

Article

Making Information Measurement Meaningful: The United Nations' Sustainable Development Goals and the Social and Human Capital Protocol

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Abstract: Drucker's saying that "What gets measured gets managed" is examined in the context of corporate social responsibility. The United Nations' Sustainable Development Goals have encouraged sustainability reporting, and a reporting tool, the Social and Human Capital Protocol, has been developed to assist measurement and provide information to support the achievement of sustainability. This information should be valid and reliable; however, it is not easy to measure social and human capital factors. Additionally, companies use a large number of methodologies and indicators that are difficult to compare, and they may sometimes only present positive outcomes as a form of greenwashing. This lack of full transparency and comparability with other companies has the potential to discredit their reports, thereby supporting the claims of climate change deniers, free-market ideologues and conspiracy theorists who often use social media to spread their perspectives. This paper will describe the development of environmental reporting and CSR, discuss the natural capital protocol, and assess the extent to which the Social and Human Capital Protocol is able to fulfil its purpose of providing SMART objective measurements. It is the first academic article to provide a detailed examination of the Social and Human Capital Protocol.

Keywords: corporate social responsibility; information management; social media; social and human capital protocol; natural capital protocol; SMART objectives; sustainable development goals



Citation: Wilson, J.P. Making Information Measurement Meaningful: The United Nations' Sustainable Development Goals and the Social and Human Capital Protocol. *Information* **2021**, *12*, 338. <https://doi.org/10.3390/info12080338>

Academic Editor:
Joanna Paliszewicz

Received: 15 July 2021
Accepted: 9 August 2021
Published: 23 August 2021

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1. Introduction

"When you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. It may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the stage of science." Lord Kelvin (1883) [1].

The management guru Peter Drucker is often credited with saying that "What gets measured gets managed" [2] (p. 205), and in a similar vein, the McKinsey maxim is "What you can measure you can manage." It is perspectives such as these that have gained traction as the world grows warmer and social issues gain more corporate prominence. The result is a strong growth in sustainability and corporate social responsibility reporting with 80% of 5200 companies in 52 countries producing reports [3].

In 2021, CEO Larry Fink [4] wrote to other CEOs stating that Blackrock, the world's largest asset management company with USD 8.7 trillion in managed assets, had a fiduciary duty to support sustainability because this influenced economic growth, financial markets and the value of assets. This form of altruistic self-interest is not only of concern to Blackrock, which has recognized the importance of reporting and acting on CSR information; the Global Sustainability Investment Alliance [5] also reported that socially responsible investment had increased to USD 30 trillion, representing approximately one-third of professionally managed assets.

Alongside these developments in CSR reporting, there has also been a noticeable increase in companies changing their missions and making social progress more central [6,7]. In addition to charities and not-for-profit organizations, B Corp [8] was established in 2006 to support for-profit companies that want to take into account other stakeholders. B Corps

are required by their governance and company articles to use their growth and profits to support their employees, communities and environment, which must be evidenced through verification and transparency.

These voluntary changes in behavior by organizations are gradually being adopted by regulators. In 2020, the US Securities and Exchange Commission [9] changed its Regulation S-K to require public companies to publish their human capital resources that were material to the operation of the organization. In April 2021, the International Financial Reporting Standards Foundation [10] proposed guidelines to amend its constitution to allow the International Sustainability Standards Board to set IFRS sustainability standards. Furthermore, the UK's Financial Reporting Council has committed the UK to be the first country to require companies to report on eleven Task Force on Climate-related Financial disclosures using Sustainability Accounting Standards Board metrics [11].

Yet, although CSR reporting has grown in importance, there are doubts around its ability to transparently and accurately communicate relevant information to shareholders and stakeholders [12]. Research has also identified that reports were sometimes lacking in full and complete information, credibility and neutrality [13,14]. On a broader scale, there is a substantial lack of public trust in official statistics by the public in the UK [15] and across all European countries [16].

Accurate, consistent, transparent and audited CSR reports are essential because without these characteristics it can be difficult to establish credibility and trust. There are a number of actors that wish to cast doubt on the authenticity of CSR reporting in order to benefit from the confusion and doubt that may be created. For example, free-market ideologues maintain that environmental problems would be resolved if the markets were not constrained by regulation [17]. Likewise, the tobacco industry has contributed to disinformation about the harmful effects of smoking through the manipulation of research and media [18]. Similarly, Exxon's research identified a link between the carbon fuels and global warming in 1977, 11 years prior to it becoming a public concern; however, the company suppressed this information and even used the same tactics and consultants as the tobacco industry to create disinformation and slow action [19,20]. Vaccination sceptics have also contributed to reduced take-up of the measles, mumps and rubella vaccine, among others [21], and this trend has been amplified during the COVID-19 pandemic linked to conspiracy beliefs [22].

