Master's thesis

NTNU
Norwegian University of Science and Technology
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Social Impact Measurement at the Bottom of the Pyramid

Towards a Comprehensive Measurement Approach

Master's thesis in Entrepreneurship
Supervisor: Vivek Sinha
June 2021

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Preface

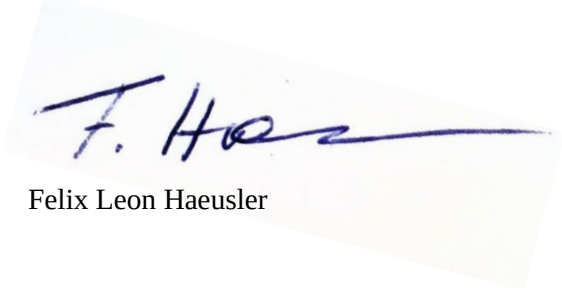
This master's thesis is written by two students within the double degree programme of Technical University of Berlin and Norwegian University of Science and Technology. After two years of study in the fields of Innovation Management, Entrepreneurship and Sustainability, this thesis represents the final paper within the master's programme. The thesis builds upon the results of a comprehensive literature review on the topic of social impact measurement at the Bottom of the Pyramid, previously conducted by the authors of this thesis.

This thesis aims for a quantitative and qualitative elaboration on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid (BoP). Despite the stress on the social impact of interventions made at the BoP, a method for measuring social impact that is suited to the characteristics and challenges at the BoP, still is missing. Thereby, the questions of how social impact measurement should be approached at the BoP, which measurement dimensions should be utilised and how characteristics of initiating organisations affect the choice of measurement dimensions have been answered by applying a mixed methods research design. Results of this thesis make manifold contributions to literature and lay valuable foundations for further research, since this thesis is one of the first approaches to investigate this topic empirically.

The authors are very grateful for the support and active exchange with BoP experts from various countries who have made valuable contributions to this thesis by sharing their knowledge and experience. Furthermore, the authors want to thank the supervisor of this thesis, Vivek Sinha, for his great support from start to finish of this thesis. By guiding and critically challenging the authors throughout the different steps of research conduction, Vivek Sinha helped and motivated the authors to improve and refine the thesis continuously, leading to a result the authors are more than satisfied with.

We confirm that the submitted thesis is original work and was written by Felix Leon Haeusler and Jonas Gerald Lautner independently. We have not used other that the declared sources. Appropriate credit has been given where reference has been made to the work of others.

Berlin, 10.06.2021



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Abstract

In recent times, an increasing shift towards the need for a more inclusive form of capitalism can be detected in public and scientific debates. This is fuelled by the observation that the neglection of social and environmental impact while pursuing profit can lead to the betterment of some at the expense of others. The BoP proposition is an approach positing that it is possible to combine profitability with social impact. While this suggested approach has been researched widely in the last two decades, the aspect of social impact of BoP interventions continues to be under-researched. This is the case because theory and practice show a large gap when it comes to social impact measurement methods at the BoP. This thesis contributes to closing this gap by elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP. The empirical investigation conducted using mixed methods demonstrates that social impact measurement methods at the BoP need to be characterised by a high degree of flexibility in order to be adaptable to specific needs of local BoP communities. Furthermore, the authors elaborate on recent approaches applied for measuring social impact at the BoP and investigates the implications of BoP characteristics for potential social impact measurement methods based on this. This thesis concludes that measurement dimensions related to the groups of *economic benefits* (including e.g. changes in local economy and material well-being) and *fundamentals* (including e.g. changes in infrastructure and quality of institutions) are of highest importance when it comes to social impact measurement at the BoP. It is moreover concluded that differences in the characteristics of the initiating organisation affect the choice of measurement dimensions utilised. By being one of the first empirical approaches to this topic, this thesis moreover suggests valuable directions for further research.

Sammendrag

I nyere tid kan det oppdages et økende skifte mot behovet for en mer inkluderende form for kapitalisme i offentlige og vitenskapelige debatter. Dette er drevet av observasjonen at forsømmelse av sosial og miljømessig innvirkning mens du forfølger profitt, kan føre til forbedring av noen på bekostning av andre. BoP-proposisjonen er en tilnærming som antyder at det er mulig å kombinere lønnsomhet med sosial innvirkning. Selv om denne foreslåtte tilnærmingen har blitt undersøkt mye de siste to tiårene, er aspektet av sosial innvirkning av BoP-intervensjoner fortsatt underundersøkt. Dette er tilfelle fordi teori og praksis viser et stort gap når det gjelder målinger av sosial innvirkning på BoP. Denne oppgaven bidrar til å lukke dette gapet ved å utdype faktorene som må vurderes når man utvikler en metode for måling av sosial effekt for BoP. Den empiriske undersøkelsen som er utført ved bruk av blandede metoder, viser at måling av sosiale påvirkningsmetoder ved BoP må karakteriseres av høy grad av fleksibilitet for å være tilpassbar til spesifikke behov i lokale BoP-samfunn. Videre utdyper forfatterne nylige tilnærminger som er brukt for å måle sosial innvirkning ved BoP og undersøker implikasjonene av BoP-karakteristikker for potensielle målinger av sosial innvirkning basert på dette. Denne oppgaven konkluderer med at måledimensjoner relatert til gruppene av økonomiske fordeler (inkludert f.eks. Endringer i lokal økonomi og materiell velvære) og grunnleggende forhold (inkludert f.eks. Endringer i infrastruktur og institusjonskvalitet) er av største betydning når det gjelder måling av sosial effekt i styret. Det konkluderes dessuten med at forskjeller i egenskapene til den initierende organisasjonen påvirker valget av måledimensjoner som benyttes. Ved å være en av de første empiriske tilnærmingene til dette emnet, foreslår denne avhandlingen dessuten verdifulle retninger for videre forskning.

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List of Abbreviations

BOP. *Bottom of the Pyramid*

EVPA. *European Venture Philanthropy Association*

GDP. *Gross domestic product*

MNC. *Multinational Corporations*

PSIA. Poverty and Social Impact Analysis

SROI. Social Return on Investment

WoS. *Web of Science*

1 Introduction

This thesis aims at contributing to current social impact measurement and Bottom of the Pyramid (BoP) literature by elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP. Thereby, this thesis has been investigating on how social impact measurement should be approached at the BoP, and which measurement dimensions should be utilised. For this purpose, a mixed methods research design has been applied while building upon the knowledge gained through a comprehensive literature review previously conducted by the authors of this thesis.

The fact that globalisation and capitalism enabled economic growth of Western economies at the cost of developing countries and the environment increasingly shapes public debates. As a result, more inclusive forms of capitalism and sustainability are receiving higher attention among scholars and practitioners than ever before.

One of the early approaches to combining dynamics of capitalism with prosperities of the disadvantaged is the BoP proposition. Initially conceptualised by Prahalad and colleagues, the BoP proposition suggests that multinational corporations (MNCs) with sufficient resources and persistence to conduct business at the BoP will be rewarded by "growth, profits, and incalculable contributions to humankind" (Prahalad & Hart, 2002: 2). Since its initial publication in the early 2000s, the BoP approach's ability to "lift billions of people out of poverty and desperation and to avert the […] environmental meltdown" (Prahalad & Hart, 2002: 2) has been widely discussed among scholars of various disciplines. Literature shows that there still is little consensus regarding how the BoP can be defined and served and whether doing so will lead to desirable outcomes for the parties involved, both socially and economically (Kolk, Rivera-Santos, & Rufin, 2014; Sutter, Bruton, & Chen, 2019). This is because most scholars and practitioners focus on the elaboration of economic effects of BoP projects from the perspective of the initiating organisation, while neglecting social and environmental implications for the local communities. One reason for this may be that evaluating traditional economic growth objectives is a well-developed field in theory and practice, whereas the structured assessment of social impacts remains a challenge and gap in literature, especially with regards to the BoP (e.g. Austin, Stevenson & Wei-Skillern, 2006; Clark, Long, Rosenzweig, & Olsen, 2004; Dees & Anderson, 2003; El Ebrashi, 2013; Goyal, Sergi, & Jaiswal, 2016; Luke, Barraket, & Eversole 2013; Parenson, 2011).

Measuring social impact has become more and more inevitable for organisations, since conscious and deliberate interactions with human and environmental resources are demanded by various stakeholders. Organisations increasingly have to prove to have taken responsibility for social and economic impacts in order to respond to calls for more holistic approaches to conducting business and maintain a competitive

edge (e.g. UN sustainable development goals) (BlackRock, n.d.; United Nations, n.d.). It is thus important that the social impact of such organisations can be measured and made explicit (Desa & Koch, 2014). For this purpose, several social impact measurement methods have been developed and applied by scholars and practitioners. This variety of tools uses different approaches and assumptions in the measurement of social impact. Further, while these measurement methods might be applicable in Western contexts, results of a literature review previously conducted by the authors of this thesis show that they follow certain agendas and are thus not, or only to a limited extent, applicable for measuring social impact at the BoP. This is because the BoP differs significantly from Western contexts in its characteristics and concerns.

Previous approaches to measuring social impact at the BoP are often limited to case studies or individual assessments, and only rarely apply structured approaches and conceptual developments to social impact measurement (e.g. Nielsen & Samia, 2008; Webb, Kistruck, Ireland, & Ketchen, 2010). As a result, there is a gap in BoP and social impact literature on social impact measurement at the BoP. Only little is known about how social impact should be measured at the BoP, which measurement dimensions should be utilised and whether characteristics of the initiating organisation affect the choice of measurement dimensions. This thesis contributes to closing this gap by aiming for elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP while answering the following three research questions:

RQ1: How should social impact measurement be approached at the BoP?

RQ2: Which measurement dimensions should be utilised when measuring social impact at the BoP?

RQ3: How do characteristics of initiating organisations affect the choice of measurement dimensions for measuring social impact at the BoP?

For better readability, short versions of the RQs have been used within this thesis. Thus, RQ1 is referred to as *How should Social Impact be Measured?*, RQ2 is referred to as *What should be Measured?* and RQ3 is referred to as *Who should Measure What?*.

In order to answer the research questions, this thesis revised insights developed from the authors' literature review (conducted earlier as part of the project thesis, and briefly presented here), and prepared them for elaboration through an empirical investigation by utilising a mixed methods research design. Thereby, the three RQs have been investigated quantitatively through an online survey as well as qualitatively through semi-structured expert interviews. Results present insights on how social impact should be measured at the BoP, what measurement dimensions should be assessed and how the characteristics of initiating organisations affect the choice of the measurement dimensions. In doing so, this thesis contributes to current

literature by laying the foundation for new approaches to developing a social impact measurement method for the BoP.

These contributions are achieved by first, reviewing the literature. Thereby, insights from the literature review done by the authors have been revised and further complemented in order to allow for quantitative and qualitative investigation of this topic. Secondly, the applied methodology is elaborated on by describing this thesis' research design, data collection and data analysis. Thereafter, findings of both quantitative and qualitative research are presented enabling comprising analysis of the topic. Lastly, results and analysis are discussed in light of the literature for the purpose of emphasising the aforementioned contribution.

2 Theoretical Background

2.1 Introduction to the Bottom of the Pyramid

According to a comprehensive study by the World Bank in 2007, the BoP comprises around four billion people (Hammond, Kramer, Katz, & Tran, 2007). This, being defined by taking incomes below USD 3,000 per year in local purchasing power as a proxy, indicates that a significant part of the world's population belongs to the BoP. The World Bank in the same study reveals that the BoP represents a global consumer market with a size of around USD 5 Trillion, backing the initial proposition of the BoP being a market with high potentials.

In order to better understand what the BoP is all about, scholars often refer to the initial article by Prahalad and Hart (1999). In this 1999 working paper, Prahalad and Hart firstly conceptualised the combination of conducting profitable business on the one hand while serving the poor by having positive social impacts on the other hand. Consequently, an increasing number of firms and scholars of different disciplines developed an interest in the BoP market, over the last decades (London & Hart, 2004; Simanins & Hart, 2009; Sutter et al., 2019; Webb et al., 2010; Prahalad & Hart, 1999; Prahalad & Hammond, 2002a; Prahalad & Hammond, 2002b; Prahalad & Hart, 2002).

Within subsequent years of scientific research, several debates as well as approaches and definitions among this topic have emerged (Kolk et al., 2014). Some have argued that the size of the BoP is overestimated and scholars like Karnani (2007, 2009) estimate that only 1.5 billion people live at the BoP. Current literature reviews point out that there still is little consensus among scholars regarding how the BoP can be defined and whether it will lead to desirable outcomes for all parties involved (Kolk et al., 2014; Sutter et al., 2019). Further, the initial idea that MNCs can search for a fortune at the BoP and simultaneously help alleviate poverty has been discussed by both proponents and opponents of the BoP approach (Hammond et al., 2007; Karnani, 2009).

Firstly, even though the BoP proposition focused on MNCs, other organisations do serve as initiators of BoP endeavours as well. Experience at the BoP shows that besides MNCs, large local firms, local small and medium sized enterprises (SMEs), non-governmental organisations (NGOs) or governments can serve as initiators for BoP initiatives (Arnould & Mohr, 2005; Brinkerhoff, 2008; Prahalad & Hammond, 2002a; Prahalad & Hammond, 2002b; Prahalad & Lieberthal, 1998; Kolk et al., 2014). In fact, many BoP initiatives appear to be introduced by small and local firms rather than large multinational firms. Literature also shows that not all BoP initiatives are introduced by for-profit firms, even though the core premise of the BoP concept is to combine poverty alleviation with profitable business projects (Altman, Rego, & Ross, 2009; Anderson & Kupp, 2008; Chesbrourgh, Ahern, Finn, & Guerraz, 2006).

Secondly, despite the fact that social impact is a central consideration at the BoP, measurement of social impact of BoP interventions also remains difficult. The issue of measuring impacts of BoP-approaches has been discussed without leading to sufficient results (e.g. London, 2009). Most articles reviewed by Kolk et al. (2014) for example, consider economic impacts using proxies like profit, price, revenue or growth to measure the outcome (Kolk et al., 2014). In general, researchers argue that BoP initiatives have positive effects on organisation performance, even though direct assessments are difficult. However, some articles consider social impacts of BoP initiatives as well. For social impacts, there is a wide variety of proxies, containing education, health care, water quality and others. Nevertheless, from reviewing highly influential BoP literature, Kolk et al. (2014) concluded that BoP projects – in theory and practice – are lacking a credible way to objectively measure social impact, since this has not been done sufficiently in the past but is urgently needed.

Another issue in BoP literature is that only few empirical studies have been conducted on the topic (Kolk et al., 2014). This low amount of empirical examinations may be caused by the large variety of actors, approaches, definitions and discussions about the BoP, which complicate the assessment of BoP interventions (Kolk et al., 2014). Thus, most articles in scientific literature only investigate the topic using either conceptual methodologies or case studies (Kolk et al., 2014). This thesis addresses this gap and aims to elaborate on factors that need to be considered when developing a social impact measurement method for the BoP.

