). Overall, the GIIN survey shows how social impact measurement nowadays is growing in importance also in the sector of impact investing.

Over the past decades, there have been some operations that involved a lot of countries around the world which contributed to the diffusion of social impact measurement practices across all sectors and nations. Among these actions, two of the most relevant ones are the institution of the Millennium Development Goals (MDGs) in 2000, and of the Sustainable Development Goals (SDGs) in 2015.

The MDGs were eight development goals to be reached by 2015, established by the United Nations (UN) and that included the commitment of 189 countries and some of the world's leading development institutions. The goals tackled various social and environmental issues that afflict the world, including poverty, education, health, gender equality, and others.

To carry on the momentum generated by the MDGs, an even more ambitious plan was established in 2015. With the UN Agenda 2030, 193 countries committed to the achievement of a more sustainable future from the economic, social and environmental perspectives, through the pursuit of the following 17 goals, to be reached by 2030:

- 1) End poverty in all its forms everywhere.
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- 3) Ensure healthy lives and promote well-being for all at all ages.
- 4) Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- 5) Achieve gender equality and empower all women and girls.

- 6) Ensure availability and sustainable management of water and sanitation for all.
- 7) Ensure access to affordable, reliable, sustainable and modern energy for all.
- 8) Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- 9) Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
- 10) Reduce income inequality within and among countries.
- 11) Make cities and human settlements inclusive, safe, resilient, and sustainable.
- 12) Ensure sustainable consumption and production patterns.
- 13) Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy.
- 14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- 15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- 16) Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- 17) Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Each goal is composed of several targets (for a total of 169) which in turn include indicators (for a total of 240) that can help to keep track of the progress towards them.

Three key features make the SDGs an innovative and important initiative (O'Connor et al., 2016). They demand universality, in the sense that every nation and sector should try to contribute to their achievement, encompassing any type of public and private organisations. The Goals are interconnected; therefore, they demand integration in their pursuit: the SDGs must be achieved altogether in order to implement sustainable development.

The SDGs aim to make great and transformative change in the world, so this is not achievable by doing business-as-usual.

Because of these characteristics and in order to monitor the advancement in the attainment of the Goals, governments and all types of organisations worldwide and across all sectors are then impelled to develop and adopt practices of social impact measurement.

Accordingly with the development of social impact measurement along the years and sectors, there has been a flourishing of these practices and multiple actors began to be interested in measuring social impact, with each of them performing it with different aims, further contributing to the proliferation of various methodologies which can meet the diverse needs of these entities.

Bengo et al. (2016) identify three macro-categories of actors that can be interested in measuring social impact:

- Capital providers, which can be distinguished into private and institutional investors on one hand, and grant makers on the other. The former look forward to investing capital into organisations that allow to obtain both social and financial returns, the latter only seek for social returns. In both cases information about the potential social impacts, generated by the organisations they are going to invest in, is crucial to decide where to deploy resources and in what measure.
- Local/national/international institutions and governments involved with policy making, which can promote and/or fund social impact initiatives or set out the regulations to favour the organisations providing them. In any case, information about the outcomes of these initiatives is very useful.
- The decision makers of different kinds of organisations interested in measuring social impact, including non-profit, for profit and social enterprises. For each of these forms of organisations, information about the social impact their activities generate can be used for decision making before, during and after the said activities are carried out. SEs, in particular, are the most recent form of organisation among the three mentioned and many of the latest methodologies of social impact measurement are designed for them to assist decision making processes.

A fourth category has to be considered, which consists in other stakeholders like customers, beneficiaries and more generally communities affected by an organisation's operations that might be interested in disclosures about their social impact; therefore, they will not directly apply measurement methodologies but will nevertheless have information needs to be satisfied.

2.4. Existing classifications of social impact measurement methodologies

As mentioned previously, the wide diversity of typologies of impact, the different sizes and types of organisations and the many information needs of the stakeholders’ groups did not lead to a standardisation of social impact measurement methodologies, but, quite the opposite, to the flourishing of a multitude of approaches, each one tackling the measurement through different variables and methods (Grieco et al., 2015; Perrini et al., 2020). This multitude of approaches can be confusing for managers and decision makers when it comes to selecting which one to apply in order to measure the social impact of their organisation, and for academics when they need to analyse the progress made in the field of impact measurement (Kah & Akenroye, 2020; Maas & Liket, 2011; Perrini et al., 2020).

As a result, in the last couple of decades there have been several attempts by both academics and practitioners to identify the measurement tools and methodologies available and classify them by utilising different variables (Kocollari & Lugli, 2020; Migliavacca, 2016; Perrini et al., 2020).

As for the academics, Clark et al. (2004) made a first classification of 9 methodologies, utilising variables like the Functional Category, that identifies the purposes of the tools, which could be used to track the efficiency of outputs, to prove incremental outcomes happening thanks to the organisations’ activity, and to monetise impacts (Table 2). The Impact Value Chain then identifies what types of data are included in the analysis, determining in fact the position in the chain where they belong; the Functions in Investment Process indicate for which purposes the methodology would be best suited in the investment process. The Applicability to Lifecycle Stages identifies for which stages of the organisation the methodology is most appropriate; the Cost/Time graphs give an idea of the costs associated with the staff time required for the application of the model, that is analysed in more detail in the Time Breakdown, where estimates of the times required for implementation for different types of employees are shown.

Variables	Types
Functional category	<ul style="list-style-type: none"> – Process – Impact – Monetisation
Impact value chain	Inputs → Activities → Outputs →

	→ Outcomes → Goal alignment
Functions in the investment process	<ul style="list-style-type: none"> – Screening – Partnership information – Management operations – Scaling – External reporting – Exit – Retrospective evaluation
Applicability to lifecycle stages	<ul style="list-style-type: none"> – Start-up – Expansion – Maturity
Cost/Time	Not defined
Time breakdown	<ul style="list-style-type: none"> – Management – Staff – Consultant/third party – Investor

Table 2: Models' classification made by Clark et al. (2004)

A second classification was made by Olsen and Galimidi (2008), who took into consideration 25 approaches, therefore considerably increasing the number, to be adopted specifically by investors only (Table 3). They used the Functional Type to determine whether the methodology can be used for screening in the due diligence process, to track the ongoing performance of the investee once the investment has been made, and/or to periodically summarise the results; this variable also tells if the functions are applicable only in a specific industry, geographic area or type of problem, or if they are suitable to be used across sectors. The Impact Depth identifies to what extent the results generated are able to actually prove the impact created; the Perspective indicates if the focus of the approach includes impacts the investee has also on the stakeholders outside (customers, local communities, etc.), or if only considers effects within the company's walls. The Category tells which type of impact is generated: social, economic or environmental; the Data Management provides information about the tools to use for data management about impact and indicators and differentiate between the ones useful for the investor, the company and for eventual third parties. Feasibility illustrates the time requirements for the application of the methodology for different types of actors; the Credibility & Verification identify the level of credibility of the results depending on the data sources utilised.

Variables	Types
Functional type	<ul style="list-style-type: none"> – Rating – Assessment – Management – General – Sector-specific
Impact depth	<ul style="list-style-type: none"> – Implied – Proven – Optimised
Perspective	<ul style="list-style-type: none"> – External – Internal
Category	<ul style="list-style-type: none"> – Economic – Social – Environmental
Data management	<ul style="list-style-type: none"> – Data entry – Analysis – Report
Feasibility	<ul style="list-style-type: none"> – Investor – Management – Staff – Consultant/Third-party
Credibility & Verification	<ul style="list-style-type: none"> – On-site third-party verification of results – Off-site third-party verification of processes – Systematic tracking by the investee company – After-the-fact non-systematic reporting

Table 3: Models' classification made by Olsen and Galimidi (2008)

Rinaldo (2010) developed guidelines for managers of organisations to determine which tool, among the 19 included in the document, would be the best for their needs. In doing so, she classified those methodologies by using a series of variables to describe them (Table 4). The Motivation identifies the reason why the manager wants to undertake the evaluation; the Readiness determines whether the organisation wants to discover what kind of changes their activities will bring, or to measure the success against the planned changes. The Capacity tells how experienced the company is in the field of social impact measurement and the amount of resources available; the Impact typology indicates whether the impact to be assess is on the environment, the economy, holistic (economy, environment and society), or the impact of volunteering on all key stakeholders. The guidelines then provide information about the overall cost of implementation, the complexity, the time required, demand on the staff, if the

methodology provides a certification, and the type of supporting resources available to apply the tool; these will have to be matched with the variables mentioned to facilitate the choice.

Variables	Types
Motivation	<ul style="list-style-type: none"> – Assess effectiveness – Assess efficiency – Manage change – Communication – Receive a quality mark – Funder requirement
Readiness	<ul style="list-style-type: none"> – Discover changes – Measure success
Capacity	<ul style="list-style-type: none"> – Small – Medium – Large
Impact	<ul style="list-style-type: none"> – Economic – Environmental – Holistic – Of volunteering

Table 4: Models' classification made by Rinaldo (2010)

Maas and Liket (2011) classified 30 methodologies, characterising them along six dimensions (table 5). The Purpose consists in the reason why the measurement is performed: to facilitate investment opportunities, to monitor and help with day-to-day decision making and market opportunities, to report to external stakeholders, to assess ex-post details about the impacts generated. The Time Frame tells if the methodology is applied before the program, project or activities are carried out to determine in advance the expected impacts, if it is performed during along with the activities, or if the assessment is done after the impacts have already happened. The Orientation determines whether the results of a social activity are assessed as a difference in inputs or outputs; the Length of Time Frame indicates if the methodology assesses changes in the short or the long term. The Perspective identifies if the tool allows to measure impacts from a business perspective, a macro socioeconomic one, or something in between; the Approach corresponds to the Functional Category from Clark et al. (2004).

Variables	Types
Purpose	<ul style="list-style-type: none"> – Screening – Monitoring – Reporting – Evaluation
Time frame	<ul style="list-style-type: none"> – Prospective

	<ul style="list-style-type: none"> – Ongoing – Retrospective
Orientation	<ul style="list-style-type: none"> – Input – Output
Length of frame	<ul style="list-style-type: none"> – Short term – Long term
Perspective	<ul style="list-style-type: none"> – Micro (individual) – Meso (corporation) – Macro (society)
Approach	<ul style="list-style-type: none"> – Process – Impact – Monetisation

Table 5: Models' classification made by Maas and Liket (2011)

Grieco et al. (2015), made a classification of the 76 methodologies they considered, then they performed a clusterisation, identifying four “macro-categories of models that could be described with reference to a number of variables” that were used in the classification (Data typology, Impact typology, Purpose, Model complexity, Sector, Time frame, Developer):

- **Simple social qualitative:** the models in this cluster generate a quantitative measure of the social impact and the impact on employees, have a retrospective time frame, can be applied easily and across sectors.
- **Holistic complex:** these methodologies use both quantitative and qualitative data, they measure holistic impacts or based on the overall added value, are used for screening and reporting purposes to support the requests of funding. The models are highly complex and can be applied in any sector, the time frame is ongoing or retrospective.
- **Qualitative screening:** these models use qualitative variables to measure impacts holistically, the level of complexity is low, they are retrospective, and can be applied to specific sectors.
- **Management:** these approaches use both qualitative and quantitative variables to measure any kind of impact, the purposes are management and certification and can be applied with an ongoing time frame in any sector.

Dufour (2015) focuses his attention on 20 social impact measurement methodologies relevant especially for Work Integration Social Enterprises (WISEs), categorising them with a proposed framework that attributes a grade from 0 to 2 along 6 different dimensions, identified and

based from the impact value chain, for each model (0 indicates that the method does not allow to measure the considered dimension, 2 that it proposes specific ways to do so, and 1 that it allows to measure it even if it was not originally created to do it):

- **Relevance:** the extent to which the objectives of a given project are able to meet the identified needs of the beneficiaries, it is usually assessed in a prospective way through a screening process.
- **Economy:** the measure of the financial savings obtained thanks to the programmes a WISE delivers by comparing its costs to the ones of other interventions that pursue similar outcomes, it can be assessed both ex-ante and ex-post.
- **Efficiency:** the ratio of outputs to inputs for a program/project, it is used to assess the productivity and find ways to increase it, it can be assessed both ex-ante and ex-post.
- **Cost-effectiveness:** the extent to which inputs are successfully converted into positive outcomes for the target beneficiaries, it can be assessed ex-ante, ex-post and even while the program is being carried out.
- **Utility and sustainability:** the degree to which the outcomes of a program are able to meet the actual needs of the beneficiaries, measuring as a matter of fact their sustainability.
- **Effectiveness:** measures how well the outputs are translated into positive outcomes for the beneficiaries, it assesses the true value added of a program and even it is most often measured ex-post, it can also be done before the intervention takes place to understand its possible effects.

Bengo et al. (2016) performed a scoping literature review and identified three groups of contributions in which the social impact measurement approaches were categorised:

- **Synthetic indicators** are models that allow the calculation of a synthetic indicator to measure the global performance (from environmental, social and economic points of view) of an organisation working in the social sector; the approaches can measure the final outcomes, sometimes taking into account the whole process of value creation of a firm.
- **Process-based models** focus on the process necessary to deliver an intervention, calculating indicators along the chain of inputs→outputs→outcomes→impacts; these methodologies are constructed to help organisations build their own performance

measurement systems, some however only focus on the recognition of performance dimensions, while others provide more precise steps to follow to select specific indicators based on internal and external factors.

- **Dashboards and Scorecards** comprise models that can identify measures to assess different performance dimensions determined representative of the objectives of the organisations. This group is quite heterogeneous and the methodologies that fall in can differ based on: the criteria by which performance dimensions and metrics are selected (either from the businesses’ goals or the stakeholders’ priorities), the inclusion or not of step-by-step guides to help the identification of performance dimensions and metrics, the calculation or not of a final synthetic indicator to give an overall view of the impact generated.

Kah and Akenroye (2020) developed a suitability framework to provide social enterprises a tool to select the most appropriate social impact measurement approach for them, “to reinforce SIM in their operational plan and share information about the achievement of their social interventions thus establishing legitimacy”(Kah & Akenroye, 2020).

The authors classify 10 measurement approaches developed by academics along two dimensions: the focus of the assessment, which determines the typology of impact to be measured (i.e., environmental, economic, social); the firm size for which the various approaches might be suited (i.e., small, medium, large) (Table 6).

Variables	Types
Focus of the assessment	<ul style="list-style-type: none"> – Environmental – Economic – Social
Firm size	<ul style="list-style-type: none"> – Small – Medium – Large

Table 6: Models’ classification made by Kah and Akenroye (2020)

Perrini et al. (2020) focused their analysis on four of the most utilised social impact measurement methodologies by practitioners, selected also by taking into account the heterogeneity among the methods in order to form a representative sample of the several categories of the existing measurement tools. The methods selected include: social return on investment, social enterprise balanced scorecard, cost-benefit analysis, best available charitable option.

The authors made a comparison of the different methodologies, by using a series of variables to describe them, that could help social enterprises, stakeholders and scholars to identify the most appropriate tool for their needs (Table 7). Here I report only the variables that have a limited number of types, and exclude variables like, for example, the benefits of the models because the possible options would be numerous and impossible to be contained in only a few types.

Variables	Types
Complexity	<ul style="list-style-type: none"> – Simple – Moderately complex – Complex
Type of data requested	<ul style="list-style-type: none"> – Qualitative – Quantitative
Level of applications	<ul style="list-style-type: none"> – Intervention – Project – Programme – Policy – Organisation – “Macro”
Level of perspective	<ul style="list-style-type: none"> – Micro – Meso – Macro
Timeline of analysis	<ul style="list-style-type: none"> – Retrospective – Prospective
Duration	<ul style="list-style-type: none"> – Short term – Long term
Time frame	<ul style="list-style-type: none"> – Past – Present – Future
Discounting of future value	Yes/No
Perspective	<ul style="list-style-type: none"> – Internal – External
Stakeholder engagement	Yes/No
Purpose	<ul style="list-style-type: none"> – Reporting – Screening – Monitoring – Evaluation
Relevance of the measurement of social impact in comparison	<ul style="list-style-type: none"> – Low – Medium – High
Synthetic definition	<ul style="list-style-type: none"> – Process – Impact

	– Monetisation
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Table 7: Models' classification made by Perrini et al. (2020)

Considering now the practitioners' side, the Global Impact Investing Network (GIIN) developed the Impact Toolkit, an online open resource designed to help investors discover and choose the right impact measurement tools for their needs (Global Impact Investing Network, n.d.). The toolkit allows for investors to make lists of fit-for-purpose resources.

The users can navigate the methodologies by selecting the variables by which the tools are classified (Table 8). The Category shows the different typologies (or sectors) of impact that are addressed by the methodologies, the Geography illustrates for which kind of market and area they are most suited, the Target Stakeholder determines whether the tools measure impacts on the environment or on people, and the Type identifies the internal structure and functioning of the methodology.