In particular, social media platforms have been potent vehicles for the transmission of unsubstantiated conspiracy theories [23]. The hockey-stick graph of climate change and the climate wars is an illustrative example of how some groups selectively challenged climate science and cast doubt on its veracity [24]. Likewise, the University of East Anglia's 'climategate' controversy in which emails were hacked and misrepresented is another example of how organizations need to ensure that the information they provide can be defended and challenges refuted [25]. In order to achieve this, reported information needs to be provided in valid, reliable and comparable ways that reflect organizations' activities.

This special edition of *Information* provides a spotlight on knowledge management, digital trust and corporate social responsibility in the era of social media. Combining these areas, this paper investigates the challenges facing organizations as they attempt to measure and report accurate and comparable data and information around natural, social and human capital. More specifically, this paper will describe the development of environmental reporting and CSR; discuss the natural capital protocol; and assess the extent to which the Social and Human Capital Protocol [26] is able to fulfil its purpose of providing SMART objective measurements. This is the first academic article to provide a detailed examination of the internationally significant Social and Human Capital Protocol and also examine the potential to apply SMART objectives. This paper will then draw some tentative conclusions and recommendations to illustrate the challenges faced by CSR reporting.

We are dependent for our health and wellbeing on a clean and healthy natural environment and well-functioning societies. The CEO of Unilever [27] tweeted in relation to the SDG Compass [28] and Dashboards that we tend to “treasure what we measure”, implying that the more we measure sustainability, the more important it will become and so will be managed more carefully. This article will investigate the extent to which we might make the measurement of social and human capital information meaningful.

2. The UN's Sustainable Development Goals and Corporate Reporting

In 1987, the Brundtland Report [29] defined sustainable development as, “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Subsequently, Elkington [30] constructed the “triple bottom line” framework to encourage reporting in the areas of planet, people and profit. Building on these, Raworth [31] constructed the Oxfam doughnut to illustrate the need for a just and safe space for humanity, and Rockström et al. [32] defined nine planetary boundaries inside of which humanity might live. Following these, the United Nations Development Programme [33] described how advances in social development might be restricted as a result of ecological destruction and urged that actions be taken to address environmental and social problems.

At the United Nations' Millennium Summit in 2000, 191 nations committed to the adoption of the Millennium Development Goals (MDGs) with the aim of achieving them by 2015 [34]. The MDGs consisted of eight goals (containing 21 targets): (1) Eradicate extreme poverty and hunger; (2) Achieve universal primary education; (3) Promote gender equality and empower women; (4) Reduce child mortality; (5) Improve maternal health; (6) Combat HIV/AIDS, malaria and other diseases; (7) Ensure environmental sustainability; (8) Global partnership for development. At the end of this period, the extent of progress was reviewed and it was identified that 1 billion people had emerged from extreme poverty, hunger had been reduced, more girls attended school and environmental action had occurred [35].

Despite these achievements, however, advancement was patchy and inconsistent, and it was recognized by the United Nations that more needed to be done. As a result, in 2015, the United Nations [36] produced wider and more ambitious targets—17 Sustainable Development Goals (containing 169 targets and 231 indicators), which 193 signatory countries aimed to achieve by 2030. It was also recognized that the focus had to expand beyond the developing countries to include developed nations and support from all businesses with the UN imploring businesses “to apply their creativity and innovation to solving sustainable development challenges” [37] (p. 67). To do this required organizations to undertake sustainability accounting in order to manage their environmental and social impacts, identify targets and then report them [38]. Six years after their earlier paper, Bebbington and Unerman [39] (p. 1659) observed that although the SDGs had received much attention from some academic disciplines, there was substantially less from the academic accounting community explaining that “to do so is not straightforward.” This was confirmed in research into 153 Italian public interest entities by Pizzi, Rosati and Venturelli [40], which supported the findings by Oxfam [41] that ‘walking’ and ‘talking’ about SDGs are not fully achieved, and there is only limited disclosure around the SDGs.

The history of financial records reporting goes back thousands of years to ancient Mesopotamia and early forms of writing [42]. Since then, financial reporting has progressively developed so that practices have become agreed and standardized, e.g., International Financial Reporting Standards. However, reporting methods for the environment and social and human capital have only been developed in recent times and present a wider range of challenges [43–45]. This paper attempts to partially redress the lack of academic engagement [39] and explore reasons for the limited organizational disclosure [40,41,46] through a consideration of how SMART objectives (as recommended by the Capitals Coalition) might be applied to social and human capital. This is not an accounting paper; the SHCP is intended for use as an internal decision-making tool for managers and decision makers [47]. Rather, the paper uses the SMART objectives as a simple proxy that should

be understandable by most employees so that they can apply and understand the benefits and limitations of reporting SDG interventions. Below, we will consider CSR, the Natural Capital Protocol, and the Social and Human Capital Protocol to investigate the extent to which the latter might be reported effectively.