In order to do so, the following section starts by analysing the topic of social impact measurement at the BoP in more detail before leading over to concrete issues of measuring social impact at the BoP.

2.2 Introduction to Social Impact and Social Impact Measurement

Within literature, social impact has been defined several times among various articles. Definitions thereby might overlap with terms such as social value creation and social return (Clark et al., 2004). For an exemplary definition of social impact, it can be referred to Rawhouser, Cummings and Newbert (2019). The authors define social impact as beneficial outcomes resulting from prosocial behaviour. These outcomes are enjoyed by the intended targets of that behaviour as well as by the broader community (i.e. individuals, organisations or environments). Another example originates from Clark et al. (2004), using a social science definition to delineate the term impact. They understand impact as the portion of the total outcome that happened as a result of an activity of a venture, above and beyond what would have happened anyways without the intervening activity. Similarly, Clifford (2014) defines social impact in reference to four key elements: (1) the value created as a consequence of someone's activity, (2) the value experienced by beneficiaries and all others affected, (3) an impact that includes both positive and negative effects, and

(4) an impact that is judged against a benchmark of what the situation would have been without the proposed activity (Noya, 2015).

Within this thesis, these definitions are used to conduct a joint definition, which suggests that social impact is a value that is firstly resulting from the outcomes of an activity; secondly, that these outcomes can comprise of both positive and/or negative effects; and thirdly, following the suggestions by Clark et al. (2004) and Clifford (2014), is above and beyond what would have happened anyway.

While definitions towards social impact itself often have some common ground, approaches to social impact measurement show significant differences (e.g. Emerson, Wachowicz, & Chun, 2000; Gentile, 2000). While some argue for measuring social impact following traditional welfare economics approaches, others reason for utilising Sen's capability approach (for more information see AtKisson & Hatcher, 2001; and Sen, 1985a, 1985b, 1999). From a procedural perspective, however, most approaches approximate to the social impact value chain, consisting of input, activity, output, outcome and impact (e.g. Clark et al., 2004).

Especially differentiating between outputs and outcomes of certain activities is an important point often stressed in literature with regards to the social impact value chain and approaches to measuring social impact. (e.g. Clark et al., 2004; Molecke & Pinkse, 2017; Nicholls, 2009). In general, inputs (e.g. total costs of a project) enable activities aiming for some kind of change. Activities in turn lead to outputs. Outputs are results that can be measured or assessed directly. Outcomes, however, are ultimate changes that an activity achieved among target stakeholders. This for example can be improved education, better levels of health or other longitudinal factors. While outputs can be measured by counting occurrences within a timeframe in which they have either happened or not, outcomes are more difficult to isolate and account for (Hehenberger, Harling, & Scholten, 2013; Molecke & Pinkse, 2017). Impacts in turn are outcomes that have been adjusted by what would have happened anyway (Clark et al., 2004; Hehenberger et al., 2013; Nicholls, 2009).

The European Venture Philanthropy Association (EVPA) furthermore developed a deviated social impact value chain, based on the assumption that the first three steps of the value chain, inputs, (activities), and outputs are internal factors of the intervening organisations, directly connected and thus easy to measure (Hehenberger et al., 2013). The last two steps of the social impact value chain, outcomes and impacts, are considered to be external factors outside the scope of organisational activities and hence difficult to measure. Being out of the scope of organisational activities furthermore does not mean that it is also out of scope in terms of accountability.

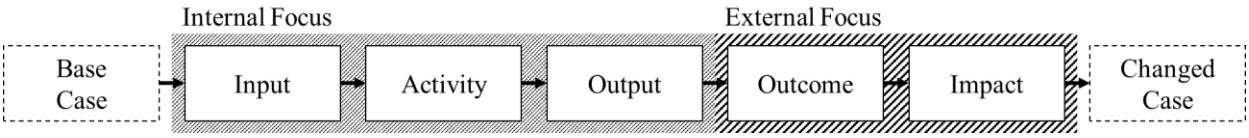

Figure 1: Social impact value chain (own illustration based on Hehenberger et al., 2013)

When approaching social impact measurement, it is thus important to keep in mind the impact value chain in order to correctly distinguish between output, outcome and impact (Hehenberger et al., 2013; Nelson & Ratcliffe, 2010). According to EVPA, it is furthermore important to consider side effects and other influencing factors that possibly affect the impacts created. Besides discounting effects by what would have happened anyway (deadweight), EVPA also suggests considering the actions of others (attribution), the reduction of certain effects over time (drop off) and the extent to which outcomes displaced potential other positive outcomes (displacement). This in turn is necessary, when analysing impacts rather than outcomes. In this case, effects of the actions of others as well as unintended consequences have to be considered.

2.3 Overview of Approaches to Measuring Social Impact on a General Level

As already mentioned, the authors of this thesis have previously conducted a structured literature review on social impact measurement at the BoP. Part of this literature review aimed for extracting the entirety of social impact measurement methods that are discussed in literature on a general level, without specifically considering the BoP context. This was considered as being a necessary step of the review in order to later investigate each method's suitability for the BoP. The objective, repeatable and robust selection process applied in the literature review resulted in 38 distinct measurement methods that have been extracted from the 200 most relevant articles in the general field of social impact measurement (for an overview of the search terms applied for the method extraction see appendix A.0.1).

Thereafter, the relevance of each method has been investigated by again applying structured searches for each of the 38 methods in the Web of Science (WoS) database. This process resulted in 945 articles and a total of 16,287 citations. The ten most cited methods thereby made up for 791 results and a total of 13,231 citations, indicating that these methods received significantly higher attention among scientific research than the remaining 28 methods citations (for a detailed overview of the search terms and results per method see appendix A.0.2). The amount of citations has carefully been used as a proxy for the quality of publications in this process (e.g. Aksnes, Langfeldt, & Wouters, 2019).

This process resulted in the following methods: *Social and Extended Life Cycle Assessment, Theories of Change, Wood's Measurement Approach, Poverty and Social Impact Analysis (PSIA), Benefit-Cost Analysis, Fortune Corporate Reputation Index, Balanced Scorecard, Blended Value Accounting, Ongoing Assessment of Social Impacts,* and *Social Return on Investment (SROI).* Results for the method *Ongoing*

Assessment of Social Impacts were not referring to a specific measurement method but rather covering impact assessment on a general level. Thus, the method *Sustainability Balanced Scorecard* has been chosen instead as it is the eleventh method from the resulting list.

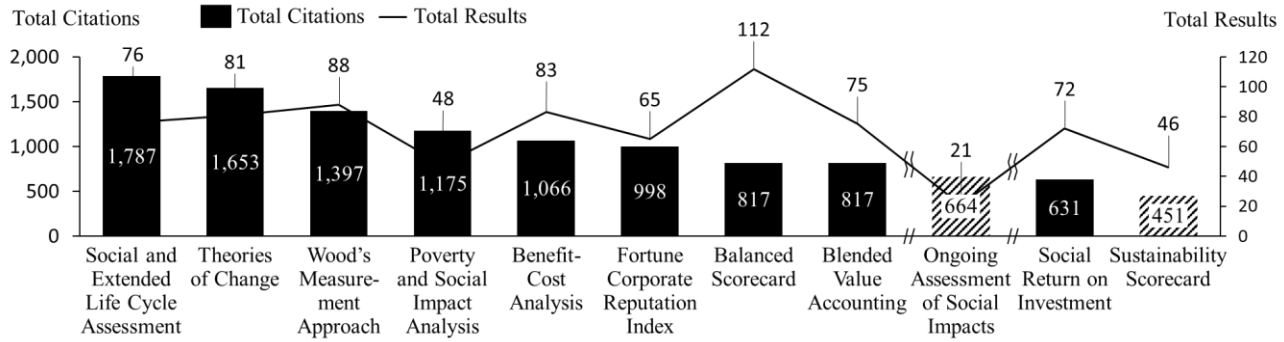

Figure 2: Social impact measurement methods by total citations and total results

Even though selected methods already passed the extensive preselection process, their approaches towards measuring social impact are still varying. While some methods like *Theories of Change* or *PSIA* for example base the assessment of social impact on assumptions and causal relationships, other methods like *SROI* or *Benefit-Cost Analysis* aim for a monetary expression of the social impact made. Yet other methods like *Blended Value Accountin*g go completely different ways and argue e.g. for a measurement approach that adapts to the capabilities and circumstances of the respective object of measurement.

Within the literature review, some methods under analysis showed several shortcomings for the application at the BoP. First of all, the methods are all characterised by a high degree of complexity. This may not only be reasoned in the structure of the actual approach but in how it relies on an understanding of the respective organisation and the targeted environment. It is thus important to get a very precise picture of the individual social impact value chain (Hehenberger et al., 2013; Molecke & Pinkse, 2017). When analysing social impact measurement methods, scholars often point out that it is of particular importance to understand how certain activities create outputs and how these again lead to outcomes which in turn result in impacts. However, understanding this is a challenging task for organisations. Often, the high complexity of social systems and the long timespan between performed activities and resulting impacts as well as the large number of influencing factors make it difficult to monitor effects of certain activities. This has to be considered by the respective measurement method. Poor or inconsistent approaches to an organisation's impact value chain will then result in confusion and misleading outcomes. Secondly, the large variety of approaches leads to decreasing comparability between organisations, measurement approaches and target groups. Depending on the target group and desired impacts, it is also important to use the right variables for measuring achieved impacts. When proxies serve as indicators for impacts, the relationship between proxy and impact has to be analysed carefully in order to minimise the risk of misleading results. This again

requires in-depth understanding of the underlying social impact value chain. (Durand, Rodgers, & Lee, 2019)

An additional challenge arises from data availability. When selecting appropriate indicators, the key challenge lies in guaranteeing their quality and integrity. Measurement approaches can only be as reliable as their underling construct of assumptions and information (Durand et al., 2019; Hehenberger et al., 2013; Molecke & Pinkse, 2017). Indicators that are not used carefully can be highly resource consuming while only generating data with little or no value, and thus evoke misleading results within the social impact measurement method applied. That for, more than one, at least two or three, indicators should be used in order to draw significant conclusions. Especially when it comes to social impacts, the availability of data and the selection of appropriate indicators constitutes a bottle neck (Hehenberger et al., 2013).

When analysing this large variety of existing general social impact measurement methods within the literature review conducted recently within this thesis, the authors concluded that none of them is unreservedly suitable for measuring social impact at the BoP. Several limitations and particularities have to be considered in order to avoid misleading results. Within the following chapter, this thesis will elaborate on the measurement approaches that have been utilised in BoP literature and will furthermore show the specific characteristics that result from the BoP context. Thereafter, in section 3.2, the authors build upon the ten social impact measurement methods described above as well as the ones applied in BoP literature in order to extract measurement dimensions for empirical investigation to advance developments towards a method for measuring social impact at the BoP.

3 Reviewing the Literature

While the theoretical foundations of the BoP proposition and the concepts of social impact as well as social impact measurement have been discussed in the previous sections, this chapter focuses on reviewing the literature regarding the three research questions. Thereby, recent approaches to measuring social impact measurement at the BoP will be analysed and characteristics of measuring social impact at the BoP will be derived. Subsequently, measurement dimensions will be extracted from literature and elaborated on in more detail. Lastly, organisational characteristics that have been used for context creation among recent approaches to measure social impact at the BoP will be extracted and discussed.

3.1 How should Social Impact be Measured?

For the purpose of investigating the question *How should Social Impact be Measured?,* this section firstly, gives an overview of measurement approaches that have recently been used in BoP literature. In order to do so, BoP literature has been searched structurally and all approaches that have been applied for the purpose of measuring social impact at the BoP have been extracted. While most of the approaches utilise case studies, only two articles employ standardised social impact measurement methods. This contradicts to current literature since scholars point out the importance of a rather high degree of standardisation when it comes to social impact measurement. In order to contribute to this discussion, characteristics of the BoP will be derived in sub-section 3.1.2 and their compatibility with a highly standardised measurement method will be challenged.

3.1.1 Recent Approaches to Measuring Social Impact at the BoP

With the intention of extracting recent approaches to social impact measurement at the BoP, two separate searches have been performed in the WoS database. The second search thereby aimed at challenging and complementing the findings of the first one. Both search terms are described more detail below. While performing the literature review, the number of articles describing different methods has been narrowed down by firstly, scanning through the titles and secondly, by reading the abstracts and texts of remaining articles. The general top-down character of this approach helped the authors to find specific cases and applications of measurement approaches and methods.

The first search performed in WoS included the keywords *BoP* (and its synonyms *base of the pyramid, bottom of the pyramid)* and *Social Impact* (and its synonyms *social effect, social implications*) on a topic level. After excluding articles with regard to general exclusion criteria such as language and type of journal, and screening of the titles of all results, 78 of the initial 253 found articles were selected as being of general relevance for the topic since they discuss social impact at the BoP. Reading the abstracts led to the rejection of 52 of them due to a lack of relevance, leaving 26 articles with intermediate to high relevance remain.

When subsequently reading those articles, another 13 were rejected as they discuss impact not exclusively in a social context. The remaining 13 articles were identified as being highly relevant for the topic and dealt with the aforementioned goals while discussing potential benefits and risks as well as real life examples of different methods at the BoP. Next to the keywords used in the first search, the second search additionally included the search terms of *measurement (measure**) and *assessment (assess)**. This resulted in a total of 51 articles. Due to the extra keywords, the search was even more specialised in terms of impact assessment at the BoP and was thus used as supplementary verification of the results. After following the top-down scanning approach mentioned above, three articles proved to be relevant. Two of those, namely Panum, Hansen, and Davy (2018) and Schrader, Freimann, and Seuring (2012) had already been found in the first search. Hence, the two searches resulted in a total of 14 relevant articles that are investigated within this chapter. The 14 articles have been classified as being relevant due to their significance concerning measuring and assessing social impact at the BoP.

Table 1: Overview of measurement methods and approaches recently used at the BoP

Methods	**Number of articles**	**Articles**
Case Study – single case	4	Gomez-Carrasco, Guillamon-Saorin, & Garcia Osma (2016); Patnaik & Bhomik (2019); Ramani, SadreGhazi, & Gupta (2017); Varga & Rosca (2018)
Case Study – multiple cases	8	Agrawal & Sahasranamam (2016); De Silva, Vorley, & Zeng (2019); Goyal, Sergi, & Jaiswal (2015); Goyal et al. (2016); Panum et al. (2018); Schrader et al. (2012); Singh & Agarwal (2017); Sinkovics, Sinkovics, & Mo (2014)
Capabilities Framework	1	Ansari, Munir, & Gregg (2012)
AtKisson Compass	1	De Beule, Klein, & Verwaal (2020)

While attentively reading the articles, the respective method section of each article has been inspected in more detail. What has been observed is that interestingly, twelve articles use case study approaches, either based on a single case or multiple cases, while analysing social impact on a qualitative level. Only two articles utilise quantitative approaches. One article refers to Sens's *Capabilities Framework* and one to the *AtKisson Compass*. In the following, these observations will be discussed in more detail.