Variables	Types
Category	Agriculture, air, biodiversity & ecosystems, climate, cross-cutting, diversity and inclusion, education, employment, energy, financial services, health, land, oceans & coastal zones, pollution, real estate, waste, water
Geography	<ul style="list-style-type: none"> – Developed market – Emerging market – Peri-urban – Rural – Urban – Wilderness
Target stakeholder	<ul style="list-style-type: none"> – Environment/planet – Social/people – Both
Type	<ul style="list-style-type: none"> – Data – Indicators – Methods – Systems

Table 8: Models' classification made by the GIIN (n.d.)

Another similar tool was developed by the Government Outcomes Lab (GO Lab), an institution founded by the University of Oxford, "walking shoulder to shoulder with governments and related organisations to enhance policy and practice towards better outcomes for people" (Government Outcomes Lab, n.d.). One branch of the GO Lab, INDIGO (International

Network for Data on Impact and Government Outcomes), that has the particular objective of sharing data about projects that seek to address complex social problems, developed the Impact Wayfinder. It is an online free tool meant for members of any kind of organisations, to help them find the most fitting measurement methodology based on a series of characteristics or variables that are used to classify the methods (Table 9). The Focus of the organisation determines whether the measurement approach has to be used in the third, public, or private sector; the Types of impact define what kind of social value is to be assessed; the Stage of the project indicates if the measurement happens ex-ante, ex-post, or ongoing with the project. The Scale of the evaluation defines the level of magnitude of the assessment (micro, meso, macro); the Type of output instead determines the typology of the final output of the methods.

Variables	Types
Focus of the organisation	<ul style="list-style-type: none"> – Third sector – Private sector – Public sector
Types of impact	Social impact, development poverty reduction, wellbeing, local rejuvenation, SDG oriented, sustainability eco, education, health, housing, employment and financial wellbeing, defence, democracy
Stage of the project	<ul style="list-style-type: none"> – Ongoing – Prospective – Retrospective
Scale of the evaluation	<ul style="list-style-type: none"> – Micro – Macro – Meso
Type of output	<ul style="list-style-type: none"> – Qualitative only – Quantitative but no single indicator – Monetary valuation – Non-monetary quantitative index – Ordinal

Table 9: Models' classification made by GO Lab (n.d.)

3. Research Gap

As seen in this literature review, in the last decades social impact measurement experienced a steep growth in its adoption, which materialised in the emergence of a plethora of methodologies developed by both academics and practitioners. Among the possible entities interested in the use of these methods, many have a strong focus on the pursue of a social mission, putting it at the core of their business models and strategies.

For this reason, social enterprises are one of the main recipients for the creation of impact measurement tools. The increasing rationalisation of the sector pushes for increasingly more robust performance measurement that can lead to the improvement of impacts (Ebrahim & Rangan, 2014; Kato, 2021; Lall, 2017; Thomson, 2011), and the external stakeholders ask for transparency and communication about the actual results of the organisations (Kato, 2021; Nicholls, 2009; Ormiston & Seymour, 2011). It is then clear how performing the measurement and management of the social impact has become extremely important from a strategic point of view, crucial for socially focused organisations in order to keep doing business in an effective and transparent way.

In the quest to find a way to organise the multitude of measurement approaches and to help these organisations choose the right one for them, academics and practitioners developed several classifications, based on different variables that address diverse aspects of the tools (Bengo et al., 2016; Clark et al., 2004; Dufour, 2015; Grieco et al., 2015; Kah & Akenroye, 2020; Maas & Liket, 2011; Migliavacca, 2016; Olsen & Galimidi, 2008; Perrini et al., 2020; Rinaldo, 2010), as shown in the previous chapter. Nevertheless, none of these works goes deep in classifying the methodologies based on variables that assess their strategic role.

Therefore, the objective of this thesis is to develop a clusterisation of the social impact measurement methodologies that organises them based on the strategic function they can offer to an organisation. Going through academic and practitioner sources I identified 78 measurement methodologies, then I performed a coding process to find patterns and similarities among them and ultimately to grasp aggregate dimensions (Chen & Harrison, 2020; Gioia et al., 2013; Saldaña, 2009; Thompson et al., 2018) that would reflect the different strategic functions covered by the models, with the aim to create a new classification that would organise them based on the functions I found.

A total of three main strategic roles (and therefore clusters) were identified, which will be discussed more in depth in the Results chapter.

While the main output of this work is the classification of the models, it was also possible to answer additional questions through an analysis of the diffusion of the measurement approaches over the years:

- What are the most and the least populated clusters and consequently the most and least satisfied functions over the years?
- Which models have the most comprehensive strategic roles, that can better contribute to the organisations' strategies from several points of view?
- What are the differences (if any) between the measurement methodologies developed by practitioners and the ones developed by academics over the years, in terms of number and types (i.e. strategic functions)?

Insights that highlight eventual trends and suggest their possible causes are given in the Discussion and Conclusion chapters.

4. Methodology

In this chapter the methodology that I followed to develop the new classification of social impact measurement models will be explained step by step.

After defining the necessary characteristics for a model to be selected, the sources from which measurement methodologies are searched will be presented, and the keywords used to research academic sources will be introduced.

The focus then shifts to the detailed analysis of academic literature first, and grey literature later. Here the process observed to identify and select the measurement methodologies will be described, which will end with the merging of the models found in the academic and grey literatures and the consequent compiling of the final list of selected social impact measurement methods.

Finally, the content analysis, performed through a coding process, will be delineated: starting from the documents selection and ending with the cluster identification described in the Results chapter.

4.1. Definitions of social impact and social impact measurement methodology used in this work

In order to be as inclusive as possible when it comes to the phenomena to be considered as social impacts, I adopt a broad conceptualisation of the term in question. To do so, I use elements of the definitions provided by Vanclay (2003), Hlady-Rispal & Servantie (2016), Reisman and Gienapp (2004), and Ebrahim and Rangan (2014). Hence, in conclusion, social impacts are the intended and unintended, positive and negative effects on the individuals, the broader society and the environment, that happen as a consequence of an organisation's actions.

On the other hand, the considered definition of social impact measurement methodology, used for the selection of models from the sources, encompasses both the trends of impact measurement identified by Dufour (2015). Therefore are included models that fall under both the categories of "social accounting and audit" and "social impact assessment", the first one being an analysis of the effects of an organization on its stakeholders, that includes the reporting of "an organisation's social, environmental, employee, community, customer and

other stakeholder interactions and activities and, where, possible, the consequences of those interactions and activities”(Gray, 2000); while the second one includes the analysis, monitoring and management of intended and unintended, positive and negative, social consequences of policies, programs, plans, projects carried out by an entity and any social change processes invoked by that entity’s activity (Vanclay, 2003).

Thus, more specifically, the characteristics that have been looked for are the following:

- **Applicable by any type of entity:**

The models selected could be applied by any of the three types of entities described by Bengo et al. (2016), therefore there were included methods suited for policymakers, capital providers (investors and grant-makers), and/or any kind of organisation (non-profit, for profit, social enterprises). No exclusion was made based on the type of entity for which a model was designed.

- **Serve a variety of functions:**

The models can serve one or more functions among: reporting impacts, assessing impacts, measuring social performance, monitoring social performance, providing guidelines to implement impact measurement, etc.

- **Applicable anywhere in the course of action:**

The models can be used prospectively, retrospectively, and/or ongoing with the activities.

- **Measure impact on several dimensions:**

The models consider the impact on society and a variety of stakeholders on several dimensions; hence I excluded the methods that can only assess performance along one specific impact dimension (e.g. gender equality, job quality, etc.) and the ones that were designed to assess performance in one specific sector only (e.g. public transport, food security, etc.).

In addition to these characteristics, certain models were not considered based on some exclusion criteria listed below:

- **Lack of publicly available information:**

Models that do not have enough publicly available information to retrieve knowledge on how they work and what is their purpose, making it impossible to perform a content

analysis. This category also comprises the methods that do not have support anymore from the organisations that created them.

- **Proprietary, organisation-specific models:**

Proprietary models which either are specifically designed only to work in the organisation (and/or the sector where it operates) that developed them, or that, again, do not have enough information available to the public.

- **Pure sets of indicators:**

Approaches that are solely sets of indicators (e.g. IRIS+ metrics); instead, the models that were included offered a process or some guidelines that an entity must follow in order to assess/report/monitor the social performance.

4.2. Sources and keywords

Social impact measurement methodologies have been developed over the years by both practitioners and scholars, with a major contribution from the first ones, since on one side funders and investors want to know whether the financial resources they allocate actually produce a social return, and on the other side managers of organisations also tried to develop approaches to measure and manage the social value they create (Rawhouser et al., 2019). Instead, even if social impact measurement has been growing quickly in the practitioners' field, scientific research hasn't kept the same pace and is lagging behind (Bengo et al., 2020).

Thus, I investigated both grey and academic literatures in order to acquire a comprehensive view of what are the methods that have been created and are being used today. Figure 2 resumes the whole process of the analysis of the literature that brought to the final list of models to be considered for the content analysis.

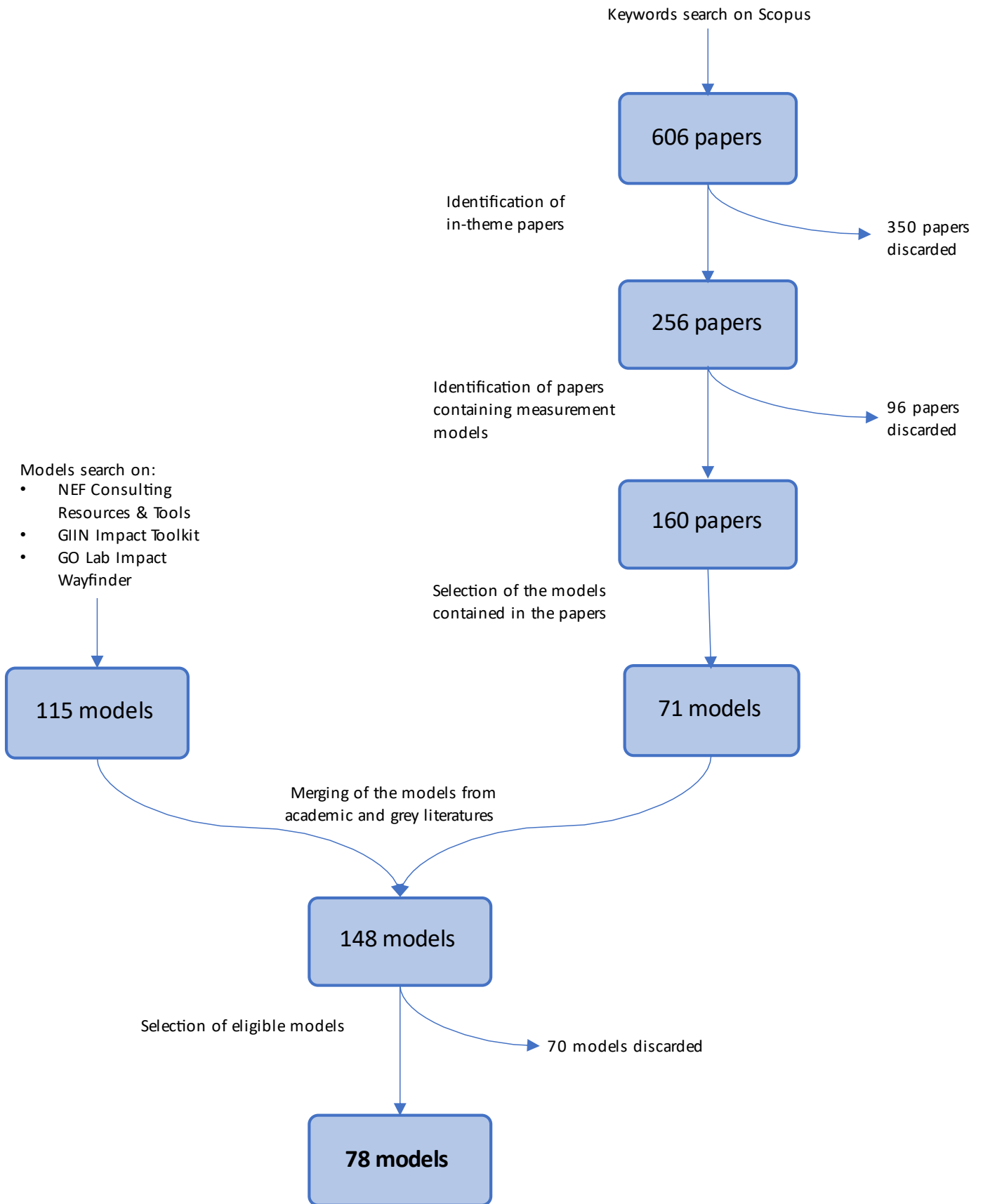


Figure 2: Models' selection process

4.2.1. Academic literature

To identify social impact measurement models mentioned in the academic literature, I performed a search on the famous abstract and citation database Scopus, looking for papers that covered the theme of social impact measurement.

The search keywords, displayed in Table 10, have been selected based on the most frequent concept in the literature on the measurement and reporting of non-financial performance and combined in search statements; moreover, the time interval, concerning the publication date of the articles, selected for the search was from the year 2016 onward.

Keywords	
Social impact AND measurement*	Social return AND evaluation*
Social impact AND assessment*	Social return AND metric*
Social impact AND evaluation*	ESG AND assessment*
Social impact AND metric*	ESG standard AND assessment*
Social performance AND measurement*	ESG assessment AND framework*
Social performance AND assessment*	ESG AND rating*
Social performance AND evaluation*	ESG AND measurement*
Social performance AND metric*	ESG AND evaluation*
Nonfinancial performance AND measurement*	ESG AND certification*
Nonfinancial performance AND assessment*	ESG AND label*
Nonfinancial performance AND evaluation*	
Nonfinancial performance AND metric*	
Social return AND measurement*	
Social return AND assessment*	

Table 10: List of keywords for academic literature analysis

4.2.2. Grey literature

To identify social impact measurement methodologies in the grey literature, I investigated three sources: the NEF Consulting Resources & Tools, the GIIN Impact Toolkit, and the GO Lab Impact Wayfinder.

NEF Consulting was founded in 2008 by New Economic Foundation, a foundation whose goal is to promote a new and more sustainable economic paradigm, that would benefit people and the planet. NEF Consulting assists companies to transition towards this new kind of economy,

by offering consultancy services to implement impact measurement and management in their strategies and training the clients in the application of different kind of tools and methodologies monitoring, assessing and reporting.

Some of these methodologies are presented in the Resources & Tools section of their website, where descriptions, examples of possible applications, and further resources to consult are available.

The GIIN Impact Toolkit, described in the Literature Analysis chapter, provides the access to information about hundreds of impact measurement and management tools, and classifies them with the variables listed previously in this work. In order to investigate as many methodologies as possible, I did not filter the variables, therefore I selected all the impact categories/sectors available so that methods measuring all the different types of impact could appear; then I also included all the types of the Geography variable to not limit the search to tools applicable only to a limited market or area (e.g. urban, wilderness, emerging or developed market, etc.). Likewise, the Target Stakeholder variable was not restricted to any value, so as to take in methodologies measuring the impacts on both people and the planet; and finally, I did not restrict even the Type variable, to not exclude any models based on their internal structure and functioning.

The same process went for the GO Lab Impact Wayfinder, which provides information about hundreds of methodologies as well. I did not restrict any variable in order to visualise as many results as possible; hence I included tools applicable in either the third, private or public sector, and I also opted for methods measuring any kind of impact or value in a prospective, retrospective or ongoing way. The magnitude of the impact to be measured could be of any level, so I included the tools measuring at micro, meso, and macro level; and the type of evaluation output of the models was also selected so to comprise the ones that produce qualitative, quantitative, monetary and/or single indicator outputs.

4.3. Academic literature analysis

4.3.1. First step: identification of theme-related papers

The initial search in Scopus resulted in 606 papers, and the first step was to distinguish between the articles focused on the theme of impact measurement and the ones that were not.

To achieve this, I read the abstracts of all the papers, and in case this wasn't enough to get a clear understanding of the theme treated, I read also parts from the introduction and/or discussion and conclusion sections. In the case the paper was in-theme, I would mark it for a deeper analysis to be performed later on, otherwise I would discard it.

At the end of the process, 256 papers were marked as addressing the theme of impact measurement, while 350 did not because treated a different theme or even belonging to a different field of research; for example, many of the 350 discarded articles were related to the medical field and presented medical studies.

4.3.2. Second step: papers focusing on specific methodologies

In this next step, I distinguished, among the 256 papers selected, the ones covering one or more specific models for social impact measurement from the ones that instead did not mention any. Also in this case, the latter were discarded since they would not have contributed to the identification and analysis of impact measurement methodologies. 160 articles mentioned or explained, to some extent, one or more models; the remaining 96 articles instead did not mention any. Part of these 96, were constituted by case studies in which the authors evaluated the effects of different types of socially oriented programs and initiatives; however, the authors, while presenting the evaluation methodology, did not mention any kind of specific model or approach applied to the cases, therefore it was impossible to take them into account and had to be discarded.

As a third step in the selection of scientific papers, I reviewed again more in detail the 160 articles remaining, in order to identify for each one which models were explained in detail and which instead were only nominated or only briefly presented. The description of a model, in order to be classified as "detailed", would have to provide information about how the model worked through the necessary steps to apply it, and about the functions and outputs that it would generate for the entity that applied it, so that later it would have been possible to point out what strategic value it could offer. This procedure was necessary so as to recognise what papers could potentially be used later for the content analysis stage, and as a result, 117 were identified to be offering detailed explanations about one or more models within them.