3. Corporate Social Responsibility

Corporate Social Responsibility has had a relatively long and contentious journey, with some arguing for the primacy of the shareholder and corporation [48,49] and Friedman [50] stating that “The social responsibility of business is to increase its profits.” It might also be added that corporation taxes represent the legal contribution by a company to society. In contrast, Dodd [51] argued that companies had responsibilities to their communities and should demonstrate these voluntarily. One of the earliest examinations of social responsibility was by Bowen [52] in *Social Responsibilities of the Businessman*, and since then this subject has greatly expanded to become a core consideration for organizations [53].

One of the main benefits and also challenges for CSR is its lack of clarity, for example, Votaw [54] (p. 11) stated that “The term is a brilliant one; it means something, but not always the same thing, to everybody.” Similarly, Friedman [50] noted that “The discussions of the ‘social responsibilities of business’ are notable for their analytical looseness and lack of rigor.” For example, Carroll [55] (p. 500), stated that “the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time.” Thus, it is possible for CSR to be interpreted from each of the four levels of Carroll’s [56] CSR pyramid: economic, legal, ethical, and philanthropic/voluntary.

These different perspectives of CSR would appear to result from changing societal beliefs and expectations [57] and also the contexts in which companies operate, e.g., geography, products, resources, size, etc. [58,59].

4. The Natural Capital Protocol

At the Rio 2012 Conference on Sustainable Development, the United Nations Environment Programme (UNEP) [60] presented its Natural Capital Declaration, which was supported by banks, investors and insurers. The declaration stated that “Natural capital comprises Earth’s natural assets (soil, air, water, flora and fauna), and the ecosystem services resulting from them, which make human life possible” [61] (p. 4). It explained that these ecosystem goods and services provided the foundations for the global economy and contributed trillions of US dollars annually. However, these contributions were barely visible and rarely accounted for in the economic system with the result that they were not always used in sustainable ways. These natural capital resources are often considered ‘externalities’ or ‘free goods’ and, consequently, have infrequently been considered in decision making. Moreover, even when they have been taken into account they have: “been largely inconsistent, open to interpretation, or limited by moral arguments” [62] (p. 2).

The UNEP Declaration [61] (p. 5) called upon governments to encourage organizations to value and report on their use of natural capital; however, it also acknowledged that “no methodology yet exists to adequately report or account for natural capital in the global financial system” and, thus, the objective of the Natural Capital Declaration was to produce new metrics and tools that would allow natural capital to be accounted for, disclosed and reported. The signatory financial institutions committed to working collaboratively, and with their respective stakeholders, to develop methodologies to identify natural capital impacts and dependencies and integrate these within their decision-making processes and financial services and products [63]. The ultimate objective was to integrate standardized natural capital measures with those of financial reporting and decision making.

In order to progress this agenda, the Natural Capital Coalition [62] (p. 2) was established and it subsequently developed the Natural Capital Protocol, which was: “a standardized framework to identify, measure, and value impacts and dependencies on

natural capital.” This framework was produced “to help generate trusted, credible, and actionable information that business managers need to inform decisions” [62] (p. 2).

Although the Natural Capital Protocol provided a standardized approach, it did not endorse particular methodologies or tools. Instead, it was designed to be flexible and encourage organizations to choose those measurement and valuation methods that were appropriate to their geography, business sector and organizational level. Its emphasis was on internal decision making and not on external reporting; however, this customization constrained the potential to compare and make benchmarks with other organizations.

The Natural Capital Protocol was, initially, mainly targeted at environment, health and safety, operations and sustainability managers to help them generate, for example, board documents, financial and operational plans, procurement decisions, and risk assessments used in decision making. These managers were chosen because they were logical champions and ambassadors of the NCP and provided gateways to influencing their larger organizations.

The Natural Capital Protocol will be discussed in more detail below because the same framework was later adopted by Social and Human Capital Protocol. In assessing the NCP, Whitaker [64] observed that governments were relatively tardy in taking up the Protocol. However, in 2020 and only four years after its development, the Capitals Coalition [65] (a successor to the Natural Capital Coalition and the Social Capital Coalition that merged in January 2020) was invited to introduce natural capital principles into the U.S. Generally Accepted Accounting Practices (GAAP) principles [66].

5. Social and Human Capital Protocol (2019)

To support progress towards the SDGs, the SDG Compass was developed by the Global Reporting Initiative, United Nations Global Compact, and World Business Council for Sustainable Development [67]. This was based upon the ‘protect, respect, remedy’ principles of the United Nations’ [68] *Guiding Principles on Business and Human Rights*, which provided a baseline for all companies to follow. There are five steps to the SDG Compass: (1) Understanding the SDGs; (2) Defining priorities; (3) Setting the goals; (4) Integrating; (5) Reporting and communicating.

The SDG Compass [28] website contains an inventory of 58 business tools (including those developed by Aviva, Earthwatch Institute, GRI, WBCSD), which can be used by companies to help them map their progress towards the SDGs. There are also 1553 indicators contained within the tools, which are tabulated against the SDGs, but because this is such a wide range of tools and indicators, there is the potential for inconsistencies and a reduction in clarity and comprehension. Thus, the WBCSD [69] published the *Social Capital Protocol* to “harmonize the currently fragmented landscape” [69]. Its purpose was to create a standardized approach that would enable businesses to incorporate social impact assessment and eventually lead to it being mainstreamed.