Case Study Approaches

Twelve out of 14 articles use a qualitative case study approach in order to examine social impact at the BoP. The case study approach is an empirical inquiry suitable for the investigation of complex social phenomena (Yin, 2009). This approach is especially beneficial for the research of present-day issues, when boundaries between a phenomenon and its context are not clearly apparent or when research is aiming at understanding a specific phenomenon within its real-life context. The multi case-based approach, which is applied by eight articles, furthermore enhances reliability and generalisability due to within-case analysis and testing of findings across other cases. It has additionally been used as replication logic, providing stronger basis for evaluating the research questions and understanding the emergent phenomenon. (Yin, 2009)

Even though it seems like a standard approach, different articles show variations, e.g. in the way they define underlying constructs of social impact or conduct data collection. Sinkovics et al. (2014), for example, use a multiple case study approach and develop their analysis around five businesses set up in rural India. They individually define social value creation according to three core values namely sustenance, self-esteem, and freedom from servitude.

In order to collect the data needed, most case study authors conduct interviews. Singh and Agarwal (2017) for example interviewed corporate social responsibility and sustainability decision makers of ten large Indian organisations. Likewise, Patnaik and Bhomik (2019)'s work, which is based on a case of a civil society named the Samdrup Jongkhar Initiative located in South East Bhutan, gathered data primarily through interviews with the community and additionally used materials from international reports.

Goyal et al., (2016) argue for their choice of multi case-based research methodology by referring to emergent nature of the BoP phenomenon as well as the complexity of the BoP environment. Agarwal and Sahasranamam (2016) chose a similar approach in their case study referring to corporate social entrepreneurship in India but mention difficulties of measuring social impact. They are thus in line with extensive literature on social impact measurement, indicating that there is no guarantee for measurement results to be unbiased (Agrawal & Sahasranamam, 2016; Millar and Hall, 2013). One solution to this can be to include as many different perspectives as possible, e.g. by considering conducting interviews with governments and people among civil societies. However, not only in the context of the corporate social entrepreneurship initiative reasonable measures are necessary, as they allow quantitative reasoning behind theoretical propositions (Agrawal & Sahasranamam, 2016).

Non-Case-Study Approaches

Beside the case studies, two articles refer to other methods partly building on approaches well known to literature. The article by De Beule et al. (2020) builds upon the work of Atkisson & Hatcher (2001), which represents a traditional welfare economics view with regards to the underlying concept of social impact and social impact measurement. Ansari et al. (2012) on the other hand, ground their work on Sen's capability framework (for more information see Sen (1985a, 1985b, 1999)).

De Beule et al. (2020) investigate the correlation between social impact and financial performance of social for-profit enterprises at the BoP. They thereby define social impact as the effect an organisation's actions have on the wellbeing of the BoP community. Regarding their understanding of social impact, they are thus in line with Ansari et al. (2012)'s work. For their research in order to measure social impact, they use items from the *AtKisson Compass*. The *AtKisson Compass* is a quantitative measurement method that is built upon the Global Reporting Initiative and Dow Jones Sustainability Index (Atkisson & Hatcher, 2001). In De Beule et al. (2020)'s work, the approach has been additionally supplemented with elements taken from the *International Association for Impact Assessment* to provide a broad understanding of the social impact organisations have on the communities in which they operate. Generally, the *AtKisson Compass* is an analogy referring to the four directions of an actual compass and thus utilises four dimensions namely Nature, Economy, Society, and Wellbeing (Atkisson & Hatcher 2001). Thereby, they build their method on an approach called Daly's Triangle, which similarly focuses on different social impact dimensions, while seeing them as different hierarchical levels in a triangle. De Beule et al. (2020) use the compass to develop their comprehensive list of social impact measures, including indicators such as employment, income, safety, and life necessities, and investigate sample organisations' impact on local communities at the BoP through surveys. While discussing measurement dimensions, some of the indicators used by De Beule et al. (2020) have been further investigated in the context of this thesis as well (see following section 3.2).

Ansari et al. (2012) follow their own approach building on the *Capabilities Framework* developed by Sen (1999). As already mentioned in section 2.1, Sen (1985a, 1985b, 1999) argues that the economic wellbeing of the marginalised was best understood through their capabilities rather than traditional economic concepts. As the poor acquire and develop more capabilities, they may be able to take advantage of economic and social opportunities. This led to Ansari et al. (2012)'s approach in which poverty alleviation – a problem targeted to being resolved since its very first appearance among BoP propositions – is rather seen as a metric of wellbeing of people. However, measuring wellbeing is challenging. As suggested by Sen (1985a, 1985b, 1999), wellbeing should be measured through a combination of *functionings* and *capabilities* or in other words, a combination of the doing of individuals and their capacity to realise such doings. Following this work, Ansari et al. (2012) redefine poverty not just as a lack of income but rather as

a lack of capabilities and argue that any BoP business initiative must be evaluated on the basis of whether it improves capability transfer. The measure supporting this evaluation is social capital, which can either be enhanced between a particular community and other more resource rich networks or preserved in the community. In order to understand the construct of social capital, Ansari et al. (2012) propose three major components: (1) *structural* social capital which represents network ties and features like the density and configuration of such networks; (2) *relational* social capital which stands for trust and the specific type of the relationship, examples would be family ties, friendship, or business relations; and (3) *cognitive* social capital which represents shared values such as language, beliefs and norms. By proposing social capital as the means of capabilities development, Ansari and colleagues offer a new community-centric BoP approach of evaluating the overall contribution a business venture has, while enabling a better understanding of its impact on the local community.

What can be summarised is that the analysis of social impact measurement at the BoP generally shows a high number of qualitative assessments through case study approaches. Likewise, literature suggests that many existing BoP interventions investigate their contribution through case studies (e.g. Nielsen & Samia, 2008; Webb et al., 2010). As described above, however, this does not account for any form of standardised approach to that matter, as different cases show a certain amount of variations e.g. in their underlying conceptualisations. Furthermore, two cases have been found in which quantitative methods have been used to measure social impact. Nevertheless, due to the special conditions given at the BoP (see section 2.1), qualitative assessment especially through multiple case studies, as argued by Goyal et al. (2016), seems to be suitable to some extent.

In terms of the basic frameworks for the two quantitative approaches, it can be concluded that these differ due to their very nature. While the AtKisson Compass uses general dimensions represented by specific variables and indicators of traditional welfare economics, the idea of social impact measurement made by Ansari et al. (2012) builds on Sen's capability approach on poverty alleviation.

Hence, it is a legitimate question to ask whether standardised methods are applicable for measuring social impact at the BoP in the first place. Especially, when considering the complex nature of social impact as well as the special characteristics developing regions at the bottom of the economic pyramid embody.

In any case, the above-mentioned and recognizable observations indicate that a large majority of the methods used in literature apply individual alternatives and that no standardised procedure can be identified. More individual and flexibly applicable approaches with a low degree of standardisation might be required in order to measure social impact as case specific as possible.

3.1.2 Specific BoP Characteristics in the Context of Measuring Social Impact

The previous section shows that most approaches to social impact measurement at the BoP are based on individual alternatives to standardised methods, even though literature suggests that a certain degree of standardisation is desirable in order to e.g. deal with the complexity at the BoP (e.g. Austin et al., 2006; Dees & Anderson, 2003; El Ebrashi, 2013; Goyal, et al., 2016; Luke et al., 2013; Nielsen & Samia, 2008; Parenson, 2011; Patnaik & Bhomik, 2019; Webb et al., 2010). Thus, the question arises of why this is the case and whether there are specific characteristics of the BoP that prevent standardised methods from being utilised. Within this sub-section, characteristics of the BoP will be derived from literature and elaborated on in the context of social impact measurement. In that way, they contribute to answering the question of how social impact measurement should be approached at the BoP.

Table 2: BoP characteristics in the context of measuring social impact

Categories	Characteristics
Infrastructure	Lack of basic infrastructure setup (water, roads, electricity and technology)
Infrastructure	Inconsistent data availability and reliability
Governance	Lack of general standards and requirements for SIM
Market	Informal market setup
Market	Various customer profiles (culture, language and education)
Market	Various initiators with different intentions
Triple Bottom Line	Unbalance with regards to social, economic and environmental aspects

Table 2 above includes seven characteristics that are perceived as being crucial for measuring social impact at the BoP. In order to allow for greater and clearer perception, the characteristics of the BoP have been classified in four categories: infrastructure, governance, market, and triple bottom line. Embedding the characteristics in these four categories not only supports the readers clear understanding of the discussed topics but also contributes to the criteria's reliability and credibility.

The first category includes the *infrastructure* situation at the BoP and refers to two characteristics. Firstly, many BoP regions deal with a lack of basic infrastructure setups like electricity, water, roads, technology and transportation networks, especially across the rural and semi-urban areas. This might further complicate comprehensive reporting and thus highlight the second characteristic that refers to lacking data quality and consistency at the BoP. Often said (e.g. Durand et al., 2019; Hehenberger et al., 2013; Molecke & Pinkse, 2017), studies and results are only as good as their underlying data. Thus, social impact measurement

methods at the BoP are required to adapt flexibly to varying data availabilities. Overcoming aforementioned hurdles and building up initial infrastructures is important not only with regards to supporting development of disadvantaged communities but also with regards to assessing social impact of future projects.

The second category, *governance*, is represented by deficient general standards and requirements for social impact measurement (e.g. Nielsen & Samia, 2008; Patnaik & Bhomik, 2019; Webb et al., 2010). This BoP characteristic is further resulting in lacking availability of assessment methods and their comparability.

The third category summarises all *market* related issues of BoP countries and regions. Three characteristics and requirements have been derived within this category (Goyal et al. 2016, De Beule et al., 2020). Firstly, the *informal market setup* in which BoP projects are located, caused by low quality institutional environments, varying approaches to heterogeneous environments in various markets at various points in time, and substantiated by the different terms and conditions of each BoP project. De Beule et al. (2020) argue that advanced institutions support the effect of social impact on financial performance. These institutional issues arise from market informalities as well as the market-based competition at the BoP (De Beule et al., 2020). Secondly, the variety of customer profiles, which is on the one hand caused by the complex BoP environment due to different cultural backgrounds, language, or education, and on the other hand also results from differing proxies used to delimitate BoP target populations ranging from people's daily or annual income to regional factors (Goyal et al. 2016, De Beule et al., 2020). Next to customers, the third characteristic within this category also stems from the analysis of past BoP projects and refers to various initiators pursuing different intentions (Kolk et al., 2014). While the initial concept emphasised on MNCs as initiators, recent studies show that also large local firms, local SMEs or NGOs have revealed themselves as initiators of BoP projects. These different initiators furthermore have different characteristics (e.g. financial/ human resources).

Lastly, the category *triple bottom line* lies its concerns explicitly towards the observable unbalance with regards to the three pillars of sustainability: the social, economic and environmental perspective. This characteristic results from the initial claim of BoP projects concerning the reconciliation of serving the poor while conducting business profitably. While this claim remains central to BoP approaches, analysis of recent BoP projects shows that the number of non-profit organisations operating at the BoP increases (Kolk et al., 2014). The fact that BoP projects are often not exclusively limited to economic and social effects further requires social impact measurement methods at the BoP to holistically consider effects following the triple bottom line approach without neglecting one of the three pillars.

Overall, when reviewing the literature regarding how social impact measurement should be approached at the BoP, scholars, on the one hand, suggest that a certain degree of standardisation is required and desirable. However, findings from literature, furthermore, indicate that standardisation is not always achievable for

two reasons. Firstly, recent approaches towards measuring social impact at the BoP are mostly based on individual alternatives. Secondly, characteristics derived in this sub-section indicate the necessity of individual adjustments to specific BoP characteristics. This implies that social impact measurement at the BoP should be approached rather flexible. However, further investigation is needed in order to eliminate potential disputes regarding this discussion.

3.2 What should be Measured?

3.2.1 Extraction of Dimensions for Measuring Social Impact at the BoP

In this thesis, twelve measurement methods have been analysed in more detail, comprising of ten generic social impact measurement methods extracted in a previous literature review (see section 2.3) as well as two measurement approaches that have been applied at the BoP (see sub-section 3.1.1). While analysing, a first indication regarding the suitability of certain methods under investigation for measuring social impact at the BoP was visible. While building upon the methods under investigation and additionally reviewing the literature, this sub-section derives dimensions, variables and proxies for measuring social impact at the BoP. Below, the methodology of variable selection will be outlined, thereafter an overview of the final set of measurement dimensions and related variables and proxies applicable to the BoP will be provided. This will serve as a basis for quantitative and qualitative research within this thesis.

The determination of technical variables for measuring social impact at the BoP has been performed in three steps. Firstly, all variables of the twelve measurement methods under investigation have been extracted. Secondly, extracted variables with sufficient relevance have been used as basis and mapped to a set of variables found in literature (Kato, Ashley, & Weaver, 2017; Smith & Vanclay, 2017; Vanclay, 2002) in order to ensure completeness of the entirety of variables under investigation. Thirdly, variables have been grouped into dimensions which in turn have been merged into overarching categories in order to attain conciseness and reduce complexity.

In order to extract all variables from the ten generic social impact measurement methods obtained in a previous literature review (see sub-section 2.3), all methods have been analysed in close detail on two levels. Firstly, on the level of the underlying concept of each method and secondly, on the level of its distinct variables. Analysis on the first level revealed that three of the ten methods, namely *Cost-Benefit Analysis*, *Balanced Scorecard* and *Sustainability Scorecard*, do not prescribe any variables for measuring social impact. The underlying concept of these three is rather designed to achieve maximum individuality in order to assess the social impact made by analysing the interrelation between actions and results throughout the social impact value chain in the specific context.

While analysing further, another three methods, namely *Theories of Change*, *Blended Value Accounting* and *SROI*, showed only limited applicability as they do not rely on predefined variables as well. The underlying concept of *Theories of Change* looks at a desired long-term goal and subsequently works back in order to identify desired outcomes that must be in place to achieve this goal. As a result, measurement methods based on the principle of *Theories of Change* do not require a certain set of variables but rather analyse interrelationships and results case-by-case. The second method without clear specification towards the measurement of social impact is *Blended Value Accounting*. This method builds upon the concept of blended value by responding to Emerson (2003)'s call for accounting measures that holistically reflect an organisations full value creation and destruction activities (Nicholls, 2009). Instead of imposing simple solutions to capturing multiple impacts of various variables, *Blended Value Accounting* embodies the important elements of experimentation and learning which also characterise social entrepreneurship. The *SROI* method enqueues into the list of methods without clear variables as well. *SROI* aims to ensure a project's comparability through expressing its value in a monetary way (Arvidson, Lyon, McKay, & Moro, 2013; Nicholls, 2009; Clark et al., 2004). Analog to *Theories of Change*, *SROI* includes an impact map that serves as a tool to understand the relationship between inputs, outputs, outcomes and impacts (Nicholls, 2009). Hence, due to the lack of variable of the aforementioned methods, they are inadequate for variable extraction at this point.

