

Measuring positive sustainability. A systematic literature review.

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Extended abstract: For many decades, companies have been challenged to disclose their environmental and social impacts. It is thus not astonishing that companies have focused their sustainability assessment, valuation and performance measurement on how much negative sustainability impacts, such as carbon emissions or workplace accidents, have been caused and reduced.

To pursue sustainable development, however, requires that positive sustainability contributions are considered, i.e. contributions to sustainable development beyond reducing the level of the own impact caused.

By conducting a systematic literature review, we explore how current sustainability assessment, valuation and measurement approaches capture positive sustainability contributions. While a positive view seems to matter often implicitly in most methods, the majority actually focuses on the reduction of negative impacts.

I. INTRODUCTION

Ness et al. (2007) describe that on the path to sustainability, goals need to be defined and progress be assessed. Often, sustainability impacts are measured in terms of “unsustainability”, e.g. harm done, or in terms of sustainability impacts reduced, e.g. less resources used or energy saved [3]. While this approach is without doubt constructive and worthwhile, this paper argues that in order to measure the progress towards sustainability, we have to understand both measures of unsustainability and sustainability [11]. This argument is underlined by the need to understand to what extent and why current actions are “unsustainable” [13:190]. Gibson (2012) identified a negative cycle towards unsustainability and, like many researchers in social, environmental and sustainability accounting, sees sustainability performance management and assessment as a “vehicle” [2:13] to support the turn to sustainability.

Both in research and corporate practice, the focus has so far been on measuring negative environmental and social impacts. However, several authors highlight the need to (also) measure sustainability in terms of positive contributions to sustainable development [e.g. 7, 8,10]. Hacking and Guthrie (2008) emphasise that the objective of sustainability performance management and assessment is increasingly moving from capturing the reduction of negative impacts to increasing the positive. In order to gain a better understanding of this pursuit of sustainability performance management and assessment, this paper uses a systematic literature review approach to better understand the underlying philosophies and aims of current methods to manage, measure and assess (un-)sustainability and to conceptualise the developments. Apart from providing an overview of measurement directions (i.e. negative and positive impacts measured) the paper aims to answer the research question “What

sustainability performance measurement and assessment methods capturing positive sustainability contributions have been proposed in literature?”.

II. METHODOLOGY

The systematic literature review follows the steps as outlined by Tranfield et al. (2003), divided into three stages; planning, conduction as well as reporting and dissemination. Their approach has been applied by various authors [1, 5, 12, 14] in the field of sustainability accounting and management. To answer the research question, the academic literature on sustainability performance management and assessment is systematically reviewed and synthesized with regard to its ability to capture positive sustainability and unsustainability. The approach consists of five methodological stages, including (1) identification of research, (2) selection of studies, (3) study quality assessment, (4) data extraction and monitoring, and (5) data synthesis and reporting [14].

III. FINDINGS

Based on the filtering process in the literature review, different sustainability assessment, performance measurement and valuation methods have been uncovered. The methods are analysed towards their ability to capture positive and negative sustainability contributions. The findings indicate that the measurement of positive sustainability performance has so far been mentioned and discussed on a general level in the literature; emphasis is however given to unsustainability in performance measurement, assessment and valuation. Most of the identified methods seem to have a limited ability to capture positive sustainability contributions. Even in integrated approaches, the focus is on the reduction of negative effects as this usually seems to be simpler and measured ‘more objectively’ with quantitative figures.

IV. DISCUSSION

The literature review reveals that positive sustainability contributions have so far not been the focus of the existing research. In a next step, the approaches to assess positive sustainability contributions are analysed and synthesised against the need and the intention to capture contributions to sustainable development.

We discuss four approaches to the matter. The *stakeholder approach to sustainability performance measurement* argues that only affected stakeholders are able to identify whether a specific impact of a company is perceived as positive, neutral or negative. While this argumentation has its merits it needs to be extended to

consider sustainable development sufficiently. Currently not affected but maybe indirectly affected stakeholders, future generations as well as less well organised and less powerful groups may not be represented sufficiently by an assessment method that is only based on a choice (who makes this choice?) of currently affected and strong stakeholders.

The *comparative* approach to sustainability performance measurement specifically lists positive contributions to sustainability next to negative impacts. Even if the negative impacts might outweigh the positive, companies will still be motivated to maximize the positive impacts to show their sustainability intentions.

The *comprehensive* sustainability performance measurement approach only defines those contributions as positive which go beyond reducing negative impacts. A positive sustainability contribution is defined here as the net positive balance between causing and reducing negative impacts. A company, for example, that applies carbon capturing by scrubbing its CO₂ emissions from the atmosphere, may only consider those emission reductions as positive environmental contributions which it captures in excess of those it emits. In essence the company would clean up the negative impacts of others.

Finally, taking a different perspective, a positive contribution can also be defined as the contribution a company makes to changing markets and society towards sustainable development. Such a *transformational approach* to sustainability performance measurement emphasises net positive sustainability impacts on production, supply chains, consumption patterns and life styles. The measurement of such transformations challenges researchers and practitioners to develop substantially new methods.

V. CONCLUSION

The systematic literature review reveals that the assessment, valuation and measurement of positive sustainability remain limited. Therefore, future research should explore how existing methods could capture positive sustainability contributions and engage in the development of new measurement approaches. The development and application of methods to measure and assess positive sustainability contributions may support corporate practice and public policy to achieve more clarity and improved incentives in decision-making for sustainable development.

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