The Social Capital Protocol distinguished between human capital and social capital (Figure 1). Human capital can be defined as “The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” [70]. Social capital can be defined as “Networks together with shared norms, values and understanding that facilitate cooperation within and among groups” [71] (p. 14).

The Social Capital Protocol was based on similar principles to the Natural Capital Protocol [62] with the intention that both would ultimately lead to the integrated reporting of people, planet and profit [45]. Both protocols had four similar stages of frame, scope, measure and value, and apply; however, the NCP had 9 steps compared to the SCP with 12 steps. One consequence of having two different sets of steps was that they did not fully articulate with one another, thereby requiring organizations to use two separate processes. Following a public consultation and expert review, the Social Capital Protocol was revised and superseded by the Social and Human Capital Protocol [72] (Figure 2). Human Capital was given more prominence, and the same four stages and nine steps as the Natural Capital Protocol were adopted, thereby enabling greater integration and correspondence between

the two protocols. It stated that “The Protocol seeks to determine: how (and by how much) your business activities increase, decrease and/or transform social and human capital, and the extent to which you depend on social and human capital resources” [72] (p. 3). The similar objectives of integrated reporting and sharing a similar process resulted in the Natural Capital Coalition, and Social and Human Capital Coalition merging to form the Capitals Coalition [26] in January 2020.

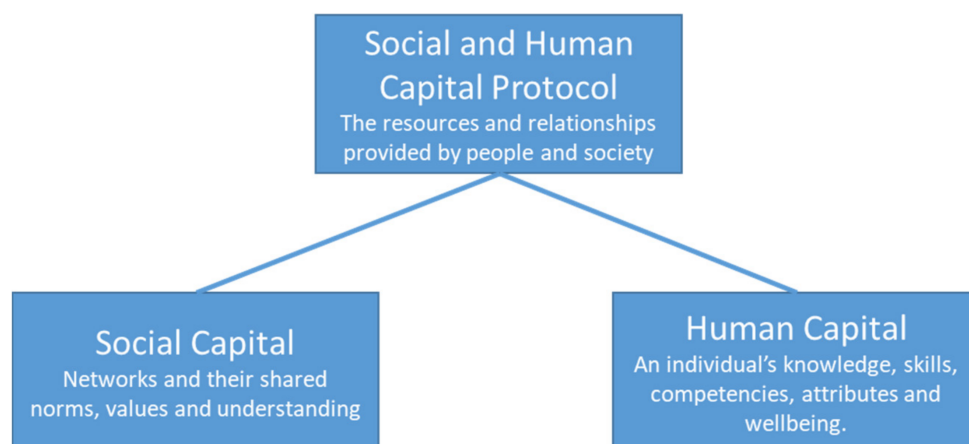


Figure 1. Social and Human Capital (adapted from Social and Human Capital Coalition, 2019).