Consequently, the four remaining general methods, namely *Social and Extended Life Cycle Assessment*, *Wood's Measurement Approach*, Po*verty and Social Impact Analysis* and *Fortune Corporate Reputation Index*, as well as the two measurement approaches that have been applied at the BoP, namely *Capabilities Framework* and *AtKisson Compass*, serve as basis for deriving variables for measuring social impact at the BoP.

In order to achieve maximum completeness regarding selected variables, the resulting set of variables extracted from methods under investigations has been supplemented by variables defined by Vanclay (2002) as well as Smyth and Vanclay (2017) in their comprehensive literature reviews on conceptualising and measuring social impact. Furthermore, variables for measuring social impact in the context of the capability approach have been extracted from Kato et al. (2017).

Subsequently, the entirety of all variables from the aforementioned sources has been collected in order to extract the most comprehensive set of variables for a method to measure social impact at the BoP. The entirety has been built with the aim that each variable is mutually exclusive, and all variables are collectively exhausting. Furthermore, the goal was to reach collective exhaustion with the lowest possible number of variables in order to keep complexity at a manageable level. To do so, variables with a too narrow level of analysis have been excluded from the entirety of variables. A variable was considered as being too narrow

in the level of analysis, when it focuses strongly on elaborating effects on one specific side. This is the case for the variables originating from Fortune Corporate Reputation Index and Woods Measurement Approach (see section 2.3). Both measurement methods aim for measuring effects on a company's reputation or corporate social performance instead of focusing on the measurement of actual social impacts in the target area.

In order to achieve mutual exclusivity, the comprehensive list of Vanclay (2002) as well as Smyth and Vanclay (2017) served as staring point and variables originating from the measurement methods have been mapped with the technique described above. This resulted in a list of 51 variables. For each variable, one or more proxies for measurement have been extracted from literature in order to ensure ascertainability of each variable. In total, 85 proxies for the 51 variables have ben be found. A comprehensive list of all variables and proxies as well as their sources can be found in the appendix (see appendix A.1). In order to structure the variables and proxies found, the variables and respective proxies have been mapped to dimensions. These dimensions again have been grouped into categories to get a better overview. Thus, this thesis utilises categories, dimensions, variables and proxies for further investigating their suitability for measuring social impact at the BoP.

In total, the procedure described above resulted in five categories for measuring social impact at the BoP. These are designed to cover all relevant aspects on an overarching level. Categories include economic and material well-being, health, constitutions, environment and social well-being. On a more specific level of analysis, the categories can be broken down into 14 dimensions covering all 51 variables. The dimensions investigated in this thesis are material well-being, local economy, labour situation, bodily health, mental health, institutions, local11 political system, ecological environment, living environment, infrastructure, social well-being within community, individual social well-being, equality and lastly, culture.

Table 3: Comprehensive list of categories, dimension and variables for social impact measurement at the BoP

Categories	**Dimensions**	**Variables**
Economic and Material Well -being	Material Well-being	Standard of Living
Economic and Material Well -being	Material Well-being	Income
Economic and Material Well -being	Material Well-being	Level of Material Wealth

Economic and Material Well -being	Material Well-being	Economic Dependency and Vulnerability
Economic and Material Well -being	Local Economy	Level of Unemployment
Economic and Material Well -being	Local Economy	Distribution of Local Economy
Economic and Material Well -being	Local Economy	Transfer and Taxes
Economic and Material Well -being	Local Economy	Savings, Loans & (Micro)Credit Access
Economic and Material Well -being	Local Economy	GDP
Economic and Material Well -being	Local Economy	Inflation
Economic and Material Well -being	Labour Situation	Employment Status
Economic and Material Well -being	Labour Situation	Workload
Economic and Material Well -being	Labour Situation	Working / Labour Conditions
Health	Bodily Health	Primary Life Necessities (Nutrition, Air, Sanitation)
Health	Bodily Health	Actual Health
Health	Mental Health	Mental Health
Constitutions	Institutions	Quality of Education
Constitutions	Institutions	Quality of Health Facilities (Hospitals, Doctors, etc.
Constitutions	Local Political System	Political Activism
Constitutions	Local Political System	Workload and Viability of Government or Formal Agencies

Constitutions	Local Political System	Workload and Viability of NON-Government or Informal Agencies
Constitutions	Local Political System	Integrity of Government
Constitutions	Local Political System	Legal Rights and Human Rights
Constitutions	Local Political System	Political Liberties, Participation and Civil Rights
Environment	Ecological Environment	Natural Resource Assets (individual/common): Forests, Waterbodies, Cropland & Pasture, etc.
Environment	Ecological Environment	Climate Change (Natural Disaster)
Environment	Ecological Environment	Biophysical Changes
Environment	Living Environment	Quality of Environment
Environment	Living Environment	Physical Quality of Housing
Environment	Living Environment	Social Quality of Housing
Environment	Living Environment	Personal Safety
Environment	Living Environment	Crime and Violence
Environment	Living Environment	Media – Radio, Newspapers, Television, Internet
Environment	Infrastructure	Access to Education
Environment	Infrastructure	Access to Health Facilities (Hospitals, Doctors, etc.
Environment	Infrastructure	Adequacy of Social Infrastructure
Social Well-Being	Social Well-Being within Community	Memberships in Sociocultural Organisations
Social Well-Being	Social Well-Being within Community	Changed Demographic Structure
Social Well-Being	Social Well-Being within	Social Tension and Violence

Social Well-Being	Social Well-Being within Community	Community Cohesion, In-migration & Out-migration
Social Well-Being	Social Well-Being within Community	Community Perceptions of Project, Conflict & Legacy Issues
Social Well-Being	Social Well-Being within Community	Relational Social capital – Trust and the Type of Relationship
Social Well-Being	Individual Social Well-Being	Autonomy
Social Well-Being	Individual Social Well-Being	Uncertainty
Social Well-Being	Individual Social Well-Being	Frequency of social activities
Social Well-Being	Individual Social Well-Being	Aspirations, Fears, Expectations
Social Well-Being	Individual Social Well-Being	Satisfaction with Leisure Time
Social Well-Being	Equality	Gender Equality
Social Well-Being	Equality	Impact Equality
Social Well-Being	Equality	Access to Legal Advice
Social Well-Being	Culture	Cultural Values

3.2.2 Specification of Dimensions for Measuring Social Impact at the BoP

In combination with the associated categories, dimensions give a precise indication of what is being assessed. Variables and proxies in turn give insights into how something is assessed. Within this thesis, further investigation will be performed on category and dimension level in order to keep complexity at a manageable level. The authors have considered variables and proxies as being too detailed for further analysis. Nevertheless, variables and proxies will serve the purpose of deepening the understanding for social impact measurement at the BoP and can additionally serve as valuable indication for scholars and practitioners. As stated above, the comprehensive list can be found in appendix A.1.

Within this sub-section, there will be a paragraph for each category containing a brief description and specification of the related dimensions in order to argue for their BoP suitability and to justify the importance of each dimension for measuring social impact at the BoP.

Economic and Material Well-being

The category economic and material well-being considers the three dimensions material well-being (e.g. personal and family income, economic success, standard of living, and level of economic wealth like property, assets, and land ownership), local economy (e.g. level of unemployment, distribution of local economy, and savings, loans and (micro-) credit access) and labour situation (e.g. employment status, workload, working conditions).

Economic impacts and material well-being relate to the wealth and prosperity of both individuals and communities. While employment opportunities, income and property prices are often used in industrialised countries, Vanclay (2002) refers to issues such as the workload of a person, which is the amount of work that is required in order to live reasonably as being important in developing countries. However, literature often refers to material well-being, specifically income, as being of high importance for people at the BoP as well given its huge impact on their general well-being. An individual's or household's stock of assets affects their overall ability to unlock opportunities and the resilience to shocks such as political instability or adverse weather (Smyth and Vanclay, 2017). People also depend on a wide range of livelihood activities to support their families. According to Smyth and Vanclay (2017), such livelihood activities can either be very basic, e.g. land or water based, or rather economic, e.g. enterprise or wage based. In literature, material wealth and property ownership have been measured as income or wealth (e.g. Battiston, Cruces, Lopez-Calva, Lugo, & Santos, 2013; Klasen, 2000), home and land ownership (e.g. Clark & Qizilbash, 2008; Santos, 2013), and the ownership of other assets, such as vehicles (e.g. Azevedo & Robles, 2013; Trani, Bakhshi, & Rolland, 2011). However, according to Kato and colleagues (2017) listing the ownership of assets instead of household income data, helps to identify less privileged groups in a community.

Furthermore, the local economy in a region or country has a high impact on the material well-being of individuals living in that region or country (Mitra, 2013; Smyth & Vanclay, 2017). Part of this dimension is the level of unemployment in a community and the distribution of the local economy. The disappearance of economic systems and structures in one region that can lead to significant changes for the people living in this region. This is related to the dimension equality which will be discussed below as part of the category social well-being. In literature, this dimension is mainly measured through percentage of unemployment (e.g. Brandolini & D'Alessio, 1998; Vanclay, 2002; Wagle, 2014), savings, loans & (micro) credit access (Smyth and Vanclay, 2017) and country level statistics such as GDP (e.g. Mitra, 2013).

The labour conditions under which people undertake aforementioned livelihood activities are an important contributor to well-being as well (Anand et al., 2009, Dubois & Trani, 2009). The dimension labour situation includes employment status (e.g. Dubois & Trani, 2009), job prestige (e.g. Brandolini & D'Alessio, 1998), and work-related opportunities (e.g. Anand et al., 2009). In literature, these measurements are often used to show individuals' general well- being status.

Health

"Health issues are social issues." (Vanclay, 2002: 202) Within this thesis, the topic of health is represented by the two dimensions bodily health (e.g. primary life necessities such as nutrition, air, and sanitation, actual health conditions, life expectancy, crude birth rate, health insurance coverage) and mental health (e.g. mental and psychological well-being, the ability to focus and concentrate, freedom from stress and lack of sleep).

With regards to the aforementioned quote, Vanclay (2002) indicates that an assessment of the impact on health situations is needed as a process to identify the social impacts on a comprehensive level. In literature, there is a wide range of health indicators used. Adequate nutrition, actual and perceived health and fertility for example are indicators that are likely to be important from a social perspective. Death in this regard is possibly the most severe impact that can be experienced by an individual, and also has major consequences for other members of the family or household, e.g. if the deceased was a major contributor to the household economy. Death further has a community level impact in terms of the loss of human and social capital. (Vanclay, 2002)

In their 2005 article, Anand and colleagues confirm Veenhoven (1994)'s findings concerning the relation between the happiness or well-being of people and their health condition. Poor health that restricts activity and limits an individual's ability to carry out daily activities such as work and generation of income, can thus reduce overall satisfaction. Life capability is according to Nussbaum (2001) related to health, specifically to bodily health. The logic behind this is that a longer life expectancy reflects better institutional or social arrangements. This is an example for the interrelationships all dimensions have as life expectancy not only reflects upon health conditions but also quality of institutions which is discussed below as part of the category constitutions. In literature, measurement of this dimension includes perceived health level (e.g. Batana, 2013; Yu, 2013), access to health facilities and doctors (e.g. Chiappero-Martinetti, 2000; Dubois and Trani, 2009; Lelli, 2001; Trani, Biggeri, & Maoro, 2013), access to water and sanitation (e.g. Lechman, 2014; Qizilbash & Clark, 2005), housing conditions (e.g. Battiston et al., 2013), and nutrition (Anand et al., 2005). Specifically in terms of mental health, literature refers to psychological well-being and the ability to focus or concentrate, lack of sleep and feelings of unhappiness and depression which are all expected to lead to a negative effect on overall satisfaction (Anand et al., 2005; Anand et al., 2009).

Constitutions

The category constitutions includes the dimensions local political system (e.g. the workload and viability of (non-) government and (in-) formal agencies, the integrity of the government (as well as the topic of legal rights and human rights) and institutions (quality of education and health facilities, quality of services and ongoing funding and maintenance arrangements). According to Smyth and Vanclay (2017), basic human rights that include health and nutrition of the family, are the most fundamental needs in order to achieve a minimum level of well-being. In this thesis, these fundamental aspects are included in the dimension local political system. A nation's government has a significant impact on the lives of the people. The complex character and multi-layered concept of governance makes it difficult to measure this dimension. Mitra (2013) refers to governance indicators as being *composite indicators*. They try to capture various proportions involved in the concept of what is considered good governance by agencies, organizations and scholars interested in the topic. In literature, measures for this dimension are political freedom and participation as well as human rights (e.g. Baliamoune-Lutz, 2004; Mitra, 2013), fair elections (e.g. Wagle, 2014), safety and security, rule of law, transparency and corruption, and other rights (e.g. Clark & Qizilbash, 2008; Mitra, 2013).

In terms of the political and governance situation, also the dimension regarding quality of institutions plays an important role. As previously shown (see sub-section 3.1.1), De Beule and colleagues (2020) stress the importance of the relationship between institutional quality and its positive effect on how social impacts affect the performance of organisations (Smyth & Vanclay, 2017). The quality of institutions is of high importance especially at the BoP, given the fact that BoP regions are characterised by low-quality institutional environment. Within this thesis, the dimension concerning quality of institutions is mainly defined by the quality of services that include e.g. education and health facilities. It is thereby closely linked to the infrastructure dimension.

Environment

The category environment is rather broad and includes the three dimensions ecological environment (climate change, biophysical changes, natural resource assets such as forests, waterbodies, cropland and pasture), living environment (quality of physical and social housing, crime and violence) and infrastructure (access to health and education facilities, adequacy of physical and social infrastructure) (Smyth & Vanclay, 2017).

For many livelihood activities, access to natural resources such as land, water bodies, and forests is necessary. While access to these is primarily governed by community or traditional and political institutions, a sustainable and secure ownership structure that provides certain degrees of stability is important, as it can enable investment and development. However, an in-depth understanding of such

ownership arrangement that captures all interests and competing demands regarding land ownership and land use is critical in order to minimize disputes and project delays. At the BoP, interventions can have impacts on the access to such natural resources as well as the demanded ecosystem services including e.g. crops, livestock, fish, timber, fresh-water or biodiversity (Smyth & Vanclay, 2017). Within this thesis, this topic obtains the necessary attention through the dimension ecological environment respectively interaction with ecological environment. In the context of capabilities literature, this dimension has been measured using indicators such as concern for other species (e.g. Anand et al., 2009) and information about sustainable farming (e.g. Grunfeld, Hak, & Pin, 2011). On a country level, Be´renger and Verdier-Chouchane (2007) used CO2 emissions as a proxy measure.