The final stage in the academic literature analysis consisted in the identification and listing of the social impact measurement models that were present in the remaining 160 papers,

whether they were simply indicated or described in depth. This resulted in a total of 71 methodologies.

4.4. Grey literature analysis

For what concerns the analysis of the grey literature, I analysed the three mentioned sources (i.e. NEF Consulting Resources & Tools, GIIN Impact Toolkit, GO Lab Impact Wayfinder) and selected the impact measurement models that I found.

Unlike in the analysis of the academic literature, here I also performed an initial skimming of the models as I went through them one by one in each of the sources, based on the definition of “social impact measurement methodology” used for this work. As a result, 115 models were kept in consideration, 38 of which had already been observed in the academic literature.

4.5. Merging academic and grey sources and final selection of methodologies

Once I identified the methodologies in the academic and grey literatures, I merged them together and performed the final selection of the models, based on the characteristics that I was looking for, listed previously in this work. From the merging, 148 models came out and, after the final selection, only 78 were determined to be compliant with the desired characteristics (Table 10).

Model	Developer	Type of source
AA1000 AS	AccountAbility	Academic, grey
Anticipated Impact Measurement and Monitoring (AIMM)	International Finance Corporation	Grey
B impact assessment	B Lab	Academic, grey
Balanced scorecard (modified)	Scholar	Academic
Basic Efficiency Resource analysis (BER)	Scholar	Academic
Benefit-cost ratio	Robin Hood foundation	Grey
Best available charitable option (BACO)	Acumen fund	Academic, grey
BoP impact assessment framework	William Davidson Institute	Grey
Business ethic excellence model	European business ethics network (EBEN GR)	Grey
Compass Index of Sustainability	AtKisson Inc.	Grey
Constituent Voice Methodology	Keystone accountability	Grey
COSA Methodology	Sustainable commodity initiative	Grey

Cost per impact	Center for High Impacts Philanthropy	Academic, grey
Cost-benefit analysis	-	Academic, grey
Cost-Effectiveness Analysis	J-PAL	Grey
Cradle to cradle certification	Cradle to Cradle Products Innovation Institute	Grey
Ebrahim and Rangan performance assessment framework	Scholar	Academic
Eco-mapping	INEM and EMAS	Academic, grey
EFQM Excellence Model	European Foundation for Quality Management	Academic, grey
Equator principles	Citigroup, ABN AMRO, Barclays, West LB, and the International Finance Corporation (IFC)	Grey
Expected return	Hewlett foundation	Academic, grey
Family of measures	Scholar	Grey
FINCA client assessment tool (FCAT)	FINCA	Grey
Fit for purpose	Development trusts association	Academic, grey
Four Pillar Approach	New philanthropy capital	Grey
Framework for integrated reporting	International Integrated Reporting Council	Grey
GIIRS impact ratings	B Lab	Academic, grey
GRI sustainability reporting standards	Global reporting initiative	Academic, grey
Impact Management Project 5 dimensions	Impact Management Project	Grey
Impact Multiple of Money (IMM) Framework	Rise Fund	Grey
Impact-Weighted Accounts	Harvard Business School	Grey
Investors in People	UK commission for employment and skills	Academic, grey
ISO26000	ISO	Academic
Lean data	Acumen fund	Academic, grey
Local multiplier 3	NEF consulting	Academic, grey
Logic model builder	Innovation network	Grey
Measuring Impact Framework (MIF)	WBCSD	Grey
Methodology for Impact Analysis and Assessment (MIAA)	Investing for good	Grey
Multi-Criteria Analysis	-	Grey
Multiple constituencies approach	Scholar	Academic
Operating Principles for Impact Management	International Finance Corporation	Grey
Outcomes star	Outcomes star	Grey

Performance Prism for social services	Scholar	Academic
Poverty and social impact analysis	World bank	Academic, grey
Poverty probability index (PPI)	Grameen foundation	Grey
PQASSO	Charities Evaluation Services	Academic, grey
Product impact metric	Scholar	Academic
Product social impact assessment	PRé sustainability	Academic, grey
Prove it!	NEF consulting	Academic, grey
Public value scorecard	Scholar	Academic, grey
Qualitative Impact Protocol (QuIP)	Bath Social and Development Research Ltd	Grey
Quality first	Tony Farley and Birmingham Voluntary Service Council	Academic, grey
SAA	Social audit network	Academic, grey
SASB standards	Social Accounting Standards Board	Grey
SDG compass	Global reporting initiative, UN global compact, WBCSD	Academic, grey
SE balanced scorecard	Scholar	Academic, grey
SMI Social Responsibility Performance Index	Scholar	Academic
Social added value evaluation (SAVE)	Scholar	Academic
Social business scorecard (SBS)	CERISE	Academic, grey
Social footprint	Scholar	Grey
Social impact assessment	IAIA	Academic, grey
Social IMPact Measurement for Local Economies (SIMPLE)	Scholar	Academic, grey
Social lifecycle assessment	-	Academic
Social return assessment	Pacific community ventures	Academic, grey
Social worlds/arenas theory based model	Scholar	Academic
Socio-economic assessment toolbox	Anglo American	Grey
SPI4/ALINUS	CERISE	Academic, grey
SROI	REDF	Academic, grey
Sustainable livelihoods	Scholar	Grey
The Big Picture	Scottish council voluntary organizations	Academic, grey
Theory of change	Scholar	Academic, grey
Third sector performance dashboard	Social firms UK	Academic, grey
Tool for Indicator Design	Shift Project	Grey

UN principles for responsible investing	UN	Grey
UN SDGs	UN	Academic, grey
UNDP SDG Impact Practice Assurance Standards	UNDP	Grey
Volunteering impact assessment toolkit	Institute for volunteering research	Academic, grey
Wallace assessment tool	Wallace foundation	Grey

Table 11: Final selection of models on which to perform the content analysis

4.6. Content analysis

Once the models were selected, I performed the content analysis through a coding process, as described and utilised by several scholars (Chen & Harrison, 2020; Gioia et al., 2013; Saldaña, 2009; Thompson et al., 2018), to find patterns in the application and functions among the different models and eventually group them into clusters that would describe what strategic functions the models within are able to satisfy. The coding process allows to manage, filter, highlight, and focus on the salient characteristics of the considered qualitative data to generate categories and aggregate dimensions, to grasp the essence of the data record and ultimately, through finding connections among the codes, the meaning behind it (Saldaña, 2009).

The process begins with the identification of words or short phrases (i.e. codes) that reduce or even summarise pieces of information but have no clear conceptual boundaries between them. Afterwards, patterns and similarities among coded data are looked for, in order to group the codes and identify categories, to which are then assigned descriptive labels. Further commonalities among the categories are then investigated, which allow to extrapolate higher level themes and concepts that might describe and explain the observed phenomena (Chen & Harrison, 2020; Gioia et al., 2013; Saldaña, 2009).

Overall, the coding process performed in this work consisted in three steps which will be explained in depth in the following sections and are summarised in Figure 3.

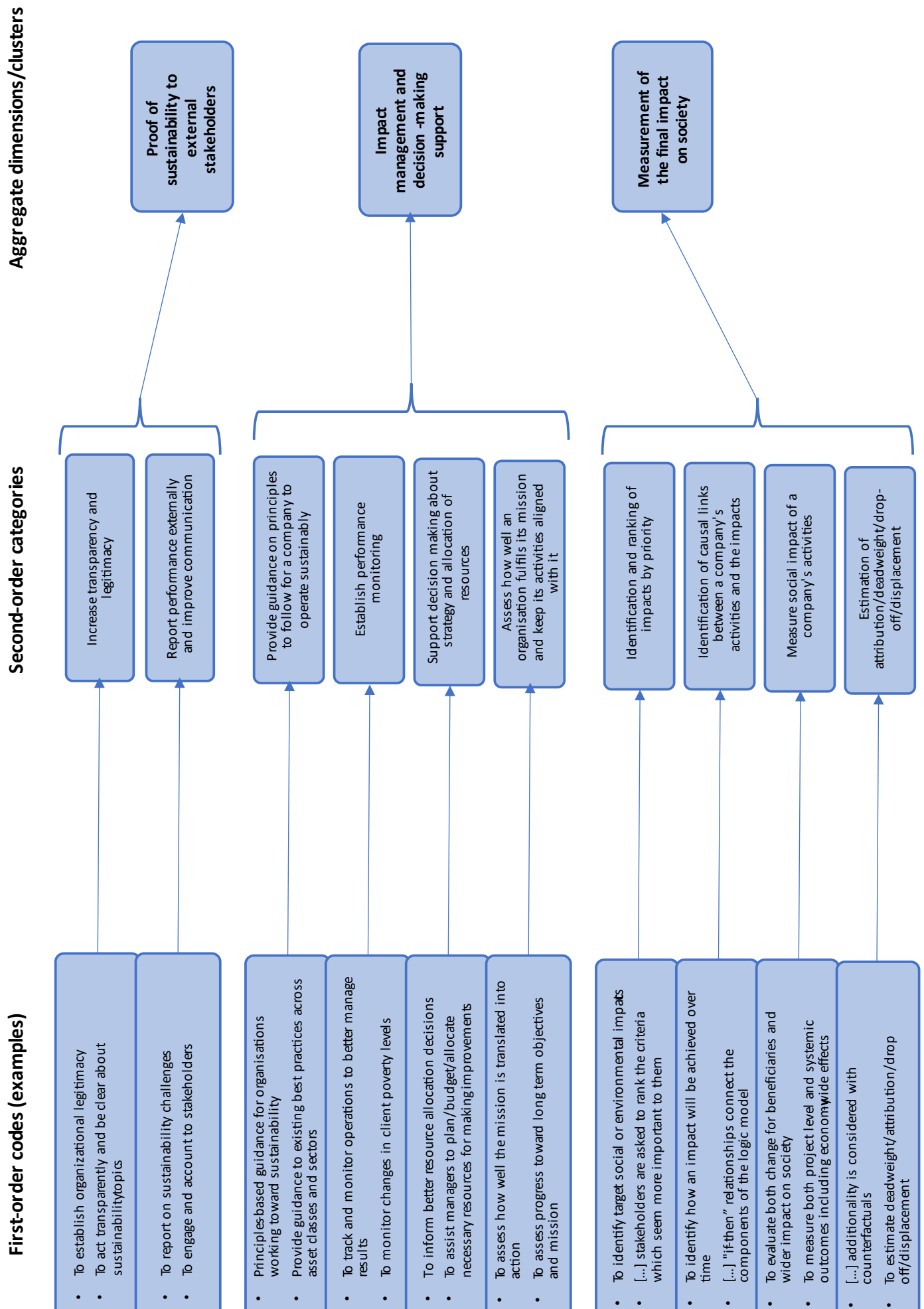


Figure 3: Summary of the coding process

4.6.1. Documents' selection and key phrases identification

Before starting the coding procedure, I searched for documents that described the models considered. Some were covered in detail in the academic papers on which I performed the literature analysis (see Chapter 5.3); for the remaining ones however, I researched in the web reports and/or articles that would offer a thorough description of the models.

For each model, I selected from 1 to 4 documents on which I would execute the coding; therefore, the documents had to illustrate on one hand the functioning of the methodologies, with the steps necessary to carry them out, the resources used, the stakeholders to be involved and so on. On the other hand, the functions they offer for the organisations applying them and what advantages can bring were also important to find patterns among the models in terms of the strategic roles that they can serve. The list of documents for each methodology utilised for the coding process can be seen in Annex 1.

Once the necessary material was gathered up, the first step of coding consisted in reviewing the documents for each model and select key phrases and keywords (i.e. the codes) that described and summarised the features described above. After having identified the codes for every methodology, I reviewed them once again to refine them by eliminating the irrelevant ones and the duplicates.

5. Results

5.1. Identification of categories

After having identified codes for each of the 78 methodologies, the second step of coding involved finding the first commonalities among them. Hence, I looked for recurring key phrases and patterns that would describe types of functions or roles that the models satisfied. This ultimately brought to the identification of the following ten categories:

- a) **Increase transparency and legitimacy:** models that satisfy this function allow the entities using them to increase their legitimacy in the eyes of external stakeholders and improve their reputation, not necessarily by creating a detailed report, but simply by interacting with stakeholders and involving them in the process, or by generating and output that certifies the company's sustainability.
- b) **Report performance externally and improve communication:** models meeting this function allow to improve communication with external stakeholders in a more elaborated way, in fact they provide ways to create reports to disclose about social performance and impact to funders, investors, beneficiaries, customers, and other types of stakeholders; some methodologies fully focus on providing detailed guidelines on how to construct these reports step by step with details on the topics to cover, others instead integrate the disclosure step as the end of the measurement process, where the organization reports the results of the measurement just performed with the model in question.
- c) **Provide guidance on principles to follow for a company to operate sustainably:** models providing this function serve the organisations with general guidance on how to operate in a sustainable way; this can be done by offering principles or standards to follow that elucidate good practices to have, like measuring and/or managing impact, disclose about social performance, interact with stakeholders, and other areas. However, this function does not provide concrete and detailed tools or guidelines on how to apply the said practices.
- d) **Establish performance monitoring:** models that satisfy this function enable entities applying them to keep track of their activities' social performance, measuring it periodically; they provide concrete tools, indicators, and/or guidelines to develop a monitoring system to measure the short and medium term outcomes the activities of

an organisation have on beneficiaries, therefore they do not allow to assess the social impact, but are helpful in managing it from an operational point of view.

- e) **Support decision making about strategy and allocation of resources:** models serving this function offer organisations support for strategic decision-making regarding the improvement of their impact and social performance; they can inform decisions that concern the allocation of resources to fund one intervention, program, project or any kind of activity instead of another, to ensure that the best results will follow.
- f) **Assess how well an organisation fulfils its mission and keep its activities aligned with it:** models that provide this function allow organisations to assess their progress towards their social goals and mission; this is done by keeping their activities on track and aligned with the goals, to avoid mission drift and keep delivering value for the beneficiaries and communities.
- g) **Identification and ranking of impacts by priority:** models performing this function allow to identify the final social impacts that an organisation's activities have on beneficiaries and society at large also on the long term, without however being capable of measuring their magnitude; some of these models also allow to rank the impacts by importance based on the priorities that either the organisation assigns, or that the beneficiaries and other involved stakeholders determine, therefore giving a direction to the service/product providers on where to focus their efforts.
- h) **Identification of causal links between a company's activities and the impacts:** models that meet this function allow organisations not only to identify their impacts, but also to establish links of causality between their activities and said impacts, determining what actions bring to what results with all the steps happening in-between; this is usually done through the use of Theories of Change or impact value chains (see chapter 3.1).
- i) **Measure social impact of a company's activities:** models that satisfy this function allow organisations to actually give a value to their final social impact by providing methods to measure it and determine its magnitude with a quantitative, monetary or non-monetary, approach.
- j) **Estimation of attribution/deadweight/drop-off/displacement:** models providing this function allow organisations to perform a step further the identification and/or measurement of impacts and causal links by increasing the accuracy and reliability of

the measurement and thus providing further proof of the generation of impact by the user; this is done with the computation of a series of characteristics like the attribution, deadweight, drop-off, and/or displacement, with, for example, a counterfactual analysis.

In particular, attribution is the assessment of how much of the impact was caused by the intervention/project/program considered and not by other factors; deadweight is defined as “the extent to which outcomes would have happened without any interventions by the organization”(Nicholls, 2009); drop-off is the decreasing of the importance of an impact resulting from an intervention over time; displacement requires an assessment of how much the impact of an intervention has displaced other impacts that would have resulted from similar interventions.

5.2. Final aggregation and identification of the clusters

In the last step of the coding process, I performed a final aggregation by unifying the categories into three clusters. The ten categories were merged based on the type of strategic contribution that they would provide to an organisation, and this brought to the identification of three major strategic functions: proof of sustainability to external stakeholders, impact management and decision-making support, measurement of the final impact on beneficiaries and society at large.

Specifically, the categories (a) and (b) merged to form the cluster “proof of sustainability to external stakeholders”, categories (c), (d), (e) and (f) formed the cluster “impact management and decision-making support”, and categories (g), (h), (i), and (j) formed the cluster “measurement of the final impact on beneficiaries and society at large”. At last, I located the social impact measurement methodologies in the clusters obtained; to do so I firstly checked the codes describing each of the models and I linked these to the categories to which they belonged, in such a way that every model was then affiliated with the categories represented by the codes describing it. Afterwards, depending on which ones of the ten categories each model was associated to, I positioned it in one or more of the clusters identified. The requisite for an impact measurement methodology to be part of a cluster is that it has to be associated with at least one of the categories forming that particular cluster; so, for example, if a model is part of the categories (b), (d), and (f), then it will be located in the cluster of “proof of sustainability to external stakeholders” and in the one of “impact management and decision-

making support”. The complete list of the models belonging to each cluster is provided in Annex 2.

The following subchapters will explain more in depth each cluster.