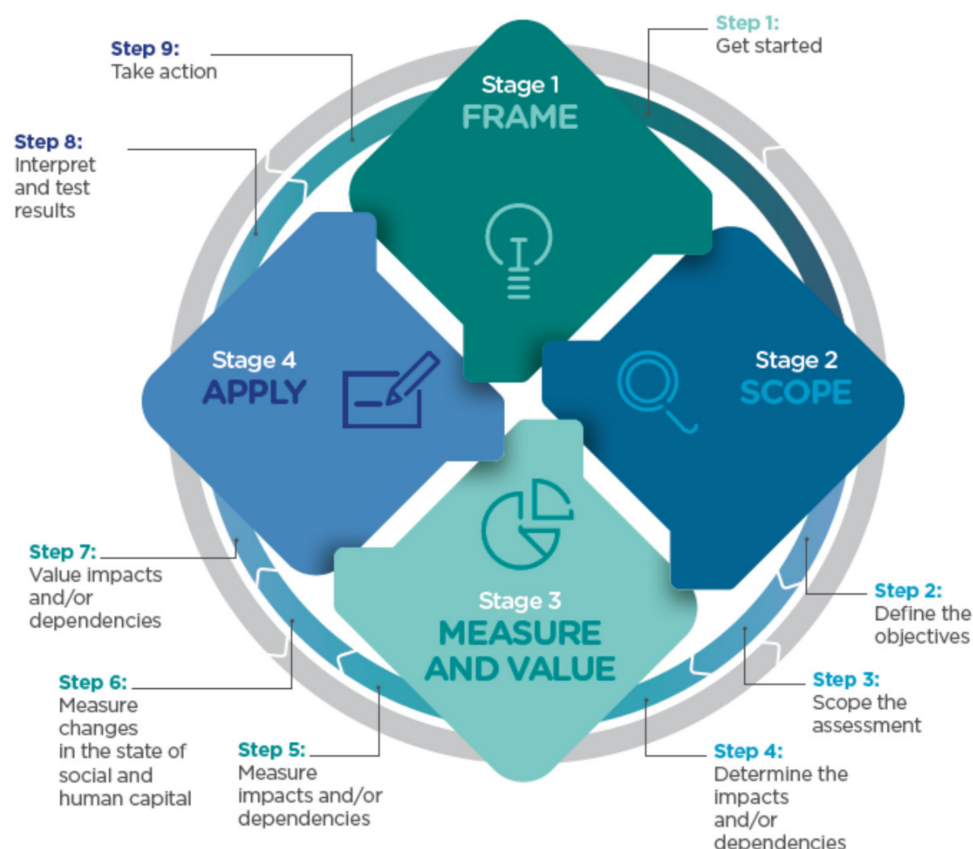


Figure 2. The Social and Human Capital Protocol (Social and Human Capital Coalition, 2019) and the Natural Capital Protocol (2016) (with permission of Capitals Coalition).

The SHCP drew upon social impact assessment, return on investment, etc., approaches developed by Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), Accounting for Sustainability, and the International Integrated Reporting

Council (IIRC). The tools developed by these organizations focused on providing data and information for external reporting, whereas the SHCP was primarily designed to assist internal decision making [72]. Initially, it was envisaged that the SHCP would be applied in a few areas and, subsequently, these practices would be scaled up and implemented across the whole organization. Adherence to the SHCP is voluntary but in the longer term the ambition was to move from being optional to becoming mainstream and an acknowledged reporting requirement. The Social and Human Capital Coalition [72] (p. 1) explained that it was: “committed to delivering a credible, comparable and broadly accepted approach to social and human capital impact measurement and valuation that enables businesses to truly value people and relationships as a driver of sustainable growth.”

The four stages of the SHCP are designed to provide organizations with a consistent process that can then be tailored to their needs and circumstances. This customization allows for the use of a variety of measurement and valuation tools to provide relevant information for use in internal decision making. Moreover, this internal information may be reported externally to demonstrate to the wider public how the organization is giving consideration to social and human capital areas. The Social and Human Capital Protocol has received very little analysis in academic journals, with only cursory comment, e.g., Diaz-Sarachaga [73] described the SHCP as a “unidimensional approach” for integrated sustainability reporting. Moreover, Nicholls [74] listed the SHCP among current approaches to social and environmental accounting and used the SHCP definition of valuation. This paper is intended to address this lacuna around an important international framework.

6. Materials and Methods

The primary purpose of this paper is to investigate the extent to which specific, measurable, attainable, relevant and time-bound (SMART) objectives, as recommended by the Social and Human Capital Protocol, can be applied in a valid and reliable way to social and human capital [72]. The use of SMART management objectives was originally described by Doran [75] and has subsequently been described as the “gold Standard” by Ogbeiwi [76] and has been used by numerous other organizations including World Bank [77] and Roundtable for Product Social Metrics [78]. These SMART objectives generally correspond to the key requirements of performance measures: accuracy, validity and reliability [79].

Schuller [80] (p. 33) explored some of the challenges involved in measuring both social and human capital and concluded that it was a “moving target” and “it may be that social capital will never be fully measurable.” Instead, he suggested that its value may be as an heuristic device that leads to the development of policies and initiatives.

This paper can be considered a review article in which each of the SHCC [72] SMART objectives are evaluated in terms of their ability to reliably, validly, and consistently address social and human capital. The approach adopted by this paper is a case study [81] of the SHCP that “investigates a contemporary phenomenon within its real-life context” using “multiple sources of evidence” [82] (p. 13). In doing so, academic and grey literature will be drawn upon as part of the analysis.

This paper also has a number of limitations. Firstly, it is a case study and, as such, the findings may not be applicable more broadly. Secondly, the analysis has been conducted from a theoretical perspective and more detailed practical application of the SDGs and their indicators should be undertaken. The author is not aware of any study that has used all 231 indicators to the depth that would provide detailed meaningful information.

No evidence was found from searches in Scopus and Google Scholar of any article that examined in detail the Social and Human Capital Protocol.

Future research might consider the practical application of SMART objectives against the 17 SDGs and 231 indicators to identify which ones might/might not be valid, reliable and consistently applied. A further area of study might investigate the extent to which climate change deniers, free-market ideologues, and conspiracy theorists use and do not use published organizations’ social and human capital data.

7. Making Measuring Meaningful: The Social and Human Capital Protocol

In 2008, French President Sarkozy invited a number of eminent economists to establish a *Commission on the Measurement of Economic Performance and Social Progress*. It reported that in an “information society”, statistics are important and “What we measure affects what we do; and if our measurements are flawed, decisions may be distorted” [83] (p. 7). It concluded that “It has long been clear that GDP is an inadequate metric to gauge well-being over time particularly in its economic, environmental, and social dimensions” [83] (p. 8).