Furthermore, people need a stable and clean living environment, represented by e.g. physical as well as social quality of housing, in order to maintain their well-being (Slootweg, Vanclay, & Van Schooten, 2001; Smyth & Vanclay, 2017). Any depreciation to the air, water or other quality of environment indicators can negatively influence people's physical and mental health. Side effects of projects such as noise, dust, vibration, pollution, light, traffic detract from people's well-being. Another aspect of the living environment is the way in which people rely on the weather e.g., on seasonal rainfall, for their livelihoods. Extreme weather events or long-term changes in the climate can have fundamental impacts on people's livelihoods. Projects need to understand the likelihood of extreme weather events and climate change and support the construction of housing and the development of livelihoods that can adapt to these changes.

Lastly, infrastructure, a rather broad topic itself, is considered to be part of the category environment (Smyth & Vanclay, 2017). People's access to basic infrastructure and services such as healthcare, water and sanitation, energy, and social welfare is a critical aspect in defining both physical and mental well-being, not only at the BoP. Furthermore, their ability to advance livelihood opportunities is hugely dependent on people's access to education, communications, transportation, agriculture and markets. However, not only the quality of physical or social infrastructure is important, but also the human resources needed to provide these services. An ongoing monitoring and negotiating of the responsibility structure for providing and maintaining the quality of services and infrastructure is necessary.

The adequacy of infrastructure, both physical and social infrastructure, is a major area for potential impacts at the community level as well (Vanclay, 2002). Population growth, especially rapid growth, in a community can lead to physical limits of existing infrastructure. Town water supplies, social services and facilities may not be able to manage the increased demand. (Smyth & Vanclay, 2017)

Social Well-being

The last category deals with social well-being of people living at the BoP. Social well-being can thereby be seen either on a community level (e.g. demographic structures, social tension and violence, community cohesion such as in-and out-migration, community perception of projects) or on an individual level (e.g. autonomy, uncertainty, aspirations, fears, and expectations). Additionally, the topic of equality (gender equality such as physical integrity or political emancipation, equal access to legal advice, and a fair distribution of social impacts) and potential changes in culture (e.g. cultural values such as moral rules, norms, beliefs, local language and dress) are included in this category.

The next dimension under analysis is social well-being within community. Because communities are often divided and projects bring together a diverse group of stakeholders with different objectives, it is very important to understand the politics of the project or intervention (Smyth and Vanclay, 2017; Vanclay, 2002). If these objectives are not acknowledged, it can be difficult to understand the true impacts of a project and the measures that might mitigate them. The extent and perception of safety and security in a community are key indicators for well-being. Having a free media and freedom of speech may determine whether meaningful consultation can take place. This aspect of social well-being within communities is thereby linked and influenced by the local political system. A community's past experience with interventions and any legacy issues will also affect support for new developments. Smyth and Vanclay (2017) as well as Vanclay (2002) furthermore implicate that while planned interventions like projects or policies, are more likely to implore feelings of upsetness or resentment, others may create positive feelings. These feelings, both positive and negative, may result in formation of interest groups, which sometimes can be used as an indicator of the degree of feeling in the community about a certain issue of interest.

When looking at the dimension individual social well-being, the capacity of individuals to work inside and outside the household, their education and skills, all contribute to how a household can exploit the livelihood resources available to it (Burdge & Vanclay 1995; Smyth & Vanclay, 2017). Households with limited labour availability (e.g. children, the elderly and sick) will be more vulnerable to impacts and require special support. BoP interventions can affect peoples' aspirations and create fears and expectations about their future that may induce stress (Smyth & Vanclay, 2017). Burdge and Vanclay already stressed in (1995) that interventions have a great impact on individuals when referring to uncertainty or fear associated with interventions, as being one of the greatest impacts. They further argued that the impacts that are perceived in anticipation of the planned intervention can be many times greater than the impacts that ultimately result from a planned intervention (Burdge & Vanclay, 1995; Vanclay, 2002). The operationalisation of individual social well-being in literature often relies on social activities such as interactions with friends (e.g.

Brandolini & D'Alessio, 1998; Schischka, Dalziel, & Saunders 2008) and leisure activities or time (e.g. Anand et al., 2009; Biggeri, Libanora, Mariani, & Menchini, 2006; Chiappero-Martinetti, 2000).

Equality, specifically gender equality, is a key factor in order to contribute to social well-being. According to Smyth & Vanclay (2017), women are often limited in their freedom to fully engage in livelihood and community activities due to cultural reasons. This already highlights the strong relationship between equality and the other dimensions of this category, community and individual social well-being as well as culture. In his article, Vanclay (2002) stresses that gender gaps at the BoP are extensive and far-reaching with regards to access to and control of resources in economic opportunities as well as in power and political voice. He further argues that gender equality needs to be seen as a core social impact issue, requiring explicit consideration in the form of gender assessments (e.g. Feldstein & Jiggins, 1994; Gianotten, Gorverman, van Walsum, & Zuidberg, 1994; Guijt & Shah, 1998; NEDA, 1997; Peiris, 1997). Within this thesis, the dimension of equality in addition to gender also focuses on the equal distribution of e.g. legal advice.

Lastly, it is essential to mention that all societies have a shared belief system that frames their existence and provides psychological security. Culture as well as religion are important to the identity of a community and provide a basis by which households engage with and support each other. Cultural heritage can either be tangible, e.g. archaeological sites, or intangible, e.g. language, oral history, music, dance and art. Through engaging interventions both types can be affected and lost as a result of the social changes that accompany a development. (Smyth & Vanclay, 2017)

3.3 Who should Measure What?

While investigating on dimensions for measuring social impact at the BoP, it stands out that the fields of measurement covered by different dimensions show large differences between each other. These suggest that it might make sense to distinguish among organisational characteristics when proposing dimensions for measuring social impact at the BoP. This could enable scholars and practitioners to only measure the dimensions that are relevant for their specificities. In other words: Should all organisations measure social impact by using the same dimensions? If not, how can organisations be distinguished and what are the factors that influence the selection of measurement dimensions for each organisation? Before answering the question *Who should Measure What?*, it must be determined whether social impact measurement is a construct that can be abstracted from the respective context or not.

3.3.1 Extraction of Organisational Characteristics for Distinction

In their literature review, Rawhouser and colleagues (2017) refer to this discussion as single sector versus multisector approach to social impact measurement. While scholars following multisector approaches conceptualise social impact as a generalisable construct that can be measured or compared across various

contexts, scholars following single sector approaches see social impact as a rather specific problem that requires similar contexts in order to make valid comparisons. When asking the question *Who should Measure What?*, this thesis aims not only for distinguishing categories and factors, but also for contributing to the question of whether social impact, especially at the BoP, can be generalised above and beyond specific contexts or not.

In order to answer these questions, a list of five organisational characteristics will be extracted from social impact measurement literature. Following the suggestion of Rawhouser et al. (2017), the five characteristics selected are oriented towards the weighting components of the *B Impact Assessment*, which is a collection of best practices for social impact assessment. They include an organisation's industry, size and geography. Furthermore, in order to reach full comprehensiveness, all single sector approach articles investigated by Rawhouser and colleagues (2017) have been analysed (see table 4). Together with the characteristics mentioned above, this process resulted in the following five characteristics: country of operation, industry, country of origin, commercial orientation and organisation size.

Table 4: Single sector approach articles investigated by Rawhouser et al. (2017)

Authors	**Titles**	**Characteristics used**
Bai (2013)	How do board size and occupational background of directors influence social performance in for-profit and non-profit organizations? Evidence from California hospitals	Commercial orientation
Casselmann, Sama, & Stefanides (2015)	Differential social performance of religiously-affiliated microfinance institutions (MFIs) in Base of Pyramid (BoP) markets	Industry (Financial Services), Country of Operation
Goh, Gao, & Agarwal (2016)	The creation of social value: Can an online health community reduce rural–urban health disparities?	Industry (Healthcare)
Peng & Yang (2014)	The effect of corporate social performance on financial performance: The moderating effect of ownership concentration	Country of Origin, Country of Operation (Taiwan)
Simpson & Kohers (2002)	The link between corporate social and financial performance: Evidence from the banking industry	Industry (Financial Services)

Battilana, Sengul, Pache, & Model (2015)	Harnessing productive tensions in hybrid organizations: The case of work integration social enterprises	Industry (Social Service)
Brickson (2007)	Organizational identity orientation: The genesis of the role of the firm and distinct forms of social value	Relationship to Stakeholders
Di Domenico, Haugh, & Tracey (2010)	Social bricolage: Theorizing social value creation in social enterprises	Industry (Social Enterprises), Country of Origin, Country of Operation (UK)
Dobson & Gerstner (2010)	For a few cents more: Why supersize unhealthy food?	Industry (Retail, Other)
Kneiding & Tracey (2007)	Towards a performance measurement framework for community development finance institutions in the UK	Industry (Financial Services), Country of Origin, Country of Operation
Murali, Lim, & Petruzzi (2015)	Municipal groundwater management: Optimal allocation and control of a renewable natural resource	Industry (Social Service, Agriculture)
Pitsakis, Souitaris, & Nicolaou (2015)	The peripheral halo effect: Do academic spinoffs influence universities' research income?	Industry (Research)
Randøy, Strøm, & Mersland (2015)	The impact of entrepreneur-CEOs in microfinance institutions: A global survey	Industry (Financial Services)
Salazar, Husted, & Biehl (2012)	Thoughts on the evaluation of corporate social performance through projects	Industry (Industrials), Country of Origin, Country of Operation (Mexico)
Utting (2009)	Assessing the impact of fair trade coffee: Towards an integrative framework	Industry (Agriculture), Country of Origin, Country of Operation (Nicaragua)
Zahra and Wright (2016)	Understanding the social role of entrepreneurship	Commercial Orientation (For-Profit)

3.3.2 Verification of Extracted Organisational Characteristics for Distinction

In order to verify the extracted categories and confirm their applicability for the BoP, articles from a structured search in the WoS database have been investigated regarding their approach (single versus multisector). Furthermore, if a single sector approach was used, the respective characteristics applied for

narrowing the context have been mapped to the characteristics extracted from Rawhouser et al. (2017). If necessary, additional characteristics have been derived from specific BoP literature.

The following search term has been performed in the WoS search engine: TS=((social AND impact) AND ((bottom OR base) AND pyramid)). The search resulted in 130 articles with 3.320 citations in total (without self-citations). The majority of articles (79 of 130) has been published in the fields of business and management. Title, abstract and name of journal have been exported to excel and screened regarding the questions asked above.

82 out of the 130 articles show a relevant BoP reference. 65 out of the 82 articles with BoP relevance perform a social impact assessment. It is important to mention that this classification has been carried out based on the article's title, journal name and abstract. Assessing the articles on such a high level might lead to distortions regarding the applied social impact measurement. However, for the purpose of verifying the findings described above, this level of analysis has been assessed as being sufficient. The 65 remaining articles have been categorised into being either single or multisector approaches. In case an article utilises a single sector approach, a mapping to the extracted categories has been performed.

Overall, 16 of the 65 articles utilise a multisector approach without a specific context for measuring social impact at the BoP. From the remaining articles utilising a single sector approach, 37 measure social impact in the context of a specific country of operation. 33 articles measure social impact at the BoP in the context of a certain industry. 13 of the single sector approach articles measure social impact at the BoP within the context of certain countries of origin. This includes multinational corporations as organisations operating at the BoP whilst originating in other countries. Eleven of the articles utilise a single sector approach by looking at organisations with a certain commercial orientation. Five of the articles utilise a single sector approach by analysing the impact of organisations of a certain size.

Table 5: Overview of approaches used in articles measuring social impact at the BoP

Approach	**Count**
Single-Sector	49
- Country of Operation	37
- Industry	33
- Country of Origin	13
- Commercial Orientation	11
- Organisation Size	5
Multi-Sector	16

Some articles utilised even more specific contexts by combining two or more categories for measuring social impact. Thus, the sum of articles from the categories extends the number of articles utilising single sector approaches. Interestingly, none of the articles utilised a single sector approach in a context other than the ones extracted from literature. Thus, the selected organisational characteristics, namely industry, country of origin, country of operation, commercial orientation and organisation size, will be part of the data collection within this thesis. This serves the purpose of finding an answer to the question of how organisational characteristics influence the choice of measurement dimensions at the BoP.

Overall, when reviewing current literature on social impact measurement at the BoP, results show that several social impact measurement methods are in place. However, none of them is unreservedly suited for the BoP. This is underlined by the fact that a large majority of approaches towards measuring social impact at the BoP utilises individual alternatives for the assessment. Together with the large variety of specific BoP characteristics, theory implies that social impact measurement for the BoP might be required to be characterised by a certain degree of flexibility. While this leads towards answering the question of *How should Social Impact be Measured?*, the question *What should be Measured?* has been attempted by extracting variables and proxies for measuring social impact at the BoP from existing measurement methods and BoP literature. These have subsequently been clustered in 14 dimensions in order to reduce complexity. The dimensions include material well-being, local economy, labour situation, bodily health, mental health, quality of institutions, local political system, ecological environment, living environment, infrastructure, social well-being within community, individual social well-being, equality and culture. Given the large variety of dimensions, organisational characteristics have been extracted from recent literature, in order to elaborate on the question *Who should Measure What?*. Recent literature shows that, if social impact is not generalised beyond a certain context, the characteristics of the initiating organisations, namely industry, country of origin, country of operation, commercial orientation and organisation size, are most often utilised for context creation.

The following parts of this thesis will elaborate on the methodological approach for quantitative and qualitative data collection and analysis and will subsequently present resulting findings. Thereafter, data will be analysed and results will be discussed.

4 Methodology

In this chapter the methodological approach for data collection will be presented. The chapter is built around three sections. Firstly, while describing the research design, a justification for the applied mixed methods approach as well as the overall process is given. Secondly, detailed information concerning the data collection process for both quantitative and qualitative research is outlined. And thirdly, the process of data analysis is described, again for both quantitative and qualitative research.

4.1 Research Design

4.1.1 Mixed Methods Approach

The methodological approach of this master's thesis follows a mixed methods approach research design. Quantitative research has been conducted in form of an online survey supplemented by sequential qualitative research in form of semi-structured interviews. While investigating the topic of social impact measurement at the BoP along the three research questions on the basis of quantitative data gathered through the survey, data has additionally been evaluated through qualitative expert interviews in the final stage of the research process.

For quantitative research, the authors approached 270 people that have been found via internet research, from which 41 responded to the online survey. Additionally, for qualitative research, five expert interviews have been conducted with people that were respondents of the survey.

Generally, mixed methods research combines elements of both quantitative and qualitative research. The word mixed thereby indicates the linkage or integration of data sets at an appropriate stage of the research process. In this thesis, this will be done by linking quantitative and qualitative data (Shorten & Smith, 2017). In doing this, the authors enable a more holistic view on the topic of research as well as its breadth and depth. In general, mixed methods research designs are considered appropriate for answering research questions that neither quantitative nor qualitative methods can answer alone.