5.3. Proof of sustainability to external stakeholders

This cluster originated from the conjunction of first two categories: “Increase transparency and legitimacy” and “Report performance externally and improve communication”. Models belonging to this cluster make it possible, for entities that utilise them, to demonstrate how sustainably they operate and how sustainable the effects of their operations are. Organisations can use these methodologies to generate proof of their legitimacy to show to different kinds of interested stakeholders, which comprehend capital providers, governments, and customers and communities affected by the actions of the organisations. In fact, capital providers, being them either investors pursuing both financial and social returns or donors pursuing only social ones, need information regarding the sustainability and the actual impacts of the possible organisations they could locate their resources into, in order to maximise said social returns coming from the potential investees; therefore, organisations can use models in this cluster to provide them these types of data. Organisations might need to deliver information about the sustainability of their operations also to governments, which can lay out regulations that favour social impact initiatives, or directly promote and fund organisations providing said initiatives; hence in this case, similarly to capital providers, governments would require such information to best allocate their resources to achieve social returns, and these models can help organisations to provide it. Other stakeholders that could be interested in the social performance and sustainability of organisations are the customers, local communities, suppliers, or others that want to make sure that the entities with which they have some kind of relation are operating in a sustainable way and achieving results that benefit society; organisations can thus use the methodologies in this cluster to increase their transparency, certificate their legitimacy, or, in some cases, even draft in-depth reports that satisfy these types of information needs. Hereafter, a couple of methodologies that satisfy this strategic function are presented as examples.

5.3.1. Example: GRI Standards

The Global Reporting Initiative (GRI) is an international independent organisation that aims to support businesses, governments, and other organizations understand and communicate their impacts on issues regarding sustainability, such as climate change, human rights, corruption, and many others along the social, environmental, and economic fields.

In 2000, the GRI launched its first set of sustainability guidelines, which were then developed into standards in 2016 and made available to the public free of charge, and are now the first and most widely adopted global standards for sustainability reporting. The GRI Standards are designed to enhance the global comparability and quality of information on social, environmental, and economic impacts, therefore enabling greater transparency and accountability of organizations. These features are achieved through sustainability reporting that, based on the Standards, helps providing a balanced and reasonable representation of an organisation's positive and negative contributions towards the goal of sustainable development. The information made available through sustainability reporting allows internal and external stakeholders to form opinions and to make informed decisions about an organization's sustainability practices and impacts on society and environment (Global Reporting Initiative, 2016; Nicholls, 2021).

The Standards are composed of four main parts (NEF consulting, n.d.-h):

- **Sustainability reporting guidelines (the Standards)** are the core of the framework and consist of principles for the definition of report content and for ensuring the quality of reported information. They also include Standard Disclosures made up of performance indicators and other disclosure items, as well as guidance on specific technical topics in reporting.
- **Sector supplements** that complement the guidelines with interpretations and guidance on how to apply them in different sectors, which also include performance indicators for each specific sector. Applicable sector supplements should be used in addition to, rather than in place of, the guidelines.
- **Indicator protocols**, which are present for each of the performance indicators contained in the guidelines. These protocols provide definitions, compilation guidance, and other information to assist report writers and to ensure consistency in the

interpretation of the performance indicators, and ultimately draft a sustainability report in the most exhaustive way.

- **Technical protocols**, created to provide guidance on issues in reporting, such as setting the report boundary. They are designed to be used in conjunction with the guidelines and sector supplements and cover issues that face most organisations during the reporting process.

5.3.2. Example: Framework for Integrated Reporting

Founded in 2010, the International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, accountants, academics and non-governmental organisations interested in the spread of the adoption of integrated reporting as a means to improve communication about value creation, advance the evolution of corporate reporting, and make a lasting contribution to financial stability and sustainable development (Nicholls, 2021). The IIRC issued, in 2013, a Framework for Integrated Reporting that promotes a more cohesive and efficient approach to corporate reporting and aims to improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital. To do this, the framework helps organisations draft a report that explains how they create, preserve or erode value over time for all the stakeholders affected by their operations. More specifically, it sets out the following seven principles that underpin the preparation and presentation of an integrated report, informing its content and how information is presented (International Integrated Reporting Council, 2021):

- **Strategic focus and future orientation.** Integrated reporting should provide insights into an organisation's strategy, and how it relates to the organisation's ability to create value in the short, medium, and long term.
- **Connectivity of information.** Integrated reporting should demonstrate a holistic view of the wider effects on the variety of stakeholders and the environment of organisational activity.
- **Stakeholder relationships.** Integrated reporting should provide insights into the nature and quality of the organisation's relationships with its key stakeholders and the feedback mechanisms that are in place.

- **Materiality.** Integrated reporting should disclose information about any matter that affects the organisation's ability to create value over time.
- **Conciseness.** Integrated reporting should be robust and concise.
- **Reliability and completeness.** Integrated reporting should include all material matters, both positive and negative
- **Consistency and comparability.** The information in an integrated report should be presented in a consistent manner over time, and in a way that enables comparison with other similar organisations as far as possible.

Besides the guiding principles, the framework sets out eight Content Elements, fundamentally linked to each other and not mutually exclusive, that include more detailed guidance of what factors to incorporate under each element of the report (International Integrated Reporting Council, 2021):

- **Organizational overview and external environment.** What does the organisation do and what are the circumstances under which it operates?
- **Governance.** How does the organisation's governance structure support its ability to create value over time?
- **Business model.** What is the organisation's business model?
- **Risks and opportunities.** What are the specific risks and opportunities that affect the organisation's ability to create value over time? How does the organisation deal with them?
- **Strategy and resource allocation.** What is the strategic direction of the organisation and how does it want to get there?
- **Performance.** To what extent has the organisation achieved its strategic objectives over time and what are its outcomes?
- **Outlook.** What challenges and uncertainties are likely to emerge and how may they affect the future performance of the organisation?
- **Basis of presentation.** How does the organisation determine what matters to include in the integrated report and how are such matters quantified or evaluated?

5.4. Impact management and decision-making support

This cluster derived from the merging of the categories: “Provide guidance on principles to follow for a company to operate sustainably”, “Establish performance monitoring”, “Support decision making about strategy and allocation of resources”, and “Assess how well an organisation fulfils its mission and keep its activities aligned with it”. Models in this cluster can be used by organisations to manage their impact on society in a variety of ways, by gaining crucial information that, through these methodologies, can be utilised as decision-making aid in order to help them pursue a positive social impact and to keep improving it over time. These methodologies accomplish this task with different approaches: for example, some provide generic guidelines and standards to follow for operating in a sustainable way and for improving their social impact, and elucidate good practices to have in order to manage social impact and the relationship with stakeholders. However, this kind of approaches do not necessarily provide specific tools for measuring and managing impact, nor in-depth guidance to apply the standards they propose, therefore remaining on a surface level.

On another note, other approaches focus on establishing a monitoring system for the social performance of an organisation’s activities, by providing tools, indicators and guidance to help keeping track of the social performance through periodic measurement; this equips organisations with concrete methods to manage their outcomes from an operational point of view. Instead, there are also approaches that offer support for strategic decision making and can help to significantly improve their social impact and performance; by applying them they can, for example, supply information useful for assisting in decisions about resource allocation that can substantially improve the social performance of an organisation. Another type of approaches helps organisations to assess their progress towards their social goals and missions and to keep their activities aligned with them.

The models of this cluster apply one or more of these approaches, and, due to their function of supporting the management of impact, the outputs they deliver are valuable primarily for the managers of social enterprises, for profit, and non-profit organisations for assisting them in strategic decisions concerning their social performance, and for capital providers that, in the screening phase, have to compare potential investees and donees so as to decide where to allocate their resources to more effectively achieve a positive social impact that is in line

with their mission. Two examples of methodologies serving the strategic function represented by this cluster are described below.

5.4.1. Example: Social Business Scorecard

Developed in 2015, the Social Business Scorecard (SBS) originated from the effort and collaboration of CERISE with the Social Business Working Group, which included non-governmental organisations, foundations, and companies all aiming to support socially-oriented businesses worldwide (CERISE, n.d.). The SBS assists social businesses in the identification of practices and operational approaches of social businesses, with the aim of classifying them into different institutional profiles defined by a set of specific indicators (Sierra et al., 2020).

Organisations can utilise the SBS for self-assessment as well as for accompanied self-assessment, and its indicators serve to analyse social businesses along seven dimensions which focus on intent and design of the businesses, their activities and outputs (CERISE, n.d.; Sierra et al., 2020):

- **Purpose:** the social mission of the organisation, which is illustrated by a series of goals, that can be defined, measured, and analysed.
- **Public:** the target clients and beneficiaries of the organisation's activities, they are usually living in disadvantaged conditions (e.g. poverty, disability, inequality). It is necessary that the products and services offered are tailored to the beneficiaries' needs.
- **Product and services:** the services provided by the organisation must contribute to the mitigation or elimination of the social problem of the clients and beneficiaries that it is targeting; moreover, the pricing of the products must take into account their low purchasing power.
- **Human resources policies and work conditions:** social businesses must consider employees an asset, not a liability, and therefore should have exemplary Human Resources practices, complying with local laws and meeting international standards to ensure decent work.
- **Ethical principles:** referring to the way the social business respects ethical principles regarding the environment, social responsibility, and transparency.

- **Profits:** social businesses should be financially sustainable without undermining its social purpose; therefore, the business model must be robust and adapted to its social goals. Particular attention has to be paid to transparency regarding financial accounts and management remuneration.
- **Partnerships:** refer to the partners that play an important role and have a structuring effect on the social business; partners may provide technical support and/or capital.

The use of the SBS can bring social businesses to the definition of social indicators that will give insights into day-to-day management practices and can help them determine where to focus efforts to improve their services and thus their impact on beneficiaries. Ultimately, it can assist organisations in refining their social strategy and drive decision making based on their mission.

5.4.2. Example: Equator Principles

The Equator Principles constitute a framework developed in 2003 by Citigroup, ABN AMRO, Barclays, West LB, and the International Finance Corporation (IFC). Established as a financial industry benchmark, the principles are used to assess, determine, and manage social and environmental risks in large projects; they serve as a support for responsible decision making by providing a minimum standard for due diligence and monitoring. The principles can be applied by financial institutions to new projects, globally and across any industry sector, along five areas of work: project finance advisory services; project finance; project-related corporate loans; bridging loans, project-related refinance; and project-related acquisition finance.

The Equator Principles consist of 10 principles based upon the IFC's environmental and social categorization process (Nicholls, 2021):

1. **Review and categorisation,** of the magnitude of the potential risks related to social and environmental impacts, including the ones affecting human rights, climate change, and biodiversity. Category A projects have potential significant adverse social and environmental risk and/or impacts that are diverse, irreversible, or unprecedented; Category B projects have potential limited adverse environmental and social risks and/or impacts that are few in number, usually site-specific, largely reversible, and

readily addressed through mitigation measures; Category C projects have minimal or no adverse environmental and social risks and/or impacts.

2. **Environmental and social assessment**, which determine the relevant social and environmental risks and the scale of impacts of the projects. The assessment must propose solutions to reduce and mitigate adverse impacts and to compensate risks for workers, affected communities, and the environment, in an appropriate manner to the scale and nature of the projects.
3. **Applicable environmental and social standards**, that comply with host country laws and regulations about social and environmental issues, as well as the standards of the IFC.
4. **Environmental and social management system and equator principles action plan**, required for every investee.
5. **Stakeholder engagement**, required to be performed in a structured and ongoing manner, taking into account the cultures of affected communities, workers and other stakeholders.
6. **Grievance mechanism**, designed to be used by the affected communities and workers to facilitate the resolution of possible concerns about the social and environmental performance of the projects.
7. **Independent review**, to be carried out of the assessment process and stakeholder engagement, to determine the organisations' compliance with the principles.
8. **Covenants**, which must be linked to compliance; if the investee fails in compliance within an agreed period, the investor reserves the right to exercise.
9. **Independent monitoring and reporting**, to be provided by an independent social and environmental consultant.
10. **Reporting and transparency**, required at a minimum to offer a summary of human rights and climate change risks and impacts, as a way for the organisation to be accountable to the investor and other stakeholders.

5.5. Measurement of the final impact on beneficiaries and society at large

This final cluster generated from the merging of the last four categories: "Identification and ranking of impacts by priority", "Identification of causal links between a company's activities

and the impacts”, “Measure social impact of a company's activities”, “Estimation of attribution/deadweight/drop-off/displacement”. While the functions exerted by the models in the first two clusters do not allow the organisations using them to assess their long-term social impact, the methodologies in this cluster actually enable them to do so, by identifying and/or measuring the final impact their activities have on the affected stakeholders and society at large. The application of these models can offer more or less precise estimations of the impacts generated, depending on the number of details and the thoroughness of the process that an organisation has to follow, which can either stop at the identification, or offer an accurate (and quantified) measurement of said impacts.

Some approaches enable organisations to discover the social impacts their activities have on the affected stakeholders, without however determining their magnitude and quantitatively measuring them; among these, there are approaches that also allow to perform a prioritisation process of the social impacts, therefore ranking them by importance. The priorities are assigned either directly by the organisation or with the consultation of the stakeholders that are touched by the organisation’s activities; because of this, the latter case brings to a more precise and concrete result. Other approaches not only enable the identification of the long-term impacts, but also help to identify the causal relations that from the inputs and passing through activities, outputs, and outcomes, ultimately bring to those impacts; hence building an impact value chain of the organisation that can highlight the actual results its actions.

In addition, certain approaches provide, as a result of their application, a quantitative evaluation of the final impacts of an organisation, by giving them monetary or non-monetary values that offer a concrete depiction of the long-term effects of the organisation’s activities. Moreover, a few other approaches empower the user entity to further increase the accuracy of the assessment of the social impact, by going beyond the identification and measurement, and determining additional components: attribution, deadweight, drop-off, and displacement. This kind of attributes can be computed in several ways; some identify past case studies that are comparable to the situation of, and impact pursued by, the user entity, and determine whether the social goals that organisation wants to reach with its activities are achievable and in what measure. Other approaches instead involve the use of counterfactual analyses and provide a better and more robust proof and computation of the mentioned

attributes. A counterfactual analysis requires the comparison of the outcomes experienced by a group of beneficiaries of the organisation's activities (the "treatment group") with those experienced by a group similar in all respects to the treatment group (the "control group"), but that has not been subjected to the activities of the organisation. By means of analysing the differences in the outcomes experienced by the two groups, the entity can eventually estimate the attribution/deadweight/drop-off/displacement effects. Naturally, the more a model allows a high accuracy in the measurement of the social impacts, the more resources it will require to be utilised, in terms of time, money, and workforce.

The models that fall into this cluster can apply one or many of the approaches described to measure social impact. Underneath, two examples of methodologies that fulfil the function represented by this cluster are presented.

5.5.1. Example: Impact Multiple of Money

The Rise Fund, an impact-investing fund for growth-stage companies, and the Bridgespan Group, a global social impact advisory firm, have developed the Impact Multiple of Money (IMM): a methodology able to estimate the financial value of the social and environmental good that is likely to result from each dollar invested; by using the IMM, impact investors can evaluate the projected return on an opportunity. The developers created the IMM in order to demonstrate the value of putting impact underwriting on the same level as financial underwriting, which will expectantly result in an increased flow of private capital towards solving the pressing social issues of our time. More specifically, the IMM enables direct comparisons between investment opportunities, helping the investor to choose where to allocate the resources. However, the IMM is not a perfectly precise number; it can be considered instead as a directional measure, that, supported by a sensitivity analysis to show what happens to the IMM if the underlying assumptions are changed, will help identify the key drivers of social value. The IMM methodology consists in six steps (Addy et al., 2019):

- 1. Assess the relevance and scale:** investors should consider the relevance and scale of a product/service/project for evaluation. Answering, on one hand, how many people the product or service will reach, and how its impact will be; and on the other hand, how much of an improvement in the life of the beneficiaries will be made.
- 2. Identify target social or environmental outcomes:** investors should identify the desired social and environmental outcomes to achieve and determine whether

existing research (typically in the social science field) verifies that they are achievable and measurable to estimate a company's impact potential.

- 3. Estimate the economic value of those outcomes to society:** once they have identified the target outcomes, investors should search an “anchor study” that robustly translates those outcomes into monetary terms. To choose the right anchor study, investors should look at several key features: its rigor, to determine if the study systematically evaluates previous research results to derive conclusions about that body of research; and its relevance, to assess if the study includes people living in similar contexts and in the same income bracket. Experts' consultation is an option in case the uncertainty of the studies found is too high.
- 4. Adjust for risks:** investors should adjust the social values derived from applying the anchor study to reflect the quality and relevance of the research. This is done with the calculation of the “realisation index”: values are assigned to six risk categories and then are summed to arrive at an impact-probability score, measured on a 100-point scale.
- 5. Estimate terminal value:** in some cases, social impacts outlive the project for long after it has ended, thus investors should estimate their terminal value. Starting from the value of impact in the final year of the investment, investors should assess the probability that both output (people reached) and social value will continue undiminished for five more years. A 5% discount rate is applied to companies with a high probability on both output and social value, while a 25% discount is applied to those with lower scores.
- 6. Calculate social return on every dollar spent:** in the final step, investors firstly should take the estimated value of the social or environmental benefit and divide it by the total investment, then they should account for their partial ownership of companies they are invested in. In the case it is a business (and not an investor) that is performing the measurement, the second step can be omitted.