If an important, relatively concrete measure such as GDP is “flawed” when there are multiple official bodies working to calculate it, this suggests more substantial challenges for areas that are less tangible, such as social and human capital. A World Bank [84] report, *Where is the Wealth of Nations?* Calculated that 78% of total wealth was connected to intangible assets including human capital and institutional capital (e.g., rule of law). These difficulties were expressed more than thirty years ago by Coleman [43] (p. S100), who articulated:

“Social capital, however, comes about through changes in the relations among persons that facilitate action. If physical capital is wholly tangible, being embodied in observable material form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the relations among persons.”

To attempt to overcome these challenges of measuring less tangible social and human capital, the SHCC [72] advised that there should be four principles used to guide the choices: Firstly, information should be ‘relevant’ to the business and stakeholders. Secondly, there should be ‘rigour’ with strong methods and data. Thirdly, there should be ‘replicability’ providing full documentation, transparency and accountability. Finally, there should be ‘consistency’ so that methods and data are compatible and can be scaled across a business. The SHCC [72] (p. 43) also suggested that quantitative, qualitative and monetary indicators should reliably communicate performance and to do this recommended the use of SMART objectives: specific, measurable, attainable, relevant and time bound. Their application to social and human capital is evaluated below.

8. Specific

No two organizations are the same; they differ along multiple dimensions, e.g., size, products, services, geography, markets, etc., and for this reason both the NCP and the SHCP were designed to allow organizations to tailor the scope, approaches and metrics that were appropriate to their operations. This is a pragmatic approach because if there were specific reporting requirements, many of them would not be relevant. The challenge that this creates is to reduce the potential to compare one organization with another because they may have selected different dimensions to measure.

Another challenge is that many tools are regularly updated, as they identify better and more appropriate approaches, e.g., GRI versions. By contrast, the design of the SHCP is based around a process, and this is more flexible and can accommodate changes in metrics without alterations to its fundamental structure. At a more granular level, metrics used by organizations will evolve and change with the potential that longitudinal measurement is difficult because of a lack of consistent and comparable data.

Another consideration relates to stakeholders whom Freeman [85] (p. 46) defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives.” Taking into account and reporting to all stakeholders would create a high degree of administration.

Probably the main issue involved with being ‘specific’ is the abstract and imprecise nature of CSR and its various meanings to different constituencies. This was remarked upon by Clarkson [86] (p. 96):

“The fundamental problem was, and remains, that no definition of social responsiveness provides a framework for the systematic collection, organization, and

analysis of corporate data . . . it remains an (p. 97) elusive construct, lacking both logic and rigor, which limits seriously its usefulness for empirical research."

9. Measurable

The OECD/DAC [87] defined that "A measure is a value that is quantified against a standard"; however, the Social and Human Capital Coalition [72] (p. 66) acknowledged that there was "little consensus" and that both measurement and valuation were still in their "infancy." In the introduction, we discussed how the purpose of measuring something was to be able to manage it, and, if it cannot be measured it is often undervalued. Furthermore, performance measurements should be "comparable" against standards that would enable them to be valued internally and have the option of external benchmarking with other organizations [72].

The UN IAEG [54] classified global SDG indicators into three tiers according to their methodology and global data availability:

- Tier 1: Conceptually clear indicator, methodology and standards, plus available data from at least 50% of countries.
- Tier 2: Conceptually clear indicator, methodology and standards, but data not regularly provided by countries.
- Tier 3: No internationally agreed methodology or standards—they will be or are being developed.

In December 2020, there were 130 Tier 1 indicators, 97 Tier 2 indicators, and 4 indicators that were applicable to all the tiers. These figures indicate considerable progress in the development of methodologies, but there are still insufficient data that are 'attainable' (see below) for a substantial proportion of the SDGs.

Although information may be reported, this does not always represent progress, as evidenced by increasing levels of carbon dioxide emissions and growth in social inequality. This, Pucker [44] (p. 137) argued, was because "Measurement is often nonstandard, incomplete, imprecise and misleading." Moreover, it has been argued that "Abstract measures are worthless. To use a performance measure—to extract information from it—a manager needs a specific, comparative gauge, plus an understanding of the relevant context" [88] (p. 598).

Yet, Behn's 'pure' approach around the need for precise data has the potential to fall into the quantitative fallacy trap, often known as McNamara's Fallacy. McNamara was US Secretary of State during the Vietnam War and had previously worked for McKinsey, which advocated "What you can measure you can manage." The McNamara Fallacy stated: "The first step is to measure whatever can be easily measured. This is OK as far as it goes. The second step is to disregard that which can't be easily measured or to give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what can't be measured easily really isn't important. This is blindness. The fourth step is to say that what can't be easily measured really doesn't exist. This is suicide." [89]

10. Attainable

The former COO of Timberland, Pucker [44] acknowledged the benefits of adopting sustainability as a corporate strategy; however, he was skeptical about the ability to measure this along opaque supply chains that were extensive and complex. He noted that 85% of Timberland's production was overseas and that there were 30,000 items used in their products. Similarly, BASF used 30,000 different raw materials and had more than 75,000 Tier 1 suppliers [89] (p. 19). Carefully monitoring all these suppliers is problematic, and a survey of 1700 suppliers by The Sustainability Consortium [90] (p. 28) revealed that the majority of responses to questions about environment and social areas stated the following: "Unable to determine."