Literature provides multiple definitions of mixed methods research designs as well as possible classifications (e.g. Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009; Johnson & Christensen, 2017). This thesis' methodological outline follows one acknowledged typology that was proposed by Morse and Niehaus (2009). Following this publication, the approach of research conducted in this thesis consists of a quantitative core component in a deductive theoretical drive with a sequential qualitative supplemental component. The quantitative core component, the online survey, represents the fundamental study of this thesis to which the qualitative study is attached in form of semi-structured interviews. Next to these two components, the theoretical drive represents the conceptual direction of the project and in this thesis refers

to the overall deductive drive of the research. The mode of synchronisation of the core and supplemental component can be either simultaneous or sequential. Within this thesis, the latter has been utilised. This has been seen as more applicable due the fact that qualitative interviews can be utilised in order to support interpretation and analysis of quantitative findings. The additional expert evaluation positively affected the efforts towards greater validity as well as reliability of the results.

Within this thesis, the mixed methods design has been used by the authors in order to gain a better knowledge about possible connections or contradictions between the quantitative conducted data and the subsequential qualitative interpretation. The experts' and practitioners' qualitative interpretation of certain quantitative findings as well as their input on the measurement approach *(How should Social Impact be Measured?)* allowed the authors to evaluate the knowledge derived from the literature and gained through the survey. It furthermore helped to ensure the reliability of the transition made from the quantitative findings towards the development of the contributions to literature.

Following this research approach, moreover, enhanced the engagement of the participants. Survey participants have been enabled to speak more open and share their experiences not only at one specific point in time as they have been included in the qualitative interviews in the final stage of the research process. In doing so, possible exploration and evidence have been improved and the research questions have been answered in more detail. Benefits for the thesis also included greater reliability as well as validity of the data and thus increased the confidence of resulting conclusions (Morse & Niehaus, 2009). Furthermore, the approach of mixed methods allowed for greater scientific interaction while improving the experience of the authors, as different perspectives have been studied on the topic under investigation (Shorten & Smith, 2017).

4.1.2 Process of Overall Methodological Approach to the Research

Within this sub-section, a comprehensive overview of the overall methodological approach to the research conducted in this thesis will be given (see figure 3 below). This master's thesis builds upon the literature review and its results presented in form of the project thesis *Measuring social impact at the Bottom of the Pyramid* that has been written by the authors as part of the specialisation project at NTNU School of Entrepreneurship in winter term 2020/21. Although this theoretical foundation served as a basis to the research problem, it has been revised and further improved within the process of working on this thesis. This ensures a close alignment with the new research goal presented in this thesis. In the figure below, the dotted lines symbolise the revised input from the project thesis, mainly presented in chapter 2. It supported the authors to develop a certain set of observations, which are presented in chapter 3 of this thesis. That chapter aims at elaborating on the theoretical foundations behind the three research questions that are covered in this thesis.

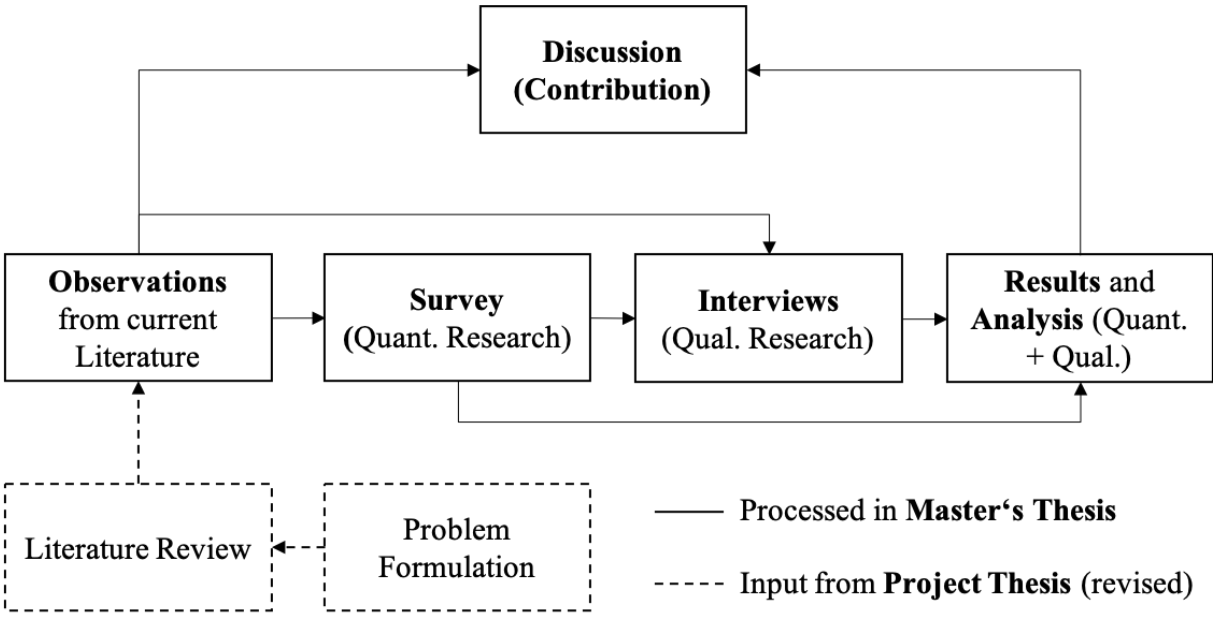

Figure 3: Methodological process of this thesis

Within the project thesis, the authors have developed a comprehensive understanding of the topic of measuring social impact at the BoP and the research gaps encountered. In order to study the topic, a structured and comprehensive literature review has been conducted, which is represented by the two dotted boxes in the bottom of figure 3 above. The authors continue their work on the research problem while revising both the research questions and the studied literature. Both BoP and social impact literature show large gaps concerning social impact measurement approaches (e.g. Nielsen & Samia, 2008; Webb et al., 2010), as structured social impact assessments as well as the quantification of social performance measures continues to be one of the greatest challenges for BoP scholars and practitioners (Austin et al., 2006; Dees & Anderson, 2003; El Ebrashi, 2013; Goyal et al., 2016; Luke et al., 2013; Parenson, 2011).

Overall, this thesis contributes to theory and practice by answering three research questions that resulted from revising the outcomes of the project thesis. By structuring the thesis following these three questions, the authors ensure a clear and structured line of argument, while enabling the reader to easily understand logical and contextual interrelationships between the findings and results of the research and the literature as well as their implications and the value added.

As no data has been collected regarding the research questions asked in this thesis before, the authors were required to collect primary data themselves. The descriptive data has been gathered while performing an online survey that helped the authors to collect observations without intervening (see sub-section on quantitative data collection 4.2.1). Thereby, observations from literature served as basis to develop the

survey, which in turn has been used to conduct interviews with selected participants of the survey. Next to the observation, the results of the survey have been utilised in order to improve qualitative research.

In the discussion section, results and outcomes of the analysis of quantitative and qualitative research and the theoretical observations extracted from literature have been collectively placed against a broader background. This serves the purpose of providing a final answer to the research questions and to draw out on implications of this thesis' results for current literature.

4.2 Data Collection

Several sources have been utilized to collect evidence for this study, including literature observations, surveys, and interviews. When using multiples sources of evidence, the data can be triangulated, meaning that several sources of evidence are utilised in order to answer the same set of research questions (Yin, 2003). When applying this approach, the information is more likely to be accurate and reliable. The process of quantitative and qualitative data collection and analysis will be elaborated on the following sub-sections.

4.2.1 Quantitative Data Collection

As already elaborated on in the section above, data collection within this thesis will be performed twofold. Within this section, the process of quantitative data collection will be elaborated on. Quantitative data collection has been performed using an online survey created in Microsoft Forms. The collection of quantitative data will be described in three steps: firstly, sample creation; secondly, questionnaire development; and thirdly, reflection of the applied method.

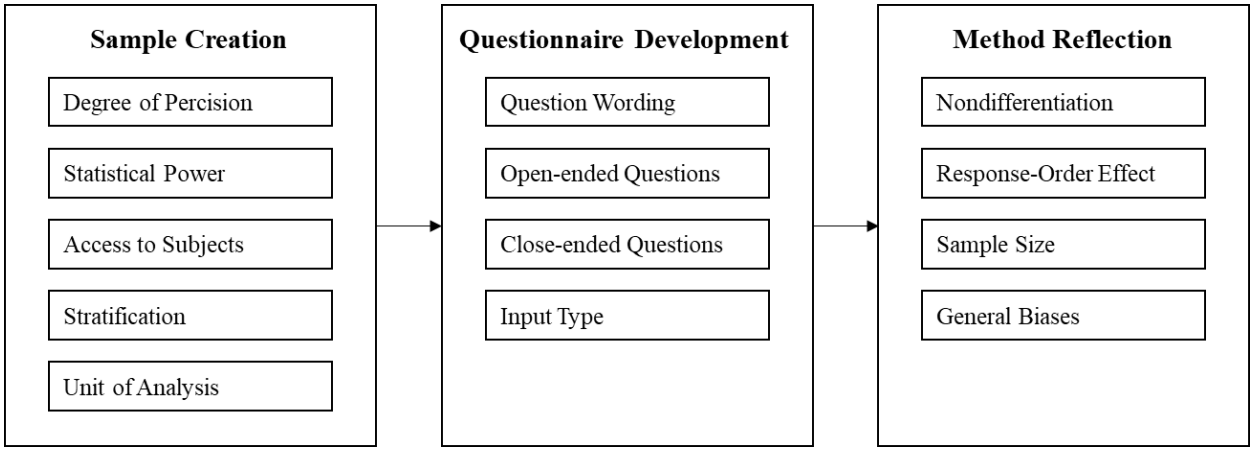

Figure 4: Process of quantitative data collection within this thesis

Sample Creation

Creating a representative sample is essential for achieving generalisability of results to a population (Krosnick, 1999). In order to select a good sample, it is required to define the target population as precise

and narrow as possible (Salant & Dillman, 1994). From that population, samples can be created either by probability sampling or by nonprobability sampling (Slattery, Voelker, Nussenbaum, Rich, Paniello, & Neely, 2011). While within the more effortful probability sampling systematic approaches like random techniques are being used for sample creation, nonprobability sampling relies on techniques that require less effort and include e.g. convenience sampling where the sample is drawn among volunteers or other more easily obtained subjects. Scholars suggest that probability sampling leads to results with higher validity and reliability and should thus be preferred over nonprobability sampling, if possible.

Since knowing the true population is not always possible, researchers are sometimes required to make use of theoretical samples (Salant & Dillman, 1994). In order to create theoretical samples, researchers select respondents that feature desired characteristics in order to fulfil the research goal. To achieve the effect of probability sampling in theoretical samples despite the fact of the unknown population, respondents can be selected randomly within the sample.

Sample size is another important factor to consider when planning a survey. Five factors have to be taken into consideration in order to determine sample size: aspired degree of precision, required statistical power, access to the study subjects, possible degree of stratification and selection of relevant unit of analysis (Aron & Aron, 1997; Pinsonneault & Kraemer, 1993; Salant & Dillman, 1994).

Due to the fact that the population for the survey conducted in this thesis is not known, a theoretical sample has been utilised as a base for the analysis. Subsequently, respondents have been selected from the sample individually, in order to achieve an approximate effect to probability sampling (Salant & Dillman, 1994). Individuals for the sample have been looked up from two sources: personal contacts and networks as well as the internet. While personal contacts and networks made up to around 15 individuals for the sample, the internet research (especially the network LinkedIn and websites of organisations operating in the BoP context) made up for the remaining individuals. Individuals have been included into the sample when they showed BoP and/or social impact experience or worked for an organisation either operating in BoP regions or markets. In order to achieve the highest possible degree of precision and statistical power, the goal was to increase sample size. However, access to study subjects has definitely been the limiting factor when creating the sample. After completely exhausting the aforementioned sources of respondents, the sample consisted of 270 individuals, from which 41 finally participated in the survey.

Questionnaire development

Within literature several factors are being discussed when it comes to questionnaire development. One factor often named is question wording (e.g. Fowler, 1995; Iarossi, 2006; McIntyre, 1999; Salant & Dilmann, 1994). The quintessence of literature is that wording used in the questionnaire for both, questions

and possible answers, has to be clearly understandable and consistent with the educational level of the respondents. It is, furthermore, important that alternative or misinterpretations are precluded (Browne & Keeley, 1998; Fowler, 1995; Salant & Dillman, 1994).

Within the questionnaire created for this thesis, the authors aimed at fulfilling all of these points. In order to word the questions, four criteria have been followed. The questions have been formulated brief, objective, simple and specific (Iarossi, 2006). However, in some cases, the authors decided to add some context to a question in order to ensure a common understanding of the question for all participants. Such information has been provided in brackets behind the question.

Besides the more general factors that have to be considered when formulating questions, several design decisions had to be made in order to reach the specific goal of the survey in case of this thesis. These design decisions include open-ended versus close-ended questions (Krosnick, 1999; Salant & Dillman, 1994). Open-ended questions, on the one hand, allow respondents to use their own words for answering (Salant & Dillman, 1994). This allows the researchers to explore new ideas and insights that would otherwise not have been aired. At the same time, open-ended questions require the respondent to be more thoughtful and hence take more time for answering. Same is true for the analysis of open-ended questions. Close-ended questions, on the other hand, force the respondent to choose from a given set of possible responses (McIntyre, 1999; Salant & Dillman, 1994). While close-ended questions with ordered choices require the respondent to examine each option independently, as e.g. provided by Likert or numerical scales, and are thus comparatively easy to answer, close-ended questions with unordered choices ask respondents to compare choices and pick one. This applies e.g. to multiple choice questions and require the researcher to provide a comprehensive selection of choices. (Salant & Dillman, 1994).

For the questionnaire created in this thesis, a mix of open-ended and close-ended questions has been chosen. Close-ended questions serve as a technique to elaborate on the different measurement dimensions extracted from literature (see section 3.2) (Salant & Dillman, 1994). This is because extraction from literature and existing social impact measurement methods already revealed a large variety of measurement dimensions while an assessment of the dimensions' importance from the practitioners' side still is lacking. Since Likert scale has been used to provide choices, the problem of non-comprehensive choices has been mitigated. However, after this close-ended question, an open-ended question allowed the respondents to provide possible dimensions that might have not been extracted from literature. In this way, efficient and easy responses as well as exploration and

completeness have been fostered. Questions regarding the degree of standardisation as well as the importance of social impact measurement in general have been formulated as close-ended questions using Likert scales as well.