5.5.2. Example: NPC's Four Pillar Approach

New Philanthropy Capital (NPC), a think tank and consultancy in the social sector, developed the Four Pillar Approach methodology, a process to build an effective measurement framework that aims to provide results that can be used to understand and improve charities' (or any social sector organisation) services, as well as report on their progress. The model goes

through four steps that start from the identification of the changes an organisation wants to make, to the ways in which it can collect data to measure those changes (Kazimirski & Pritchard, 2014):

- 1. Map the theory of change:** the organisation should develop a theory of change (ToC) to provide clarity and reveal the causal links between its activities and what impacts it is trying to achieve. The ToC should be built “backwards”, starting from the long-term goals of the organisation, and linking them to the intermediate outcomes, the outputs, the activities, and finally the necessary inputs. Building a ToC helps to understand which are the most important impacts for the organisation and therefore serve as a basis to identify the right things to measure.
- 2. Prioritise what to measure:** once the ToC is in place, the organisation should select the most important impacts that it wants to actually measure. To do so, it is firstly needed to prove the causal links in the ToC, that can be done by looking into research that backs up how the changes the organisation wants to achieve can happen through the activities it performs. Then, the organisation should identify the relevant impacts based on if they are in the concrete influenced it, if they are material to the mission, if they do not require excessive amounts of funds, and if credible data about them can be produced.
- 3. Choose the level of evidence:** the organisation should choose the desired level of rigour for evidence of the impacts that best suits the needs of its stakeholders. Different approaches can be applied to gather evidence of impact, depending on the information needs of the stakeholders some will require stronger proof, for others instead a lower level might be enough. Methods mainly consist in: statistical approaches (e.g. correlation, regression analysis, etc.); experimental approaches (e.g. counterfactual analysis); case-based approaches, that compare cases within an intervention; and theory-based approaches, which describe in detail how a service or programme influences different people at different times and places using observations by staff, evaluators, and other stakeholders, as well as what beneficiaries say.
- 4. Select the sources and tools:** finally, the organisation should decide what data is needed and select or develop measurement tools or data sources to capture it. The impacts prioritised and the level of evidence to be achieved determine the type of data

to be collected and how the organisation should do it, and three questions can guide it to do so: who does the organisation need to collect the data from? What type of data (i.e. quantitative or qualitative) should be collected? When should the data be collected? To retrieve the data, the organisation can utilise already existing tools for data collection, develop a personalised new one, or opt for a mixed solution by customising already existing tools by filling eventual gaps to best fit them for their needs.

6. Discussion

6.1. Population of the clusters

After assigning the social impact measurement models into the clusters, it is possible to analyse how populated they are, that means to identify how many methodologies reside in each cluster. It becomes therefore more clear which functions, represented by the clusters, are overall more satisfied and which ones are more neglected. First of all, as it is displayed in Table 12, only 20 out of the 78 models (25,6%) are located in only one single cluster (3 in the “proof of sustainability” cluster, 15 in the “impact management”, and only 2 in the “measurement of the final impact” one); in fact, some can fulfil two, or even all three of the strategic functions. These latter, moreover, count for a consistent slice (21 models, 26,9%) of the totality of the methodologies, suggesting that a considerable number of tools have been developed that can serve companies in pursuing and shaping their strategy in a variety of ways. Instead, 25 methodologies (32,1% of the total) belong both to the “proof of sustainability” and the “impact management” clusters; whereas 12 (15,4%) serve both the functions of “impact management” and “measurement of the final impact”. None of the analysed methodologies fulfil simultaneously both the “proof of sustainability” and the “measurement of the final impact” functions, without also satisfying the “impact management” one.

	Proof of sustainability to external stakeholders	Impact management and decision-making support	Measurement of the final impact on beneficiaries and society at large
# of models in each cluster or group of clusters	3		
		15	
			2
	25		
		12	
	21		
Total # of models satisfying the function of the cluster	49	73	35
# of models that satisfy at most the function of the cluster	3	40	35

Table 12: Population of the clusters

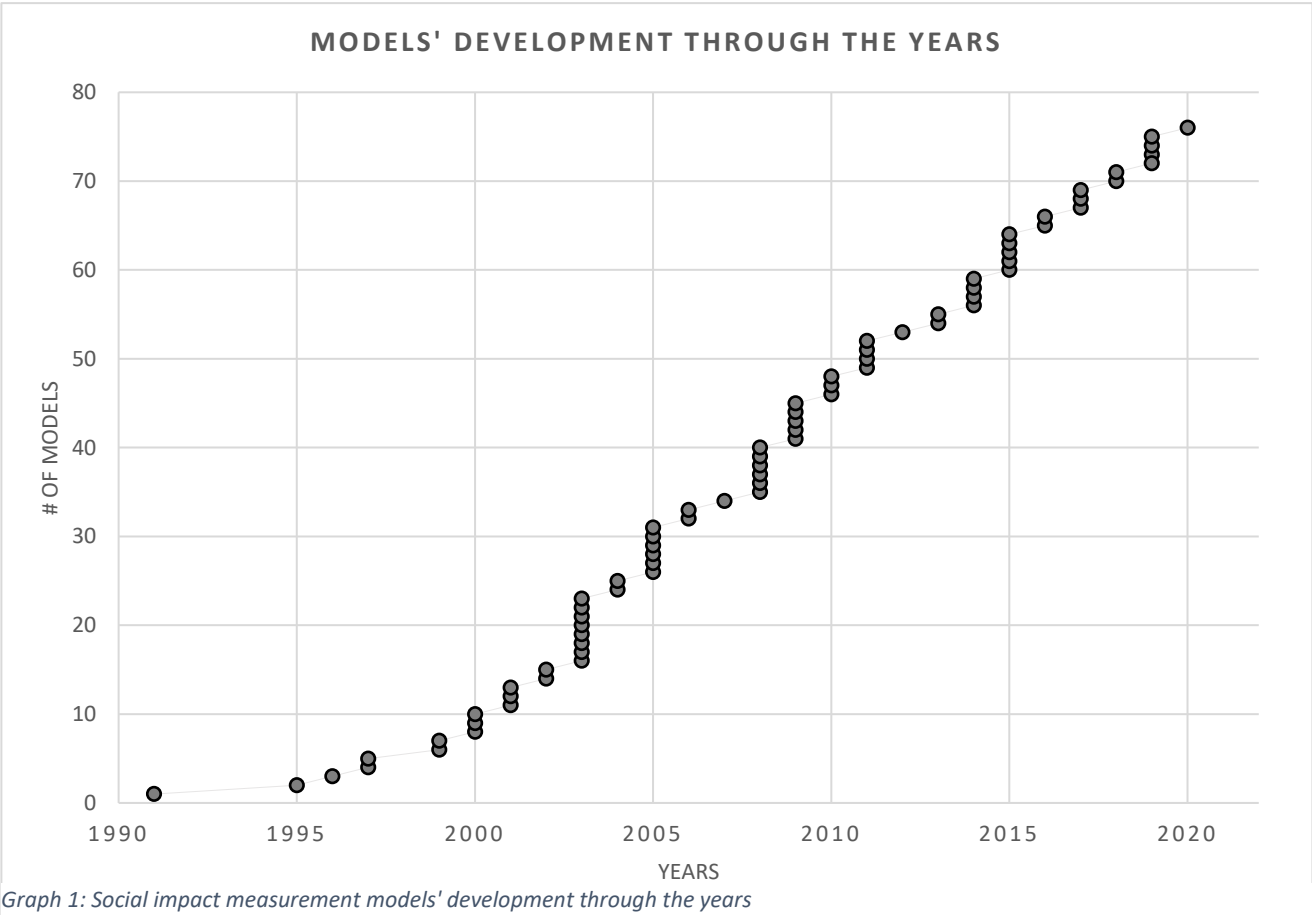
By summing the numbers in the columns of the table, it is possible to obtain the total number of models that are located in each cluster, thus identifying how many models can serve each function. 93,6% of the methodologies (73 out of 78) can satisfy in some measure the “impact management” strategic function, hence the great majority of the models can be utilised by companies as a support to decision-making in the management of the social impact they produce. 62,9% of the methodologies (49 out of 78) can accomplish the function of demonstrating the sustainability of the companies to their external stakeholders, while the last cluster of “measurement of the final impact” is the least populated. In fact, only 44,9% of the models (35 out of 78) are able to actually measure the long-term impact of the companies’ activities on the beneficiaries and society at large.

Lastly, if we consider the “level of advancement” of a measurement methodology, it can be stated that the models only satisfying the function of “proof of sustainability” are at the base level, since they cannot actually help companies to measure and/or manage their outcomes and impacts but can only be utilised to disclose information about them to the external stakeholders. Next, a bit more advanced are the methodologies that arrive to serve the function of “impact management” thanks to their utility of keeping track of the social performance of a company and use the gathered information to continuously improve said performance. Finally, the models that arrive to fulfil the function of “measurement of the final impact” are the only ones that allow companies to really measure their long-term effects on society and provide them with reliable and solid data on how their actions affect the different stakeholders. The models belonging to the first level are just 3 and satisfy only the function of “proof of sustainability”; instead, the ones that arrive to the second level are 40 and comprise methodologies serving simultaneously the functions of “proof of sustainability” and “impact management” or just the latter one. Ultimately, the approaches that attain the most advanced level are all the remaining ones, i.e. the models satisfying just the “measurement of the final impact” function, the ones satisfying simultaneously the “impact management” and “measurement of the final impact” function, and the approaches that are able to fulfil all the three functions. These latter are the most comprehensive ones, since they provide the user entities with the largest variety of strategic functions concerning their social impact, thus making them able to disclose it, to manage it, and to measure it.

6.2. Analysis of the models' development through time

In addition to the analysis of the population of the clusters, I also performed an examination of the development of measurement methodologies through time. Therefore, I first of all researched the year of development of the models, which consisted in the date of either the original creation or of the last major update of the methodology, that resulted in significant changes in the way it functions or in its purpose. However, two of the models were left out from the analysis, the Cost-benefit analysis (CBA) and the Multi-criteria analysis (MCA), because of the difficulty to trace back their original development to a precise year, since these are two approaches that have been existing and continuously developing for many decades now, utilised in a wide variety of fields. The year of development for each measurement approach considered is provided in Annex 1.

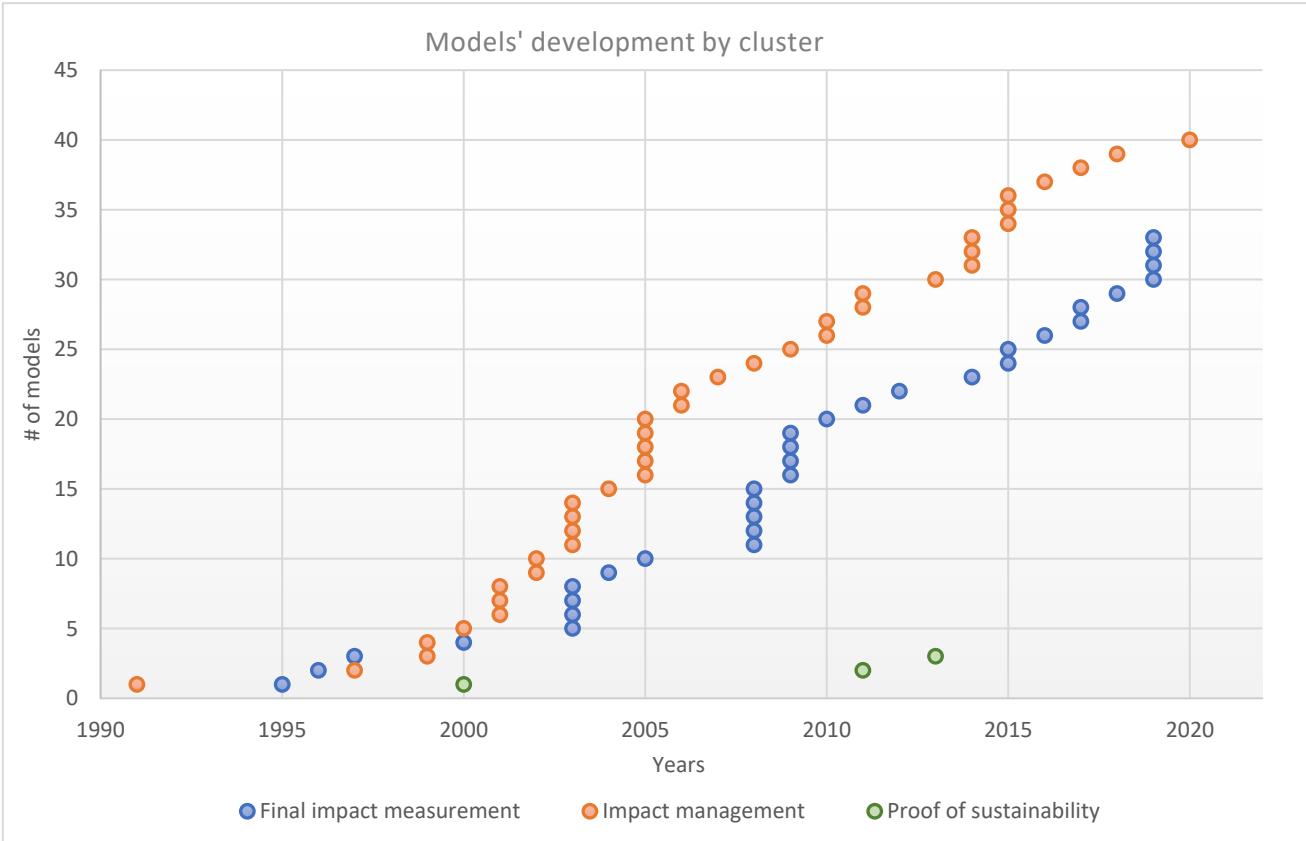
Initially I plotted the methodologies' development along the years without making any distinction in terms of which clusters they are part of or who the developers of the models are, in order to obtain a general view on how the proliferation of social impact measurement approaches evolved during the past decades (Graph 1).



Graph 1: Social impact measurement models' development through the years

It is clear from the graph how the creation of social impact measurement methodologies has been consistently growing in the past decades. In fact, after a first slow-growth initial period that goes from 1991 to 1999, from year 2000 onwards the development of new approaches proliferated at steadily high rate, with an average of 3,4 new models created every year from 2000 to 2020. In particular, the decade going from 2001 to 2010 experienced a huge flourishing, with 38 methodologies (48,7% of the total number of approaches) being developed over those years.

In order to get more meaningful insights, I then plotted the models’ development over the years by also taking into account the clusters to which the different methodologies belong. To assign the measurement approaches to the cluster they belong to, I considered the last row of Table 12, therefore assigning the models based on their “level of advancement”, but also concurrently excluding the CBA and MCA methodologies from the count for the reasons elucidated earlier; hence, a measurement methodology will be allocated to the most advanced strategic function (i.e. cluster) it can satisfy. The result is shown in Graph2.