There are 17 Sustainable Development Goals that contain 169 targets and 231 unique indicators, which is a substantial number to measure and report on. Admittedly, not all the SDGs may be relevant to an organization, but they can present a heavy administrative

burden. Not only is measurement not always ‘attainable’, but only 1% of companies planned to measure the impact of their activities against the 17 SDGs [46]. Significantly, research conducted into the social impact of three projects found that not all social indicators were able to be measured [91]. Cadbury [92] (p. 1.9) in his influential report on corporate governance drew attention to the need to balance reporting with financial achievement, stating “It must, however, be recognized that no system of control can eliminate the risk of fraud without so shackling companies as to impede their ability to compete in the market place.” In line with this, the GRI, UNGC, WBCSD [67] recommended that the cost and complexity of measurement should be proportional to the benefits achieved from measurement.

11. Relevant

The ‘relevant’ objective refers to “meaningful information” [72] (p. 43), which in accounting terminology equates to ‘materiality’. The International Accounting Standards Board [93] defined this as “Information is material if omitting, misstating or obscuring it could reasonably be expected to influence the decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity.” These “primary users” are stakeholders and their association and engagement with the organization should be taken into account by prioritizing relevant and significant areas through the use of a materiality assessment [94]. A further level of scope complexity is added in that companies are able to choose their own level of ambition about how much they wish to engage with the whole process [72].

Another dimension to consider for relevance is ‘externality’, which means an action undertaken by an organization that results in a positive or negative impact on the environment or social and human capital [72]. These impacts that have costs or benefits are not always taken into account by an organization because they are beyond their legal scope of responsibility.

The four main boundaries that should be taken into account in the SHCP are “organizational, geographic, temporal and value chain” [72] (p. 25). The value chain boundary is extensive and not only involves upstream suppliers and production, but also downstream distributors, customer use, and end-of-life disposal and recycling (Global Reporting Index (GRI), United Nations Global Compact (UNGC), and World Business Council for Sustainable Development [67] (p. 12).

Geographic boundaries also need to be considered. Offshoring production has a negative social and human impact on countries and communities, which lose a company, and positive impacts on recipient countries. Sustainability indicators do not always fully convey the impact on communities, and comparing one country with another presents further obstacles [95].

Some organizations are motivated to produce CSR reports because they can present a positive perspective [65]. Organizations may also cherry-pick indicators [46,96] and this might be considered greenwashing [97]. To counter this, the SHCC [72] (p. 69) advised organizations to report on both positive and negative consequences of their operations. Impacts may be intended and unintended, and positive impacts provide a benefit to society, whereas negative impacts result in a cost to society.

Another important consideration is the potential trade-off between environmental and social and human capital dimensions. The United Nations [68] considered that “sustained, inclusive and sustainable economic growth is essential for prosperity”; however, this might not always be compatible with environmental sustainability [98]. This point was raised by the European Commission [99] (p. 9), which suggested that sustainable consumption might lead to a “reversal of progress towards greater quality of life.” In response to this dilemma, Markman and Krause [100] proposed that environmental considerations should have priority, secondly social, and lastly economic.

12. Time-Based

Financial reporting is generally conducted on an annual basis and social and human capital accounting would benefit from integration into this time scale. However, the time period that is described within reports also needs to consider much longer impacts. Temporal boundaries should not only describe past performance but they should also consider the impact of their activities, products and services into the future. Temporal boundaries are also sometimes ambiguous and present difficulties for measurement [101]. When DDT was originally sprayed to kill malaria carrying mosquitos, it had a significant positive impact on the health of communities; however, it was later found to harm the food chain and the environment [102].

Some companies also have different time perspectives, e.g., Unilever implemented a sustainability policy that involved more investment and expected a return-on-investment over a more extended time-period than some other companies. The impact of this was to depress its share price and make it more attractive to corporate raiders who identified cost-savings. Polman, the CEO of Unilever and environmental champion, fought off the bid from 3G but subsequently had to reduce long-term sustainability and balance this with providing shareholders with a short-term reward [103]. In order to address issues such as this, companies can adopt four competitive strategies with regard to social responsiveness, i.e., reactive, defensive, accommodative, and proactive, and each one possesses different advantages and costs [55,104].

Dangers to the environment are not always very visible, and it is only after a period of time that problems begin to emerge. This is particularly evident in the emergence of research identifying the toxic effects of micro-plastics on aquatic creatures and humans [105]. However, it is not possible to rewind the clock, and measurements and reporting need to be incorporated within indicators as quickly as possible.