Within the survey, a 5-point Likert scale has been applied. Scholars argue that 7-point Likert scales lead to more accurate results, since it prevents respondents from being forced to choose between two options of which both might be wrong to the same degree what can lead to distorted results (Joshi, Kale, Schandel, & Pal, 2015). However, within this study, traditional Likert scale labels have been replaced by a scale prompting the level of importance rather than the level of agreement. Within discussions among the authors and field test participants, the 5-point Likert scale has proven to be more suitable in this case, since it helps to achieve brevity and simplicity within the survey which have been considered more important to the authors than the increase in accuracy within the Likert scale. The same is true regarding questions three and four of the questionnaire (see appendix A.2). Furthermore, research showed that reliability and validity can be significantly improved, if all points of a scale are labelled in order to clarify the meaning of all scale points (Krosnick & Berent, 1993; Peters & McCormick 1966). Validity also increases if labels divide the continuum into equal sized units (Klockars & Yamagishi, 1988). Both is given for the questionnaire developed within this thesis.

Meta-questions regarding the respondents' industry, region of origin, region of operation and size have been formulated as close-ended questions as well. The industry, region of origin and region of operation have been asked for by using multiple-choice options. The size of the respondents' organisation has been asked for by using close-ended questions providing choices from <10 employees to >1000 employees with three options in-between in order to enable later stratification of the sample, if needed. The organisations' commercial orientation has been elaborated on by using a partial close-ended question in order to elaborate on specific cases between for- and non-profit businesses. The respondents' BoP experience has been asked for by using a close-ended question followed by an open-ended question in order to elaborate on the respondents' experience in more detail. The last question, asking for the respondents' experience regarding problems in measuring social impact has been formulated as an open-ended question in order to gain a large variety of inputs. A comprehensive overview of all questions can be found in appendix A.2.

Certain actions have been taken by the authors to ensure and further improve the validity and reliability of the questionnaire that was developed. Validity in this context refers to the concept and ensures that the concept is fully measured as intended. Due to the fact that the authors have previously conducted

a comprehensive literature review on the topic of the survey and have additionally reviewed the literature specifically with regards to the aim of this thesis, validity can be ensured.

In terms of reliability, the authors have tried to formulate all questions in the most unambiguous way so that everyone interprets them in the same manner. Also, questions have been formulated with sufficient specificity in order to allow everyone to give an answer. To further increase reliability of the questionnaire and thus the trust that repeated research would lead to similar outcomes, formulation of the questions and answers has been checked multiple times before sending out the survey. Additionally, pretesting in form of trial runs with a pilot questionnaire has been conducted. The pilot has been sent to ten persons of the near environment of both authors and to the supervisor of the master's thesis. Through taking this action, accessibility of the study and formulation of the questions have been reviewed in a final step before sending out the link to the respondents.

4.2.2 Qualitative Data Collection

Interviews are, according to Eisenhardt and Graebner (2007), an efficient way to collect rich and empirical data. The interviews in this thesis have been designed based on two types of interviews: open-ended and focused. Open-ended interviews ask for facts and opinions about events, e.g. surprises found in the quantitative research, while focused interviews follow certain sets of questions (Yin, 2003). The combination of focused and open-ended questions has been brought together carefully in each of the five interviews. After two introductory questions regarding the interviewees industrial background and personal experience, each interviewee has been confronted with a set of questions regarding the findings of the quantitative research. Each question has been selected individually according to the specific background of the experts. After the individual questions, a set of common questions regarding how social impact measurement should be approached at the BoP has been asked.

Interviewees have been selected by firstly, contacting all 41 respondents of the survey in order to ask them to participate in the interviews to qualify the survey results. As a result, ten of the 41 respondents agreed on a follow-up interview. Secondly, the backgrounds of the ten respondents have been analysed in order to map the open questions to the experience and fields of knowledge of the respondents. The aim was to cover all topics of the survey and to maximise the number of perspectives on certain topics. Thirdly, interviews have been scheduled. Unfortunately, three out of the ten respondents did neither respond to the initial e-mail asking for a suitable time-slot, nor to the friendly reminder that has been sent out one week later. Out of the seven interviews scheduled, two interviewees did not show up without cancelling the meeting. When reaching out to them again, no responses have been received. Thus, questions regarding the dimensions

changes quality of institutions and changes in mental health could not be asked due to a lack of knowledgeable interview partners.

Generally, the interviews have been set up in an unstructured or semi-structured form, which is often considered to be a highly attractive qualitative research method due to the flexibility it offers (Bryman, 2016). The qualitative interviews thus allowed to depart from the original point of the interview and supply in-depth and open-ended answers. One of the main advantages of semi-structured interviews is that it offers the interviewer the possibility to adapt the interview guide during the interview (Bryman, 2016). The interviewer can therefore angle the question or move the conversation in a new direction as they learn new elements from the interviewee. The questions thus initiate a dialogue by allowing interviewers to deviate from the sequence of questions and the exact formulation (Flick, 2015). The brief design of the interview structure is presented below. The transcript of each interview can be found in appendix A.4.

The set of individually selected questions aimed at specific interpretations of quantitative findings. These questions mainly concerned the importance of each measurement dimension and the experts' personal take on certain events and anomalies, given their experience. Qualitative data collection, thus, mainly aimed at answering RQ2 and RQ3. It has been ensured by the authors that questions about certain dimensions have been carefully selected according to the expert's expertise. This approach allowed higher levels of detail and competence in terms of gathered information. In the following table 6 an overview of the interviewees and their area of expertise as well as the assigned dimensions is given. For better clearance and readability, anonymised experts have been numbered consecutively. Throughout this thesis, it will be referred to respective experts by using the expert ID shown in table 6 below. Experts have been anonymised in order to ensure the privacy of their data and in order to enable them to speak freely.

The set of standardised questions concerned the measurement approach and thus pointed towards answering RQ1. By asking all five experts about their opinion regarding the degree of standardisations, importance of social impact measurement, as well as current and ideal measurement approaches, superordinate understanding on these rather meta-level criteria has been gathered.

Table 6: Expert IDs and interviewees' area of expertise as well as respective area of questions

Expert ID	Organisation, Country	Industry; Area of Expertise	Area of Question/ Dimension under Investigation
1	Observer Research Foundation, India	Professional Services and Research; Gender, Social Justice	Culture; Individual and Community Social Well-being
2	Observer Research Foundation, India	Professional Services and Research; NGO; Social	Infrastructure; Local Economy; Material Well-being; Bodily

		Development and Infrastructure	Health (regarding Asian organisations)
3	One Dollar Glasses, Germany	Healthcare; NGO	Bodily Health; Culture; Local Political System (regarding NGO)
4	Energy4Impact, Kenya	Energy, Healthcare; (Economic) Development and Energy	Energy Industry; Ecological Environment, Material Well-being
5	Deloitte, South Africa	Professional Services; For-Profit, Entrepreneurship, Economic Development, and Finance	Local Economy; Material Well-being; Individual and Community Social Well-being (regarding Finance)

4.3 Data Analysis

This thesis's research can be characterised as following the structure of a descriptive study, as it is designed to describe the major characteristics of a given problem situation (Lawless & Heymann, 2010). The process of descriptive analysis was essential to present all the data obtained from the survey and the interviews. Since this is a descriptive study, there is no hypothesis to be tested in this paper. Therefore, the analysis does not aim to explore or find data that would either confirm or disprove anything in particular.

4.3.1 Quantitative Data Analysis

In order to prepare for quantitative analysis, findings of the online survey have been extracted following three steps: (1) translating ratings into digits, (2) categorising translated findings, and (3) plotting categorised and translated findings into diagrams. Firstly, after exporting the data to excel, the 5-point Likert scale applied for rating the importance of certain measurement dimensions, ranging from *very low importance* to *very high importance* has been translated into digits ranging from -2 to +2. This translation was necessary for analysing the results of the survey questions 1, 3, and 4 that utilised the Likert scale for the importance rating of the measurement dimensions, the degree of standardisation and the general importance of social impact measurement. Translating the results allowed for a more extensive comparison through the ability of statistical methodologies to the results. In addition, answers to voluntary open-ended questions of the survey have been extracted, coded and grouped.

Secondly, extracted results have been categorised to view and analyse them from the perspective of different groups of respondents. For this purpose, all respondents have been divided into groups, which have been created in relation to their organisations and personal background (industry, country of origin, country of operation, organisation size and personal experience). Thus, it was possible to construct comparability of results between the different organisational profiles within a single group, such as organisations from different industries (e.g. professional services, education, healthcare) or commercial orientation (e.g. for-profit, non-profit). This procedure allowed for in-depth analysis to the second and third research question.

Thirdly, results have been transformed into diagrams. This way, not only the overall importance of certain dimensions but also the spread of answers and potential outliers have been made easier to observe. Bryman (2016) refers to diagrams as being amongst the most frequent methods to display quantitative data. Their advantage lies in the relatively easy way of creation while presenting the quantitative data in a way that is comfortably understandable and interpretable. For this reason, the descriptive analysis uses bar charts as the main method to present the data from the survey.

After preparing and extracting the data following the aforementioned steps, results have been compared in order to investigate certain relationships of high relevance. Thereby, relationships established through the survey have been analysed separately in a first step. Thereafter, once the interviews have been carried out, an additional analysis of the survey findings in the light of the qualitative interview findings and expert interpretations has been conducted (see 4.3.2). Relationships under investigation refer to potential affiliations between the (1) outcome variable response (e.g. rating of dimensions or degree of standardisation, as well as the (2) input variable respondents' background (e.g. industry, commercial orientation).

There are multiple ways to establish relationships between variables. In the context of quantitative research, Bryman (2016) refers to relationships as being "an association between two variables whereby the variation in one variable coincides with variation in another variable" (Bryman, 2016: 695). Bryman (2016) stresses that it is important to keep in mind that a relationship analysis only uncovers a relationship, not causality between two variables. However, correlation analysis on the other hand can do that. Correlation is "an approach to the analysis of relationships between interval/ratio variables and/or ordinal variables that seeks to assess the strength and direction of the relationship between the variables concerned" (Bryman, 2016: 690). This study establishes relationships for most input variables (groups of industry, country of origin, country of operation, commercial orientation) and only uses correlations for examining the variables organisation size and personal experience.

Due to the fact that this relationship study is exploratory, relationships were tested for a wide combination of variables, most often between one input variable and one outcome variable, yet sometimes between two or more outcome variables at the same time. Determining which variables to analyse collectively was based on hunches, intuition, as well as outcomes from the interviews. In the scope of this thesis, combinations that deemed most relevant and adequate for the purpose of answering the research questions have been analysed.

4.3.2 Qualitative Data Analysis

The process of analysing the interviews started with a transcription of the recorded interviews. Subsequently, findings of the interviews have been coded in order to create a system that serves as an overview of the findings. This allowed for simplicity in reviewing relationships and potential similarities between the responses of the interviewees as well as the comparison with quantitative results.

To prepare for the coding process, all important passages of the transcripts have been highlighted. The passages then have been coded according to their suitability of answering either one of the three research questions: findings that answer *How should Social Impact be Measured?*, findings that answer *What should be Measured?*, findings that answer *Who should Measure What?*, and other findings. Other findings are elements that did not belong to any of the three questions but that still contain valuable information. Afterwards, findings have been grouped thematically according to categories within each question set.

The analysis of the interviews thereby has been performed twofold. Immediately after conducting an interview, transcription and a first brief analysis has been performed in order to directly take the new findings into account. The major part of the interview analysis has then been performed after conducting all five interviews. This was essential in order to ensure highest levels of comparability and prepare for the aforementioned coding process.

The findings from the interviews are presented in chapter 6, whereas the specific thematic findings from the interviews are elaborated on in more detail in the descriptive analysis and the discussion chapter (see chapter 7 and 8), as they are closely linked to the quantitative findings and together allow for a comprehensive understanding that aims at answering the research questions.

4.4. Methodological Reflections and Limitations

Generally, great care has been taken to all aforementioned topics in order to maximise reliability and validity of the study. However, if it was not possible to fulfil certain requirements to the fullest, consequences have been weighted up and discussed by the authors as already briefly described. Compromises to aforementioned requirements have only been made when advantages of the respective action have outweighed the disadvantages, which justifies the deviation from existing norms. The authors are convinced that the overall approach to the research, including the online survey, the semi-structured interviews as well as the analysis of both, is of high quality and will lead to insightful results. However, this section will reflect on some general limitations.

Due to certain characteristics of the study, mainly the rather small sample size and the non-probability sampling, the possibility of making statistically significant and valid assumptions was limited to a certain extent. Assumptions such as independence of observations, homogeneity of variance and normality of data

hence could not be fulfilled without limitations. Thus, methods of traditional quantitative statistical analysis have not been applicable for this thesis. At this point, it has to be noted that the inferences made are not as strong as with purely parametric tests.

Concerning the online survey, limitations include design decisions and general biases. First of all, the ranking versus rating decision made in this survey will be discussed. Researchers can gain insights into respondents' choices by either explicitly asking them to make choices by rank ordering a set of alternatives or by asking them to rate each object individually (Krosnick, 1999). In general, rankings have proven to show higher reliability and validity compared to ratings, which is due to a phenomenon called nondifferentiation (Nathan & Alexander, 1985; Schriesheim, Hinkin, & Podsakoff, 1991; Zuckerman, Bernieri, Koestner, & Rosenthal, 1989; Elig & Frieze, 1979; Miethe, 1985; Munson & McIntyre, 1979). However, ratings are much less time consuming and people enjoy filling out ratings more and are more satisfied with their validity, compared to rankings (Elig & Frieze, 1979; McIntyre & Ryans, 1977). Since respondents took 26 minutes in average to complete the survey during pretesting, and the goal was to keep completion time at a manageable level, time has been the most important factor when making the decision between ranking and rating.

Additionally, the sample size used in this survey might be criticised as being too small. Since the population of BoP practitioners cannot be known, the authors had to rely on theoretical sampling. The authors declare that all possible efforts have been undertaken in order to maximise the sample size for this study. However, having a sample of 270 individuals with a wide range of backgrounds and origins can be considered sufficient for this study, especially when results will be challenged qualitatively as well.

Topics like the social desirability bias, conversational conventions or acquiescence have been considered when creating the survey as well (see Krosnick, 1999). The authors conclude that they are either not or only partially relevant due to the digital nature of the survey conducted in this thesis. Appropriate measures have been taken to increase reliability and validity of the results, if possible.

While interviewing experts, the authors aimed to produce contextual real-world knowledge about the behaviours and social structures of the experts. As this part of the research is less controlled and more interpretive, it was needed to reflect on the authors' position as researchers considering how their participation and perception might have influenced the results.

Lastly, confidentiality and trust between the authors and the survey participants as well as interviewees are paramount to the quality and integrity of the research. Without adequate trust, experts are less likely to respond honestly and may withhold useful information. To build trust between the authors and respondents, participants in the online survey and in the expert interviews have been assured of anonymity. Many survey

and interview questions can be considered sensitive, as they ask respondents to disclose what they perceive as challenges for themselves and to also describe challenges that their organisations face. It has been clearly explained to respondents that all of their answers could be used in this thesis. In order to build trust between the authors and the interviewees, the interviewees were clearly informed about the entire research process so that they could properly understand how their thoughts and interpretations would be used in the thesis. This has been explained in the initial email and repeated again before the interviews. Interviewees have also been asked for permission to record their interviews. As already mentioned, anonymity has been assured to the interviewees as well.