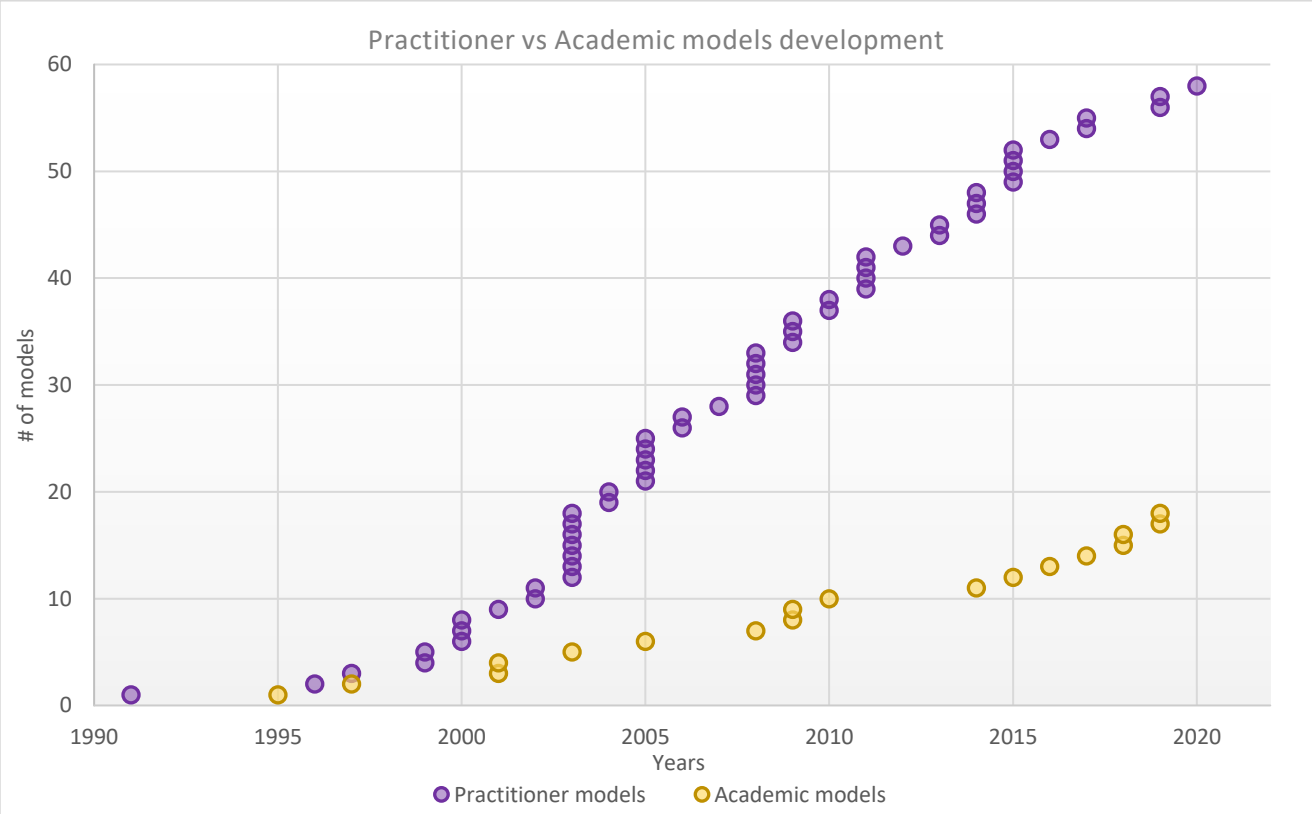


Graph 2: Social impact measurement models' development through the years distinguished by cluster

There are displayed only three models belonging to the “proof of sustainability” cluster because of the logic adopted for the assignment of the models to the clusters explained

previously. Nevertheless, the other two clusters have been rapidly growing along the years, with 40 developed approaches belonging to the “impact management” cluster, and 33 to the “measurement of the final impact” one. Despite the overall higher numerosity of methodologies serving the “impact management” function, the cluster of “measurement of the final impact” has seen a strong growth recently; specifically, the models that are part of this cluster developed from 2015 to 2020 account for the 58,8% of the total number of models created in these years (10 out of 17). Furthermore, 6 of these 10 models can also fulfil the other two strategic functions. This suggests an increasing interest in the development of social impact measurement methodologies that are more complete from the point of view of the functions they can satisfy, thus being actually able to measure the final impact of companies’ activities on the society, along with managing to fulfil the other functions of “proof of sustainability” and “impact management”.

In order to gain an additional perspective on the development of the models over time, I also plotted their creation distinguishing by the type of developer, which could be of academic nature (i.e. universities) or a practitioner one, like consultancy companies, non-profit organisations, national and international associations and organisations, investment funds, and so on (Graph 3).



Graph 3: Social impact measurement models' development through the years distinguished by developer

As anticipated in Chapter 5.2, scientific research has been lagging behind, in respect to the practitioners' field, in terms of development of social impact measurement methodologies. In fact, the Graph 3 shows how the number of models developed by practitioners is greatly superior to the number of models developed by scholars; specifically, the former are 58, while the latter are 18, only 23,7% of the total. Nevertheless, the approaches of academic origins had a considerable boost during the last years, with 8 of them (the 44,4% of the total) being developed from 2014 to 2019.

Furthermore, by combining the information about the developer type and the cluster of belonging of the methodologies, it can be seen that, in total, 43,1% of the models developed by practitioners fall into the "measuring the final impact" cluster. However, if only the ones created from 2015 onwards are taken into consideration, the percentage of approaches in that cluster rises to 70%, 7 out of a total of 10; and of these 7 models, 5 can also be utilised to perform the other two functions of "impact management" and "proof of sustainability".

7. Conclusion

7.1. Implications

This thesis adds to the numerous attempts, made by scholars and practitioners, to give an order and classify the myriad of social impact measurement approaches that have been flourishing over the past decades and have been organised by using several different variables, that reflect the different characteristics of the methodologies. In particular, the unfolding of this work has brought to a novel classification of social impact measurement models based on the strategic functions they manage to serve, identified by the three clusters named: “proof of sustainability to external stakeholders”, “impact management and decision-making support”, and “measurement of the final impact on beneficiaries and society at large”.

The results of this work both contribute to the still developing, but rapidly growing, scientific literature about social impact measurement, and also benefit the practitioners’ field by offering criteria based on which an organisation could select the best fitting measurement approach for its strategic needs. More specifically, the analyses conducted on the population of the clusters and the relative trends over the past years provide both academics and practitioners with valuable insights about nowadays’ social impact measurement landscape and even for future diffusion of new more comprehensive measurement models.

The gathered information clearly shows how the development of measurement approaches in the past thirty years has been constantly proliferating. It is also indicated that great part of the models was created during the decade between 2001 and 2010; this flourishing might have been stimulated by the introduction of the Millennium Development Goals, one of the first international efforts to tackle important social issues in the world, that required nations and organisation around the globe to start keeping track of the progresses made in the various objectives of the plan.

Furthermore, the analysis of the results illustrates that among the strategic functions the social impact measurement methodologies can fulfil, the “measurement of the final impact” one is the least satisfied; hence the most part of the models cannot actually evaluate correctly and in detail the long-term outcomes an organisation has on its direct beneficiaries and the wider society. It would be therefore useful and probably even necessary in the future to develop more approaches that could serve this function, so as to provide organisations and

their stakeholders with valuable and reliable information about their final social impact. The research, in fact, also exhibits that in recent years there have been several notable trends in terms of the diffusion of the models: most of the methodologies developed after the 2015 are indeed able to satisfy the advanced function of “measurement of the final impact”, especially among the ones generated by practitioners. Additionally, while the academic field has always been lagging behind in the development of social impact measurement models compared to the practitioners, in the last few years (specifically from 2014 onwards) there has been a considerable increase in the number of approaches designed by scholars. Moreover, in recent times the focus on the creation of more comprehensive models seems to have incremented, since most of the approaches developed from 2015 to 2020 can fulfil all three of the strategic functions identified in this thesis.

All these elements suggest an increase in the level of complexity of the new social impact measurement models being designed nowadays and that will most likely diffuse in the next years. The complexity is reflected both in the level of advancement of the methodologies, which become progressively more able to measure the real final impact of projects and interventions on beneficiaries and society, and in the completeness from the point of view of functions that they can serve, thus being used by organisation to satisfy a wide variety of purposes. The recent proliferating of complex models could be derived, at least partially, from the institution of the United Nations Agenda 2030 and the 17 Sustainable Development Goals within it, which were established in 2015 as the successors of the Millennium Development Goals and require nations and organisations worldwide to monitor their progress towards the achievement of the goals; thus the diffusion of complex measurement models can help in bringing tangible positive change for society and the planet.

7.2. Limitations and future research

The main limitation of this work relies in the selection of the measurement approaches to be analysed and categorised. Specifically, the methodologies that did not have enough publicly available information were excluded. Therefore, by potentially including also proprietary models into the categorisation, the results of the research might change, or at least give them more numerical significance. Nevertheless, even without considering them, the number of models utilised is still high, in line with previous researches of different scholars that performed a classification of the methodologies, and even higher (Clark et al., 2004; Dufour,

2015; Grieco et al., 2015; Kah & Akenroye, 2020; Maas & Liket, 2011; Olsen & Galimidi, 2008; Perrini et al., 2020; Rinaldo, 2010).

For future research it would be interesting to perform again the process illustrated in this thesis after some years have passed and new social impact measurement methodologies have been developed, in order to compare and analyse the population of the clusters, the functions that the new models can satisfy, and to verify if the trend of increasing comprehensiveness of the methodologies will continue or not. Furthermore, it would be useful to conduct interviews with organisations that perform the measurement and management of their social impact, in order to verify which are the models that are most frequently chosen and consequently the most performed functions; this would give an “on-field” perspective to the research and possibly increase its relevancy.

8. Bibliography

AccountAbility. (2018). *AA1000 - Accountability Principles 2018*.

Acumen Fund Metrics Team. (2007). *Acumen Fund Concepts: The Best Available Charitable Option* (Issue January, pp. 1–5). www.technoserve.org.

Adams, T., Gawande, R., & Overdyke, S. (2017). *Innovations in Impact Measurement*. <https://acumen.org/wp-content/uploads/2017/09/Innovations-in-Impact-Measurement-Report.pdf>

Addy, C., Chorenge, M., Collins, M., & Etzel, M. (2019). Calculating the value of impact investing. In *Harvard Business Review* (Vol. 2019, Issue January-February). <https://hbr.org/2019/01/calculating-the-value-of-impact-investing>

Aledo-Tur, A., & Domínguez-Gómez, J. A. (2017). Social Impact Assessment (SIA) from a multidimensional paradigmatic perspective: Challenges and opportunities. *Journal of Environmental Management*, 195, 56–61. <https://doi.org/10.1016/j.jenvman.2016.10.060>

Anglo American Services UK. (2014). *SEAT Toolbox - Socio-Economic Assessment Toolbox Version 3 - An Overview*. <https://www.angloamerican.com/~media/Files/A/Anglo-American-PLC-V2/documents/communities/seat-v3-jan-15-2.pdf>

Antonaras, A., Iacovidou, M., & Memtsa, C. (2010). Measuring social return on investment using the EBEN GR Business Ethics Excellence Model. *Verslo Ir Teisės Aktualijos*, 6(1), 69–89. <https://doi.org/10.5200/1822-9530.2011.04>

Arena, M., Azzone, G., & Bengo, I. (2015). Performance Measurement for Social Enterprises. *Voluntas*, 26(2), 649–672. <https://doi.org/10.1007/s11266-013-9436-8>

AtKisson, A., & Hatcher, R. L. (2005). The Compass Index of Sustainability : A Five-Year Review. *Journal of Environmental Assessment Policy and Management*, 3(4), 509–532.

AtKisson inc. (n.d.). *Compass Lite - A Tool for Introducing People to Sustainability*.

B Lab. (n.d.). *Introduction to the Standards: The B Impact Assessment*.

Bassi, A., & Vincenti, G. (2015). Toward a New Metrics for the Evaluation of the Social Added Value of Social Enterprises. *Ciriec-España. Revista de Economía Pública, Social y*

Cooperativa, 83, 9–42. <https://doi.org/10.7203/CIRIEC-E.83.13417>

Bath Social & Development Research. (2020). *Qualitative Impact Assessment Protocol*. October.

Bengo, I., Arena, M., Azzone, G., & Calderini, M. (2016). Indicators and metrics for social business: a review of current approaches. In *Journal of Social Entrepreneurship* (Vol. 7, Issue 1, pp. 1–24). Routledge. <https://doi.org/10.1080/19420676.2015.1049286>

Bengo, I., Chiodo, V., & Tosi, V. (2020). Measuring a Blended Performance: Managerial Insights from the Field of Impact Entrepreneurship. In *Entrepreneurship [Working Title]*. IntechOpen. <https://doi.org/10.5772/intechopen.94441>

Bhatt, A. (2018). Why worry about your impact? Rationale, challenges and support for Indian social enterprises' impact measurement. In *Social Entrepreneurship and Sustainable Business Models: The Case of India* (pp. 99–116). Springer International Publishing. https://doi.org/10.1007/978-3-319-74488-9_4

Bonilla-Alicea, R. J., & Fu, K. (2019). *Systematic Map of the Social Impact Assessment Field*. <https://doi.org/10.3390/su11154106>

Brest, P., & Harvey, H. (2008). *Making Every Dollar Count: How expected return can transform philanthropy*. http://www.hewlett.org/wp-content/uploads/2016/08/Making_Every_Dollar_Count.pdf

Burdge, R. J., Chamley, S., Downs, M., Finsterbusch, K., Freudenburg, B., Fricke, P., Gramling, B., Smith, M., Kragh, B. C., Stoffle, R., Thompson, J. G., & Williams, G. (2003). Principles and guidelines for social impact assessment in the USA. *Impact Assessment and Project Appraisal*, 21(3), 231–250. <https://doi.org/10.3152/147154603781766293>

Burdge, R. J., & Vanclay, F. (1996). Social impact assessment: A contribution to the state of the art series. *Impact Assessment*, 14(1), 59–86. <https://doi.org/10.1080/07349165.1996.9725886>

Calderini, M., Chiodo, V., & Michelucci, F. V. (2018). The social impact investment race: toward an interpretative framework. *European Business Review*, 30(1), 66–81. <https://doi.org/10.1108/EBR-10-2016-0134>

- Calvo-Mora, A., Domínguez-CC, M., & Criado, F. (2018). Assessment and improvement of organisational social impact through the EFQM Excellence Model. *Total Quality Management and Business Excellence*, 29(11–12), 1259–1278. <https://doi.org/10.1080/14783363.2016.1253465>
- Camoletto, M., Ferri, G., Pedercini, C., Ingaramo, L., & Sabatino, S. (2017). Social Housing and measurement of social impacts: steps towards a common toolkit. *Valori e Valutazioni*, 19. www.cdpisgr.it
- Center for Sustainable Organizations. (2011). *The Social Footprint - Introduction and Proof of Concept*.
- Centre for High Impact Philanthropy. (2008). *How we calculated cost per impact in education*. www.impact.upenn.edu
- CERISE. (2017). *SPI4 Audit Guide* (Issue November).
- Chen, S., & Harrison, R. (2020). Beyond profit vs. purpose: Transactional-relational practices in impact investing. *Journal of Business Venturing Insights*, 14, e00182. <https://doi.org/10.1016/j.jbvi.2020.e00182>
- Choda, A., & Teladia, M. (2018). Conversations about measurement and evaluation in impact investing. *African Evaluation Journal*. <https://doi.org/10.4102/aej>
- Clark, C., Long, D., Rosenzweig, W., & Olsen, S. (2004). Double bottom line project report: assessing social impact in double bottom line ventures. *Business*, 1–70. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:double+bottom+line+project+report:+assessing+social+impact+in+double+bottom+line+ventures#0>
- Committee On Sustainability Assessment. (n.d.). *COSA Methods - Concise introduction to the methodological principles*. Retrieved May 23, 2021, from www.thecosa.org
- Costa, E., & Pesci, C. (2016). Social impact measurement: why do stakeholders matter? *Sustainability Accounting, Management and Policy Journal*, 7(1), 99–124. <https://doi.org/10.1108/SAMPJ-12-2014-0092>
- Cradle to Cradle Products Innovation Institute. (2021). *Cradle to Cradle Certified® Version 4.0: Product Standard*. www.c2ccertified.org

- Cugelman, B., & Otero, E. (2010). Basic Efficiency Resource: A framework for measuring the relative performance of multi-unit programs. *Leitmotiv and AlterSpark, September*, 1–14. papers2://publication/uuid/6DDFEC22-043F-498A-ABF8-6D675418EBA6
- Development Trust Association. (2017). *Fit for purpose: the Development Trusts Association healthcheck for community enterprise organisations*.
- Devita, M. C. (2005). *How are we doing? One foundation's efforts to gauge its effectiveness*.
- Dhaliwal, I., Duflo, E., Glennerster, R., & Tulloch, C. (2012). Comparative Cost-Effectiveness Analysis to Inform Policy in Developing Countries: A General Framework with Applications for Education. *J-Pal*, 69.
- Dichter, B. S., Adams, T., Ebrahim, A., Dichter, B. S., Adams, T., & Ebrahim, A. (2016). The Power of Lean Data. *Stanford Social Innovation Review, Winter*, 36–41. http://ssir.org/articles/entry/the_power_of_lean_data
- Dufour, B. (2015). State of the art in social impact measurement: methods for work integration social enterprises measuring their impact in a public context. *Emes*, 1–24.
- Duman, G. M., Taskaynatan, M., Kongar, E., & Rosentrater, K. A. (2018). Integrating Environmental and Social Sustainability Into Performance Evaluation: A Balanced Scorecard-Based Grey-DANP Approach for the Food Industry. *Frontiers in Nutrition*, 5, 65. <https://doi.org/10.3389/fnut.2018.00065>
- Ebrahim, A., & Rangan, V. K. (2014). What impact? A framework for measuring the scale and scope of social performance. *California Management Review*, 56(3), 118–141. <https://doi.org/10.1525/cmr.2014.56.3.118>
- Emerson, J. (2003). The blended value proposition: Integrating social and financial returns. In *California Management Review* (Vol. 45, Issue 4). <https://doi.org/10.2307/41166187>
- Emerson, J., Wachowicz, J., & Chun, S. (1998). Social Return on Investment: Exploring Aspects of Value Creation in the Nonprofit Sector. In *Farber Intern SROI Analyst Farber Fellow*. <https://redf.org/wp-content/uploads/REDF-Box-Set-Vol.-2-SROI-Paper-2000.pdf>
- Engel, H. W. (2001). *Ecomapping* (Issue November).
- Estrada, R., Sousa, S., & Lopes, I. (2018). Performance assessment system development based