13. Results and Discussion: Evaluation and Review—SMARTER Objectives

Both the Natural Capital Protocol and the Social and Human Capital Protocol recommend the use of SMART objectives that assist in the production of more valid and reliable information. From the investigation above, it is clear that SMART objectives do contribute to reliable and valid information; however, there are also a number of difficulties in applying each objective to social and human capital areas.

In some cases, companies may just avoid complying with legislation and agreements. A landmark decision by a Netherlands court, ruled that the Royal Dutch Shell's sustainability policy was insufficiently "concrete" and ordered the company to cut emissions by 45% by 2030 compared with 2019 levels, thereby complying with the Paris Climate Accord [106].

In other cases, there is also a danger that some companies might adopt regulatory arbitrage strategies where it is cheaper for them to operate if they do not always fully adhere to voluntary sustainability principles [107]. Voluntary commitment to social and human capital sustainability is unlikely to be sufficiently attractive to some organizations and, therefore, in the long run, there will need to be legislation that is consistently enforced and comparable across nations [108].

SMART objectives may also have unintended consequences. It has long been recognized that the measurement of performance can have unintended and sometimes undesirable consequences [109]. Moreover, in *'The Social Life of Information'*, Brown and Duguid [110] advised that when measures are developed, the "social periphery" also needs to be taken into account. In effect, unless measures of social and human capital are carefully tested and developed, they may inadvertently constrain their intended purpose.

It is evident that social and human capital metrics need to be regularly evaluated and processes reviewed to assess whether they are fit for purpose. What has also emerged from this investigation is that the five SMART objectives enhance social and human capital measurement and they also have systemic problems that will be difficult to overcome. The objectives would further benefit from the addition of 'Evaluation' and 'Review', and in this way the SMART acronym might be extended, making it SMARTER.

14. Conclusions

The introduction to this paper noted the substantial growth in CSR/ESG reporting and the need to provide accurate information that might be used for decision making and reporting purposes. It also described how Drucker, McKinsey and Polman argued that it was necessary to measure things if they were to be managed, as well as how this principal has been incorporated within the SHCP, which recommends the use of SMART objectives [72]. This paper then examined the extent to which social and human capital can be adequately measured by SMART objectives. For ‘Specific’ objectives, it was discerned that there was a tension between selecting measures that were relevant for individual organizations and also for comparing and benchmarking with other organizations that might have different measures. ‘Measurable’ objectives imply that there is a standard; however, some dimensions, such as social relations, are intangible and therefore cannot be measured accurately. With ‘attainable’ objectives, it was noted that collecting data across the whole cyclical supply chain with large numbers of materials and suppliers was very difficult and costly to achieve [44,89]. Moreover, only 1% of companies planned to measure impact for all 17 SDGs [46]. ‘Relevant’ objectives are based around organizational, geographical, temporal and value-chain boundaries, and selective organizational decisions based around the scope of these objectives will impact reporting. Finally, unlike yearly financial reporting periods, ‘time-based’ objectives need to consider future impacts, which may be measured in decades.

The SHCP can be used to identify, prioritise, measure, value, integrate and communicate social and human capital across operations and all of the value chain, including upstream and downstream. In addition to the benefits of these measurements, we also identified some weaknesses, including: defining geographical and temporal boundaries; a large number of indicators and tools; lack of standardisation, which reduces the ability to compare and benchmark; long and opaque supply chains; selective cherry-picking of indicators; and the potential for regulatory/sustainability arbitrage.

As a relatively new social accounting tool, the SHCP has to face what Gray [111] (p. 58) described as steering “an impossible path between the speculative but ungrounded and the empirical but captured and emasculated.” The SHCP is a ‘fledgling standard’ [47] that is still evolving and developing, and this beneficial testing and improvement of metrics should lead to increased uptake and more integrated reporting.

Limited tangibility particularly presents problems of credibility for the social and human capital measurement, and this allows some actors using social media opportunities to try and undermine their validity. The measures that are produced need to be transparently communicated and verified through external auditing. In this way, challenges in social media and elsewhere can be more robustly defended.

Measuring social and human capital is challenging from theoretical, practical and managerial perspectives. Theoretical development needs further contributions from the academic accounting community. Moreover, practical development is still at a ‘fledgling’ stage, and numerous supranational, governmental and accounting organizations are working the identification of practical tools that provide valid, reliable and consistent data. It is managers, perhaps, who are presented with the most difficult challenge of using incomplete tools to provide data that satisfy the demands of multiple stakeholders. In some respects, the managers need to operate like the politicians who committed to the SDGs and did not know how they might be achieved. It was Otto von Bismarck who said that “Politics is the art of the possible, the attainable—the art of the next best,” and it might be argued that the SHCP is “the art of the next best.”

What can be established from this investigation is that a pragmatic/political approach is required when attempting to measure and report on social and human capital. A range of quantitative, qualitative and monetary reports are necessary, and no single dimension will provide all the necessary insights to enable management decision making. As Einstein said, “Not everything that counts can be measured, and not everything that can be measured counts.”

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The author declares no conflict of interest.

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