- on performance prism in social services. *IEEE International Conference on Industrial Engineering and Engineering Management, 2017-Decem*, 855–859. <https://doi.org/10.1109/IEEM.2017.8290013>
- European Commission. (2017). TOOL #63. Multi-Criteria Analysis. In *Better regulation toolbox*. https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox/better-regulation-toolbox_en
- Fici, A. (2017). *A European Statute for Social and Solidarity-Based Enterprise*.
- Fontes, J., Tarne, P., Traverso, M., & Bernstein, P. (2018). Product social impact assessment. In *International Journal of Life Cycle Assessment* (Vol. 23, Issue 3, pp. 547–555). Springer Verlag. <https://doi.org/10.1007/s11367-016-1125-6>
- Freudenburg, W. R. (1986). Social Impact Assessment. *Annual Review of Sociology*, 12(1), 451–478. <https://doi.org/10.1146/annurev.so.12.080186.002315>
- Gentile, M. C. (2002). *Social Impact Management: a Definition*. <https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/bsp/SOCIALIMPACTMANAGEMENT.PDF>
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, 16(1), 15–31. <https://doi.org/10.1177/1094428112452151>
- Global Impact Investing Network. (2020). *The State of Impact Measurement and Management Practice: second edition*. [https://thegiin.org/assets/GIIN_State of Impact Measurement and Management Practice_Second Edition.pdf](https://thegiin.org/assets/GIIN_State%20of%20Impact%20Measurement%20and%20Management%20Practice_Second%20Edition.pdf)
- Global Reporting Initiative. (2016). *Consolidated Set of GRI Sustainability Reporting Standards 2020*.
- Global Reporting Initiative, United Nations Global Compact, & WBCSD. (2016). *The guide for business action on the SDGs*. www.sdgcompass.org
- Graham, S., & Tevosyan, A. (2015). *From Intentions to Outcomes: Indicators and Tools for Managing Social Performance*. www.FINCA.org/inclusion

- Grameen Foundation. (2008). *Progress out of Poverty Index: PPI Pilot Training* (Issue March). www.progressoutofpoverty.org.
- Gray, R. (2000). Current Developments and Trends in Social and Environmental Auditing, Reporting and Attestation: A Review and Comment. *International Journal of Auditing*, 4(3), 247–268. <https://doi.org/10.1111/1099-1123.00316>
- Grieco, C., Michelini, L., & Iasevoli, G. (2015). Measuring Value Creation in Social Enterprises: A Cluster Analysis of Social Impact Assessment Models. *Nonprofit and Voluntary Sector Quarterly*, 44(6), 1173–1193. <https://doi.org/10.1177/0899764014555986>
- Hayes, A. C. (2017). What is impact assessment? Some personal reflections C. P. Wolf (1933–2015), edited posthumously by Adrian C. Hayes. *Impact Assessment and Project Appraisal*, 35(3), 186–199. <https://doi.org/10.1080/14615517.2017.1322812>
- Hervieux, C., & Voltan, A. (2019). Toward a systems approach to social impact assessment. *Social Enterprise Journal*, 15(2), 264–286. <https://doi.org/10.1108/SEJ-09-2018-0060>
- Hlady-Rispal, M., & Servantie, V. (2016). Deconstructing the Way in which Value Is Created in the Context of Social Entrepreneurship. *International Journal of Management Reviews*, 20(1), 62–80. <https://doi.org/10.1111/ijmr.12113>
- Hornsby, A. (2012). *The good analyst : impact measurement and analysis in the social-purpose universe*. Investing for Good. www.investingforgood.co.uk
- IFC. (2019). Investing for impact: Operating principles for impact management. In *International Finance Corporation*. www.ifc.org
- Innovation Network. (2012). *Logic Model Workbook*. www.innonet.org•info@innonet.org
- International Finance Corporation. (2018). *How IFC Measures the Development Impact of its Interventions*. https://www.ifc.org/wps/wcm/connect/ecf96a65-ed27-4c8f-803a-8e054932147b/201806_IFC-AIMM-Brochure.pdf?MOD=AJPERES
- International Integrated Reporting Council. (2021). *International <IR> Framework*. www.integratedreporting.org
- Investors In People. (2015). *Investors in People: The Standard*.
- ISO. (2010). ISO 26000 Guidance on social responsibility Discovering. In *iso.org* (pp. 1–19).

- Kah, S., & Akenroye, T. (2020). Evaluation of social impact measurement tools and techniques: a systematic review of the literature. In *Social Enterprise Journal*. <https://doi.org/10.1108/SEJ-05-2020-0027>
- Kato, S. (2021). Social performance measurement adoption in nascent social enterprises: Refining the institutional model. *Journal of Business Venturing Insights*, 15(March), e00244. <https://doi.org/10.1016/j.jbvi.2021.e00244>
- Kay, A. (2011). *Prove! Improve! Account! The New Guide to Social Accounting and Audit*. Social Audit Network. www.socialauditnetwork.org.uk.
- Kazimirski, A., & Pritchard, D. (2014). *Building Your Measurement Framework : NPC's Four Pillar Approach* (Issue June).
- Keystone Accountability. (2014). *Technical Note 1: Constituent Voice*. <http://feedbacklabs.org/voice-as-both-means-and-end/>
- Kocollari, U., & Lugli, E. (2020). Social Accounting at Work: An Analysis of Social Impact Measurement Models. *Journal of Modern Accounting and Auditing*, 16(1), 31–43. <https://doi.org/10.17265/1548-6583/2020.01.003>
- Kollmair, M. (2002). *The Sustainable Livelihoods Approach*. www.livelihoods.org
- Kročil, O., & Pospíšil, R. (2018). Comprehensive measurement of social enterprise impact. *Ekonomski Pregled*, 69(5), 594–610. <https://doi.org/10.32910/ep.69.5.6>
- Lall, S. (2017). Measuring to Improve Versus Measuring to Prove: Understanding the Adoption of Social Performance Measurement Practices in Nascent Social Enterprises. *Voluntas*, 28(6), 2633–2657. <https://doi.org/10.1007/s11266-017-9898-1>
- Latané, B. (1981). The psychology of social impact. *American Psychologist*, 36(4), 343–356. <https://doi.org/10.1037/0003-066X.36.4.343>
- Lombardo, G., Mazzocchetti, A., Rapallo, I., Tayser, N., & Cincotti, S. (2019). Assessment of the Economic and Social Impact Using SROI: An Application to Sport Companies. *Sustainability* 2019, Vol. 11, Page 3612, 11(13), 3612. <https://doi.org/10.3390/SU11133612>
- London, T. (2009). Making better investments at the base of the pyramid. *Harvard Business*

- Review*, 87(5). <https://hbr.org/2009/05/making-better-investments-at-the-base-of-the-pyramid>
- Lunn, M. (2010). *The Compass Assessment A strategic evaluation of sustainability performance for companies and their investors*.
- Maas, K., & Grieco, C. (2017). Distinguishing game changers from boastful charlatans: Which social enterprises measure their impact? *Journal of Social Entrepreneurship*, 8(1), 110–128. <https://doi.org/10.1080/19420676.2017.1304435>
- Maas, K., & Liket, K. (2011). *Social Impact Measurement: Classification of Methods*. https://doi.org/10.1007/978-94-007-1390-1_8
- Mamabolo, A., & Myres, K. (2020). Performance Measurement in Emerging Market Social Enterprises using a Balanced Scorecard. *Journal of Social Entrepreneurship*, 11(1), 65–87. <https://doi.org/10.1080/19420676.2018.1561499>
- Mancini, L., & Sala, S. (2018). Social impact assessment in the mining sector: Review and comparison of indicators frameworks. *Resources Policy*, 57, 98–111. <https://doi.org/10.1016/j.resourpol.2018.02.002>
- Mathur, H. M. (2016). Social impact assessment: An approach to improving development outcomes. In *Advances in Asian Human-Environmental Research* (Issue 9783319191164, pp. 19–43). Springer International Publishing. https://doi.org/10.1007/978-3-319-19117-1_2
- McElroy, M. W. (2015). The Social Footprint Method. In *The Sustainability Practitioner's Guide to Social Analysis and Assessment* (pp. 1–10).
- McLoughlin, J., Kaminski, J., Sodagar, B., Khan, S., Harris, R., Arnaudo, G., & Mc Brearty, S. (2009). A strategic approach to social impact measurement of social enterprises. *Social Enterprise Journal*, 5(2), 154–178. <https://doi.org/10.1108/17508610910981734>
- Migliavacca, A. (2016). Social impact measurement practices A meta-analysis. *International Journal Series in Multidisciplinary Research*, 2(3), 1–17. <https://iris.unito.it/handle/2318/1564922?mode=full.1224>
- Mohaddes Khorassani, S., Ferrari, A. M., Pini, M., Settembre Blundo, D., García Muiña, F. E., &

- García, J. F. (2019). Environmental and social impact assessment of cultural heritage restoration and its application to the Uncastillo Fortress. *International Journal of Life Cycle Assessment*, 24(7), 1297–1318. <https://doi.org/10.1007/s11367-018-1493-1>
- Mook, L., & Quarter, J. (2006). Accounting for the social economy: The socioeconomic impact statement. *Annals of Public and Cooperative Economics*, 77(2), 247–269. <https://doi.org/10.1111/j.1370-4788.2006.00305.x>
- Moore, M. H. (2005). The Public Value Scorecard: A Rejoinder and an Alternative to “Strategic Performance Measurement and Management in Non-Profit Organizations” by Robert Kaplan. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.402880>
- NEF consulting. (2009). *Prove it! Toolkit Background*. <http://www.neweconomics.org/gen/uploads/nrir51m3fwdtanbj2mehub4516012006142151.pdf>
- New Economics Foundation. (2009). *Tools for you: approaches to proving and improving charities, voluntary organisations and social enterprise*. https://neweconomics.org/uploads/files/ee604b9c7787bf1b80_aym6ivqnu.pdf
- Nicholls, A. (2009). “We do good things, don’t we?”: “Blended Value Accounting” in social entrepreneurship. *Accounting, Organizations and Society*, 34(6–7), 755–769. <https://doi.org/10.1016/j.aos.2009.04.008>
- Nicholls, A. (2021). *Impact Measurement and Management in Sustainable Finance*.
- O’Connor, D., Mackie, J., Van Esveld, D., Kim, H., Scholz, I., & Weitz, N. (2016). *Universality, Integration, and Policy Coherence for Sustainable Development: Early SDG Implementation in Selected OECD Countries*. http://www.wri.org/publication/universality_
- Olsen, S., & Galimidi, B. (2008). Catalog of Approaches To Impact Measurement: Assessing social impact in private ventures. In *The Rockefeller Foundation* (Issue May). <https://measureresults.issuelab.org/resource/catalog-of-approaches-to-impact-measurement-assessing-social-impact-in-private-ventures.html>
- Orenstein, M. R., Westwood, E., & Dowse, S. (2019). Effect characterization in social impact assessment: a scan of current practice. *Impact Assessment and Project Appraisal*, 37(1),

- 48–56. <https://doi.org/10.1080/14615517.2018.1522839>
- Ormiston, J., & Seymour, R. (2011). Understanding Value Creation in Social Entrepreneurship: The Importance of Aligning Mission, Strategy and Impact Measurement. *Journal of Social Entrepreneurship*, 2(2), 125–150. <https://doi.org/10.1080/19420676.2011.606331>
- Pacific Community Ventures. (2004). *Executive Summary of a Comprehensive Assessment - Sustaining Strong Social Returns*.
- Parsons, R. (2020). Forces for change in social impact assessment. *Impact Assessment and Project Appraisal*, 38(4), 278–286. <https://doi.org/10.1080/14615517.2019.1692585>
- Perrini, F., Costanzo, L. A., & Karatas-Ozkan, M. (2020). Measuring impact and creating change: a comparison of the main methods for social enterprises. *Corporate Governance (Bingley)*. <https://doi.org/10.1108/CG-02-2020-0062>
- Rawhouser, H., Cummings, M., & Newbert, S. L. (2019). Social Impact Measurement: Current Approaches and Future Directions for Social Entrepreneurship Research. *Entrepreneurship Theory and Practice*, 43(1), 82–115. <https://doi.org/10.1177/1042258717727718>
- Reisman, J., & Gienapp, A. (2004). *Theory of Change: A Practical Tool For Action, Results and Learning*. <https://www.aecf.org/m/resourcedoc/aecf-theoryofchange-2004.pdf>
- Renes, G., & Romijn, G. (2013). *General Guidance for Cost-Benefit Analysis Gerbert Romijn*.
- Rinaldo, H. (2010). *Getting started in social impact measurement: A guide to choosing how to measure social impact. September*.
- Sacks, J. (2002). The Money Trail: Measuring your impact on the local economy using LM3. In *New Economics Foundation and The Countryside Agency* (Issue June). http://b3cdn.net/nefoundation/7c0985cd522f66fb75_o0m6boezu.pdf
- Saldaña, J. (2009). An Introduction to Codes and Coding. In *The Coding Manual for Qualitative Researchers* (pp. 1–31). <https://doi.org/10.1002/9780470975220.ch1>
- Sawaengsak, W., Olsen, S. I., Hauschild, M. Z., & Gheewala, S. H. (2019). Development of a social impact assessment method and application to a case study of sugarcane, sugar, and ethanol in Thailand. *International Journal of Life Cycle Assessment*, 24(11), 2054–

2072. <https://doi.org/10.1007/s11367-019-01624-8>

Sawhill, J., & Williamson, D. (2001). Measuring what matters in nonprofits. *McKinsey Quarterly*, 2, 98–107.

SCVO. (n.d.). *Introducing The Big Picture - Helping voluntary groups and organisations to improve what they do*.

Serafeim, G., Zochowski, T. R., & Downing, J. (2019). *Impact-weighted financial accounts: the missing piece for an impact economy*.

Serrat, O. (2017). The Sustainable Livelihoods Approach. In *Knowledge Solutions* (pp. 21–26). Springer Singapore. https://doi.org/10.1007/978-981-10-0983-9_5

Shift. (2021a). *Indicator Design Tool: A people-centered approach to measuring the progress and effectiveness of human rights initiatives and programs*.

Sierra, J., Muriel-Patino, V., & Rodríguez-López, F. (2020). The quest for the evaluation of microfinance social performance. *Iberoamerican Journal of Development Studies*, 9(2), 55–108. https://doi.org/10.26754/ojs_ried/ijds.351

Somers, A. B. (2005). Shaping the balanced scorecard for use in UK social enterprises. *Social Enterprise Journal*, 1(1), 43–56. <https://doi.org/10.1108/17508610580000706>

Stevenson, P. D., Mattson, C. A., Bryden, K. M., & Maccarty, N. A. (2018). Toward a Universal Social Impact Metric for Engineered Products That Alleviate Poverty. *Journal of Mechanical Design, Transactions of the ASME*, 140(4). <https://doi.org/10.1115/1.4038925>

Stewart, B. (2020). Cost–benefit analysis. In *Sport Funding and Finance* (pp. 182–205). <https://doi.org/10.4324/9780080467023-23>

Stuart, J. (2016). *Assessing the impact of volunteers*.

Syed Azman, S. M. M., & Engku Ali, E. R. A. (2019). Islamic social finance and the imperative for social impact measurement. *Al-Shajarah*, 2019(Special Issue Islamic Banking and Finance 2019), 43–68.

The Acumen Fund. (2015). *The lean data field guide - Tips For Collecting Customer Data to Build More Impactful Businesses* (Issue November).

http://www.ssir.org/articles/entry/the_

The World Bank. (2003). *A User's Guide to Poverty and Social Impact Analysis*. www.worldbank.org/psia.

Thompson, T. A., Purdy, J. M., & Ventresca, M. J. (2018). How entrepreneurial ecosystems take form: Evidence from social impact initiatives in Seattle. *Strategic Entrepreneurship Journal*, 12(1), 96–116. <https://doi.org/10.1002/sej.1285>

Thomson, D. (2011). The role of funders in driving nonprofit performance measurement and use in strategic management. *Public Performance and Management Review*, 35(1), 54–78. <https://doi.org/10.2753/PMR1530-9576350103>

Traverso, M., Bell, L., Saling, P., & Fontes, J. (2018). Towards social life cycle assessment: a quantitative product social impact assessment. In *International Journal of Life Cycle Assessment* (Vol. 23, Issue 3, pp. 597–606). Springer Verlag. <https://doi.org/10.1007/s11367-016-1168-8>

Triangle. (2017). *What is the Outcomes Star? Introducing our evidence-based tools for supporting and measuring change*.

Tuan, M. T. (2008). *Profiles of Eight Integrated Cost Approaches To Measuring and / or Estimating Social Value Creation*.

UNDP, & SDG Impact. (2021). *SDG Impact Standards - Enterprises*.

UNEP, & United Nations Global Compact. (2020). *Principles for Responsible Investment*. <https://doi.org/10.4324/9781351278881-34>

Vanclay, F. (2003). International principles for social impact assessment. *Impact Assessment and Project Appraisal*, 21(1), 5–12. <https://doi.org/10.3152/147154603781766491>

Vardakoulias, O. (2013). *Where does multi-criteria analysis come from?* <http://www.cserge.ac.uk/sites/default/files/>

Venezia, E., & Pizzutilo, F. (2020). Evaluation tools for transport infrastructures: Social return on investments. *European Transport - Trasporti Europei*, 76(76). <https://ssrn.com/abstract=3614593>

WBCSD. (2008). Measuring Impact Framework Methodology. In *WBCSD Development* (Vol. 7,

Issue 11). www.wbcds.org/web/measuringimpact.htm

Wells, R. (2018). *Statistical Learning for Customized Easy Poverty Measurement*.

Widad, F., Lotfi, C., & Sefiani, N. (2017). A new performance measurement corporate social responsibility model for small and medium-sized industrial enterprises. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 1301–1311.

9. Sitography

B Analytics. (n.d.). *Company Ratings | B Analytics*. Retrieved September 13, 2021, from <https://b-analytics.net/content/company-ratings>

B Analytics. (2018). *GIIRS Fund Rating Methodology | B Analytics*. <https://b-analytics.net/content/giirs-fund-rating-methodology>

Better Evaluation. (n.d.). *Qualitative Impact Assessment Protocol (QUIP) | Better Evaluation*. Retrieved May 21, 2021, from <https://www.betterevaluation.org/en/plan/approach/QUIP>

CERISE. (n.d.). *Social Business Scorecard*. Retrieved May 17, 2021, from <https://cerise-spm.org/en/sbs/>

Cultivating Capital. (2021). *Completing the B Impact Assessment*. <https://www.cultivatingcapital.com/completing-b-impact-assessment/>

FINCA. (n.d.). *Survey Methodology - FINCA Results*. Retrieved May 26, 2021, from <https://results.finca.org/approach-social-performance/methodology/>

Global Impact Investing Network. (n.d.). *Welcome to Impact Toolkit | Discover fit-for-purpose impact measurement & management resources*. Retrieved June 18, 2021, from <https://impacttoolkit.thegiin.org/>

Government Outcomes Lab. (n.d.). *Impact Wayfinder [Prototype]*. Retrieved June 18, 2021, from <https://golab.bsg.ox.ac.uk/knowledge-bank/indigo/wayfinder-assessment-resources/>

Impact Management Project. (2020a). *How enterprises manage impact*. Impact Management Project. <https://impactmanagementproject.com/impact-management/how-enterprises-manage-impact/>

Impact Management Project. (2020b). *Impact Management Norms*. Impact Management Project. <https://impactmanagementproject.com/impact-management/impact-management-norms/>

NCVO. (n.d.). *NCVO - How PQASSO works*. Retrieved May 18, 2021, from <https://ncvosandbox.web3.clickingmad.com/practical-support/quality-and->

[standards/pgasso/how-pgasso-works](#)

NEF consulting. (n.d.). *DTA Fit for Purpose - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/fit-for-purpose/>

NEF consulting. (n.d.-b). *GRI Standards - NEF Consulting*. Retrieved May 5, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/gri-guidelines/>

NEF consulting. (n.d.-c). *Investors in People - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/investors-in-people/>

NEF consulting. (n.d.-d). *Local Multiplier 3 (LM3) - NEF Consulting*. Retrieved May 7, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/local-multiplier-3/>

NEF consulting. (n.d.-e). *Practical Quality Assurance System for Small Organisations (PQASSO) - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/pgasso/>

NEF consulting. (n.d.-f). *Prove It! - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/prove-it/>

NEF consulting. (n.d.-g). *SIMPLE - NEF Consulting*. Retrieved May 9, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/simple/>

NEF consulting. (n.d.-h). *Resources and Tools - NEF Consulting*. Retrieved June 21, 2021, from <https://www.nefconsulting.com/training-capacity-building/resources-and-tools/>

NEF consulting. (n.d.-i). *Social Accounting and Audit - NEF Consulting*. Retrieved May 4, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/social-accounting/#information>

NEF consulting. (n.d.-j). *Social Enterprise Balanced Scorecard - NEF Consulting*. Retrieved May

- 7, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/social-enterprise-balanced-scorecard/>
- NEF consulting. (n.d.-k). *The Big Picture - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/the-big-picture/>
- NEF consulting. (n.d.-l). *Third Sector Performance Dashboard - NEF Consulting*. Retrieved May 11, 2021, from <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/prove-and-improve-toolkits/third-sector-performance-dashboard/>
- NEF consulting. (n.d.-m). *Volunteering Impact Assessment Toolkit - NEF Consulting*. Retrieved May 18, 2021, from <https://www.nefconsulting.com/what-we-do/evaluation-impact-assessment/resources-and-tools/volunteering-impact-assessment/>
- PPI Alliance. (2009). *About the PPI*. PP International. <https://www.povertyindex.org/about-ppi>
- Razvi, N. (2017). *NCVO - PQASSO*. <https://ncvosandbox.web3.clickingmad.com/practical-support/quality-and-standards/pqasso>
- Shift. (2021b). *Why an Indicator Design Tool? - Shift*. <https://shiftproject.org/resource/indicator-design/why/>
- The World Bank. (2015). *Poverty and Social Impact Analysis (PSIA)*. <https://www.worldbank.org/en/topic/poverty/brief/poverty-and-social-impact-analysis-psia>
- Triangle. (2019a). *What is the Outcomes Star? - Triangle*. <https://www.outcomesstar.org.uk/about-the-star/what-is-the-outcomes-star/>
- Triangle. (2019b). *Why the Outcomes Star works - Triangle*. <https://www.outcomesstar.org.uk/about-the-star/what-is-the-outcomes-star/why-the-outcomes-star-works/>
- Willaert, T. (2015). *Understanding Accountability with AA1000 – an Interview with Claire Hart*. <https://dqs-cfs.com/2015/03/understanding-accountability-with-aa1000-an-interview-with-claire-hart/>

10. Annexes

10.1. Annex 1 – Year of creation of the models and documents used for the coding

Name of the model	Year of development	Sources for coding
AA1000 AS	2003	(AccountAbility, 2018; Willaert, 2015)
Anticipated Impact Measurement and Monitoring (AIMM)	2017	(International Finance Corporation, 2018)
B impact assessment	2011	(B Lab, n.d.; Cultivating Capital, 2021)
Balanced scorecard (modified)	2001	(Duman et al., 2018; Mamabolo & Myres, 2020)
Basic Efficiency Resource analysis (BER)	2010	(Cugelman & Otero, 2010)
Benefit-cost ratio	2005	(Tuan, 2008)
Best available charitable option (BACO)	2004	(Acumen Fund Metrics Team, 2007; Tuan, 2008)
BoP impact assessment framework	2009	(London, 2009)
Business ethic excellence model	2007	(Antonaras et al., 2010)
Compass Index of Sustainability	2000	(Atkisson & Hatcher, 2005; AtKisson inc., n.d.; Lunn, 2010)
Constituent Voice Methodology	2008	(Keystone Accountability, 2014)
COSA Methodology	2011	(Committee On Sustainability Assessment, n.d.)
Cost per impact	2008	(Centre for High Impact Philanthropy, 2008; Tuan, 2008)
Cost-benefit analysis	-	(Renes & Romijn, 2013; Stewart, 2020; Tuan, 2008)
Cost-Effectiveness Analysis	2012	(Dhaliwal et al., 2012; Tuan, 2008)
Cradle to cradle certification	2005	(Cradle to Cradle Products Innovation Institute, 2021)
Ebrahim and Rangan performance assessment framework	2014	(Ebrahim & Rangan, 2014)
Eco-mapping	2002	(Engel, 2001)
EFQM Excellence Model	2003	(Calvo-Mora et al., 2018)
Equator principles	2003	(Nicholls, 2021)
Expected return	2008	(Brest & Harvey, 2008; Tuan, 2008)
Family of measures	2001	(Sawhill & Williamson, 2001)
FINCA client assessment tool (FCAT)	2003	(FINCA, n.d.; Graham & Tevosyan, 2015)
Fit for purpose	2008	(Development Trust Association, 2017; NEF consulting, n.d.-a)
Four Pillar Approach	2014	(Kazimirski & Pritchard, 2014)

Framework for integrated reporting	2013	(International Integrated Reporting Council, 2021; Nicholls, 2021)
GIIRS impact ratings	2011	(B Analytics, n.d., 2018)
GRI sustainability reporting standards	2000	(Global Reporting Initiative, 2016; Mancini & Sala, 2018; NEF consulting, n.d.-b)
Impact Measurement Project 5 dimensions	2017	(Impact Management Project, 2020a, 2020b)
Impact Multiple of Money (IMM) Framework	2019	(Addy et al., 2019)
Impact-Weighted Accounts	2019	(Serafeim et al., 2019)
Investors in People	1991	(Investors In People, 2015; NEF consulting, n.d.-c)
ISO26000	2010	(ISO, 2010)
Lean data	2014	(Adams et al., 2017; Choda & Teladia, 2018; Dichter et al., 2016; The Acumen Fund, 2015)
Local multiplier 3	2002	(Kročil & Pospíšil, 2018; NEF consulting, n.d.-d; Sacks, 2002)
Logic model builder	2010	(Innovation Network, 2012)
Measuring Impact Framework (MIF)	2008	(WBCSD, 2008)
Methodology for Impact Analysis and Assessment (MIAA)	2009	(Hornsby, 2012)
Multi-Criteria Analysis	-	(European Commission, 2017; Vardakoulias, 2013)
Multiple constituencies approach	2016	(Costa & Pesci, 2016)
Operating Principles for Impact Management	2019	(IFC, 2019; Nicholls, 2021)
Outcomes star	2006	(Triangle, 2017, 2019a, 2019b)
Performance Prism for social services	2018	(Estrada et al., 2018)
Poverty and social impact analysis	2003	(The World Bank, 2003, 2015)
Poverty probability index (PPI)	2005	(Grameen Foundation, 2008; PPI Alliance, 2009; Wells, 2018)
PQASSO	1997	(NCVO, n.d.; NEF consulting, n.d.-e; Razvi, 2017)
Product impact metric	2018	(Stevenson et al., 2018)
Product social impact assessment	2013	(Fontes et al., 2018; Traverso et al., 2018)
Prove it!	2000	(NEF consulting, n.d.-f, 2009)
Public value scorecard	2003	(Moore, 2005)
Qualitative Impact Protocol (QuIP)	2015	(Bath Social & Development Research, 2020; Better Evaluation, n.d.)
Quality first	1999	(New Economics Foundation, 2009)
SAA	2005	(Kay, 2011; NEF consulting, n.d.-h)
SASB standards	2011	(Nicholls, 2021)

SDG compass	2015	(Global Reporting Initiative et al., 2016)
SE balanced scorecard	2005	(Kročil & Pospíšil, 2018; NEF consulting, n.d.-i; Somers, 2005)
SMI Social Responsibility Performance Index	2017	(Widad et al., 2017)
Social added value evaluation (SAVE)	2015	(Bassi & Vincenti, 2015)
Social business scorecard (SBS)	2015	(CERISE, n.d.; Sierra et al., 2020)
Social footprint	2008	(Center for Sustainable Organizations, 2011; McElroy, 2015)
Social impact assessment	2003	(Aledo-Tur & Domínguez-Gómez, 2017; Mathur, 2016; Orenstein et al., 2019; Parsons, 2020)
Social IMPact Measurement for Local Economies (SIMPLE)	2009	(Bhatt, 2018; McLoughlin et al., 2009; NEF consulting, n.d.-g)
Social lifecycle assessment	2009	(Bonilla-Alicea & Fu, 2019; Mohaddes Khorassani et al., 2019; Sawaengsak et al., 2019)
Social return assessment	2001	(Pacific Community Ventures, 2004)
Social worlds/arenas theory based model	2019	(Hervieux & Voltan, 2019)
Socio-economic assessment toolbox	2003	(Anglo American Services UK, 2014)
SPI4/ALINUS	2014	(CERISE, 2017; Sierra et al., 2020)
SROI	1996	(Kročil & Pospíšil, 2018; Lombardo et al., 2019; Venezia & Pizzutilo, 2020)
Sustainable livelihoods	1997	(Kollmair, 2002; Serrat, 2017)
The Big Picture	1999	(NEF consulting, n.d.-j; SCVO, n.d.)
Theory of change	1995	(Camoletto et al., 2017; Lombardo et al., 2019)
Third sector performance dashboard	2009	(NEF consulting, n.d.-k)
Tool for Indicator Design	2016	(Shift, 2021b, 2021a)
UN principles for responsible investing	2006	(Nicholls, 2021; UNEP & United Nations Global Compact, 2020)
UN SDGs	2015	(Mancini & Sala, 2018; Syed Azman & Engku Ali, 2019)
UNDP SDG Impact Practice Standards	2020	(Nicholls, 2021; UNDP & SDG Impact, 2021)
Volunteering impact assessment toolkit	2004	(NEF consulting, n.d.-l; Stuart, 2016)
Wallace assessment tool	2005	(Devita, 2005)

10.2. Annex 2 – Population of the clusters

<i>Proof of sustainability to external stakeholders</i>	<i>Impact management and decision-making support</i>	<i>Measurement of the final impact on beneficiaries and society at large</i>
Cost-benefit analysis	Cost-benefit analysis	Cost-benefit analysis
Multi-Criteria Appraisal	Multi-Criteria Appraisal	Multi-Criteria Appraisal
Theory of change	Theory of change	Theory of change
SROI	SROI	SROI
Prove it!	Prove it!	Prove it!
Poverty and social impact analysis	Poverty and social impact analysis	Poverty and social impact analysis
Social impact assessment	Social impact assessment	Social impact assessment
Socio-economic assessment toolbox	Socio-economic assessment toolbox	Socio-economic assessment toolbox
Volunteering impact assessment toolkit	Volunteering impact assessment toolkit	Volunteering impact assessment toolkit
Benefit-cost ratio	Benefit-cost ratio	Benefit-cost ratio
Constituent Voice Methodology	Constituent Voice Methodology	Constituent Voice Methodology
BoP impact assessment framework	BoP impact assessment framework	BoP impact assessment framework
Social IMPact Measurement for Local Economies (SIMPLE)	Social IMPact Measurement for Local Economies (SIMPLE)	Social IMPact Measurement for Local Economies (SIMPLE)
Logic model builder	Logic model builder	Logic model builder
Four Pillar Approach	Four Pillar Approach	Four Pillar Approach
Qualitative Impact Protocol (QuIP)	Qualitative Impact Protocol (QuIP)	Qualitative Impact Protocol (QuIP)
SDG compass	SDG compass	SDG compass
Anticipated Impact Measurement and Monitoring (AIMM)	Anticipated Impact Measurement and Monitoring (AIMM)	Anticipated Impact Measurement and Monitoring (AIMM)
Impact Multiple of Money (IMM) Framework	Impact Multiple of Money (IMM) Framework	Impact Multiple of Money (IMM) Framework
Operating Principles for Impact Management	Operating Principles for Impact Management	Operating Principles for Impact Management
PQASSO	Sustainable livelihoods	Sustainable livelihoods
Compass Index of Sustainability	FINCA client assessment tool (FCAT)	FINCA client assessment tool (FCAT)
Balanced scorecard (modified)	Cost per impact	Cost per impact
Family of measures	Expected return	Expected return
Eco-mapping	Measuring Impact Framework (MIF)	Measuring Impact Framework (MIF)
Local multiplier 3	Social footprint	Social footprint
AA1000 AS	Methodology for Impact Analysis and Assessment (MIAA)	Methodology for Impact Analysis and Assessment (MIAA)
Equator principles	COSA Methodology	COSA Methodology
Public value scorecard	Cost-Effectiveness Analysis	Cost-Effectiveness Analysis
Cradle to cradle certification	Tool for Indicator Design	Tool for Indicator Design
Poverty probability index (PPI)	IMP 5 dimensions	IMP 5 dimensions
SAA	Social worlds/arenas theory based model	Social worlds/arenas theory based model
SE balanced scorecard	PQASSO	Social lifecycle assessment
Outcomes star	Compass Index of Sustainability	Product impact metric
UN principles for responsible investing	Balanced scorecard (modified)	Impact-Weighted Accounts
Business ethic excellence model	Family of measures	

Proof of sustainability to external stakeholders	Impact management and decision-making support	Measurement of the final impact on beneficiaries and society at large
Third sector performance dashboard	Eco-mapping	
ISO26000	Local multiplier 3	
B impact assessment	AA1000 AS	
GIIRS impact ratings	Equator principles	
Product social impact assessment	Public value scorecard	
SPI4/ALINUS	Cradle to cradle certification	
Social business scorecard (SBS)	Poverty probability index (PPI)	
Multiple constituencies approach	SAA	
SMI Social Responsibility Performance Index	SE balanced scorecard	
GRI sustainability reporting standards	Outcomes star	
SASB standards	UN principles for responsible investing	
Framework for integrated reporting	Business ethic excellence model	
Impact-Weighted Accounts	Third sector performance dashboard	
	ISO26000	
	B impact assessment	
	GIIRS impact ratings	
	Product social impact assessment	
	SPI4/ALINUS	
	Social business scorecard (SBS)	
	Multiple constituencies approach	
	SMI Social Responsibility Performance Index	
	Investors in People	
	Quality first	
	The Big Picture	
	Social return assessment	
	EFQM Excellence Model	
	Best available charitable option (BACO)	
	Wallace assessment tool	
	Fit for purpose	
	Basic Efficiency Resource analysis (BER)	
	Ebrahim and Rangan performance assessment framework	
	Lean data	
	Social added value evaluation (SAVE)	
	UN SDGs	
	Performance Prism for social services	
	UNDP SDG Impact Practice Standards	
	Impact-Weighted Accounts	