5 Presentation of Quantitative Findings

Within this chapter, the findings of the quantitative data collection will be presented, which is organised in three sections, each being guided by one of the three main questions of this thesis. The first section will focus on the question *How should Social Impact be Measured?* by presenting the results on a meta-level while extracting criteria for measuring social impact at the BoP. The second section will focus on the question *What should be Measured?* by presenting results on a general level. Subsequently, the third section *Who should Measure What?*, presents results on a more specific level. For the quantitative results, this means that results will be presented by grouping the respondents according to their organisation's background. As described in sub-section 4.3.1, in order to enable quantitative analysis, results from the Likert scale have been quantified into numbers from +2 to -2, representing *very high importance* to *very low importance*. Averages have been rounded to the second digit and will be presented with the results in the following chapters.

5.1 How should Social Impact be Measured?

5.1.1 Importance of Measuring Social Impact at the BoP

Table 7: Overview of key observations regarding the importance of measurement

#	Key Observation
1	Regardless of organisational characteristics, all respondents agree on very high importance of social impact measurement at the BoP.

Among all respondents, regardless of organisational characteristics like industry or country of operation, the importance of social impact measurement achieved an overall rating of very high importance (n=41; avg=1,53). Interestingly, 61,9% of the respondents rated that social impact measurement in general is of very high importance, while 31% rated it as being of high importance. Only 7,1% rated it as being of neutral importance to them.

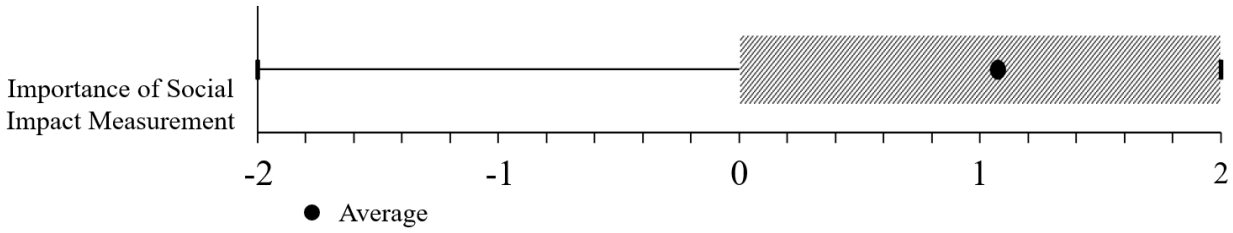

Figure 5: Quantitative results: Importance of social impact measurement

5.1.2 Degree of Standardisation

Table 8: Overview of key observations regarding the degree of standardisations

#	Key Observation
1	Respondents are divided with regards to the degree of standardisation of a social impact measurement method for the BoP. Results are almost balanced between high degree of standardisation and high degree of flexibility with an average of -0,02.
2	Results show variations regarding the degree of standardisation i.e. when it comes to the respondents' industry, country of origin, commercial orientation, and organisation size.
3	Results show negative correlation between the respondents' experience at the BoP and the degree of standardisation.

Results show that respondents did not agree regarding the degree of standardisation of social impact measurement methods at the BoP. Responses spread equally over the whole spectrum from *highly standardised* (2) to *highly flexible* (-2). Thus, the average lies at -0,02 (n=41).

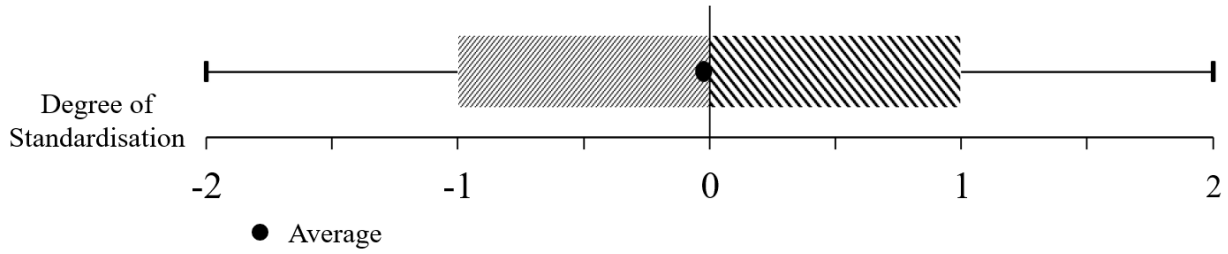

Figure 6:Quantitative results: Degree of standardisation

A more detailed analysis shows that e.g. organisations from healthcare industry, on the one hand, rated for more standardised approaches (n=4; avg=0,5). Respondents from financial services industry, on the other hand, rated for more flexible approaches (n=5; avg=-0,8). Furthermore, respondents from organisations from Western countries seem to prefer a higher degree of standardisation (n=10; avg=0,4) compared to respondents from organisations from BoP regions (n=31; avg=-0,16). Especially respondents from organisations originating from Africa, prefer flexible social impact measurement methods (n=5; avg=-0,6). Another observation is that non-profit organisations rated for a higher degree of standardisation (n=25; avg=0,32), whereas for-profits seem to prefer higher flexibility (n=17; avg=-0,59). The degree of standardisation furthermore correlates with the size of the respondents' organisation. While respondents from larger organisations rated for more flexible methods (n=24; avg=-0,17), small and medium sized organisations voted for a higher degree of standardisation (n=17; avg=0,18). Lastly, results show a negative correlation between the respondents' experience at the BoP and the degree of standardisation. Respondents with little or no experience preferred a higher degree of standardisation (n=14; avg=0,14), whereas respondents with more experience preferred more flexible methods (n=27; avg=-0,11).

5.1.3 Challenges of Current Measurement Approaches

Table 9: Overview of key observations regarding the current measurement approach

#	Key Observation
1	Respondents refer to challenges on an overall level such as deficient definitions of the underlying concept or methodology of the topic of social impact measurement itself.
2	Respondents refer to method related challenges such as a general lack of measurement methods and a lack of standardised metrics.
3	Respondents refer to external challenges influencing the measurement such as a lack of resources and available data.

In the final stage of the survey, respondents were confronted with two voluntary open-ended questions related to measurement approaches currently used in their work environment. In total, 18 participants responded to the questions regarding their experience with measuring social impact and potential associated problems they have faced in their career. Hence, this question feeds into the general understanding of social impact measurement and associated challenges in a BoP context. Responses from the open-ended questions have been coded and grouped in order to be evaluated properly. In this sub-section, examples of the inputs from the survey are given. A comprehensive overview of all addressed aspects and the mapping to the respective challenges is provided in appendix A.3.2.

On a general level, the lack of a fundamental concept or methodology has often been named by the respondents. Furthermore, noticeable challenges relate to both the method level as well as the measurement level. Part of the method related problems are a general lack of measurement methods and a lack of standardised metrics. External problems influencing the measurement at the BoP are mostly related to a lack of resources and a lack of available data. Respondents typically referred to more than one problem at a time. The problems mentioned above are given in more detail below. These account for the four most prominent problems observable in the survey.

Eight of 18 respondents mention deficient definitions of the underlying concept or methodology of the topic of social impact measurement itself

> "Lack of clear methodologies to measure impact; […] Most outlined methodologies and guidelines by international organizations guiding social research are not replicable in a local community context." – *Respondent ID 4*

Related to that is the general lack of measurement methods, which is stated by a total of four respondents.

> "Lack of well-set measurement tools applicable for the specific project." – *Respondent ID 23*

Four of 18 respondents referred to problems related with a lack of standardised metrics. This also concerns aspects of missing replicability of measurement methods and metrics or indicators, which can be observed in the first quote above.

> "Lack of clear standardized metrics to measure changes in poverty and other development indicators." – *Respondent ID 7*

The problem of lacking resources at the BoP has been stated by seven of 18 respondents. In particular mentioned are limited capacity, such as funds and time.

> "1. Limited resources and capacity of Social Enterprises. (Specifically early stage ones) 2. Sometime lack of commitment from Top management." – *Respondent ID 37*

Lastly, the lack of available data seems to be one important problematic aspect faced by any respondents. Six of 18 respondents referred to this type of problem. Part of this are limited studies and sources on reliable data and indicators as well as honest feedback and information from stakeholders.

> "In India, data can be difficult to access, to parse through, there is also a lack of gender aggregated data." – *Respondent ID 32*

> "Lack of adequate data and documentation leading to problems in measuring impact." – *Respondent ID 39*

> "[…] lack of local data matching standardized international measurement tools, lack of follow-up studies in measuring social impact." – *Respondent ID 7*

5.2 What should be Measured?

Table 10: Overview of key observations regarding What should be Measured?

#	Key Observation
1	Changes in local economy and changes in infrastructure have been rated as being the dimensions of highest importance for measuring social impact at the BoP (both scored *high importance* in average).
2	The subsequent ten dimensions have been rated as being of high importance as well. From these, average ratings of the first six dimensions are close to each other.
3	Results show a negative correlation between a dimension's average result and the spread of responses.
4	Changes in individual social well-being and changes in culture have been rated as being of lowest importance for measuring social impact at the BoP.

Within this section, the general results from the quantitative data collection will be presented. Overall, twelve out of 14 dimensions have been rated as being of high importance in average. Thereby, changes in

local economy and changes in infrastructure have been rated highest. Both have reached an average of 1,46 which translates into high importance. The subsequent ten dimensions have been rated 1,41 to 0,65 in average and thus have all achieved a rounded scoring of high importance in average as well. Changes in individual social well-being and changes in culture have, however, been rated as being of neutral importance only, while achieving scores of 0,27 and 0,17. None of the dimensions has achieved a negative average rating.

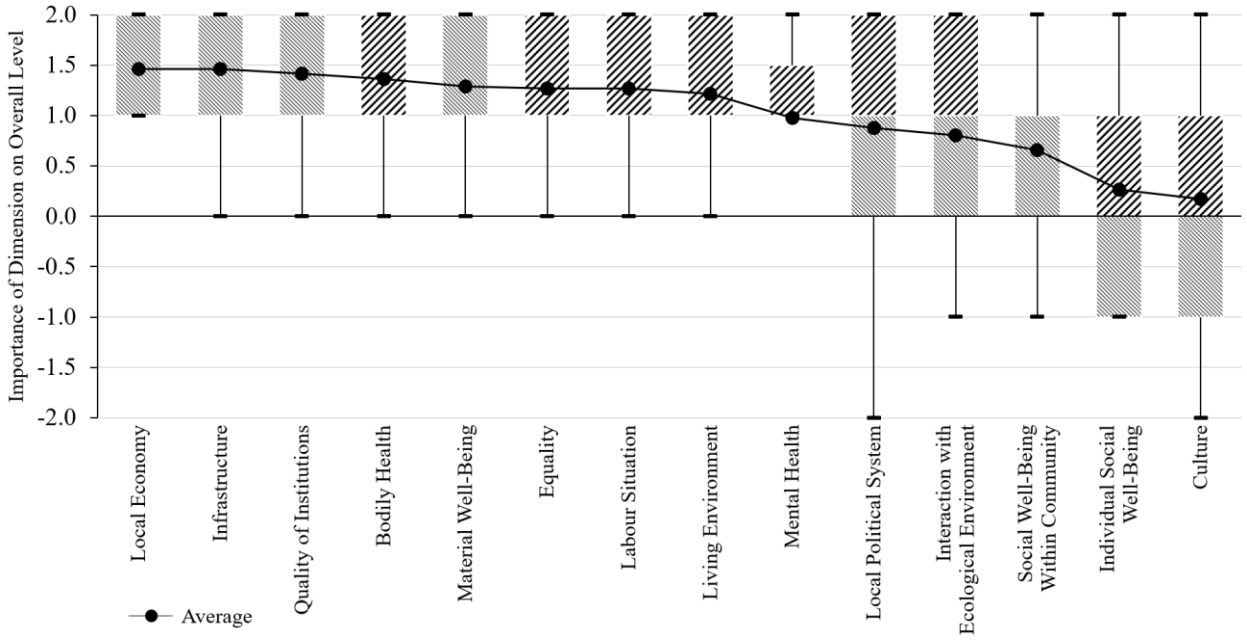

Figure 7: Quantitative Results: Overview of findings on an overall level

Nevertheless, data shows a negative correlation between a dimension's average result and the spread of responses. With lower average scoring, spread of the results increases indicating less agreement among the respondents. While for example responses for changes in local economy are all situated between very high importance and high importance, responses for changes in culture cover the whole bandwidth from very high to very low importance.

A similar correlation can be observed regarding the difficulty of assessment of a dimension. Dimensions with a higher overall rating seem to be the ones that are easier or more common to quantify and assess, while dimensions with a lower overall ranking seem to be the ones that are more difficult to assess or appear to be softer. This manifests through the proxies provided for each dimension within the survey. While such proxies for the dimensions with higher overall ratings included the ones that are quantifiable more easily (e.g. increase/decrease in level of unemployment (changes in local economy) or increase/decrease in access to health facilities (changes in infrastructure)), proxies for the dimensions with lower overall ratings appear

to be more soft and difficult to assess (e.g. obtainment/ destruction of rituals, rules or local languages (changes in culture) or increase/decrease in autonomy (changes in individual social well-being)).

The second survey question referred to potential missing dimensions in the list that has been provided for ratings. In total, 17 of 41 participants respondent to this question. All aspects that participants addressed in this question, have already been covered by a certain dimension. A comprehensive overview of the aspects addressed in this question as well as the respective dimensions that cover these aspects can be found in appendix A.3.1. Hence, the list of dimensions developed in the beginning of this thesis can be considered to be complete. However, this might indicate that respondents have not been able to completely understand the presented dimensions in the way they were intended by the authors and, thus, may constitute a bias, which is elaborated on in the limitations section (see section 9.1).

All in all, results on a general level indicate that all dimensions that have been extracted from the literature (see section 3.2) have their raison d'être when it comes to measuring social impact at the BoP from the practitioner's point of view. Results furthermore indicate that the 14 dimensions under analysis seem to be a suitable answer to the question *What should be Measured?*. This is true for both theory and practice.

5.3 Who should Measure What?

After presenting the results on a general level, results within this section will be given on a more detailed level following the question *Who should Measure What?*. It includes the question whether multisector or single sector approaches should be utilised when conceptualising social impact and whether different organisations should utilise different dimensions for measuring social impact at the BoP, based on their characteristics. Within this section, results will be presented by grouping the responses according to the background of the respondents' organisations.

5.3.1 Industry

Table 11: Overview of key observations on industry level

#	Key Observation
1	There are variations regarding the dimensions that have been considered as being of highest importance per industry. However, results coincide with the observations on an overall level.

In total, respondents from ten different industries participated in the survey. The large number of units of analysis thus leads to the highest variations of results. As demonstrated in table 12 below, the number of participants per industry shows variations. While agriculture and industrials are only represented by one respondent each, professional services are represented by seven participants. Hence, the following presentation considers only those industries that are represented by four or more respondents in order to increase reliability.

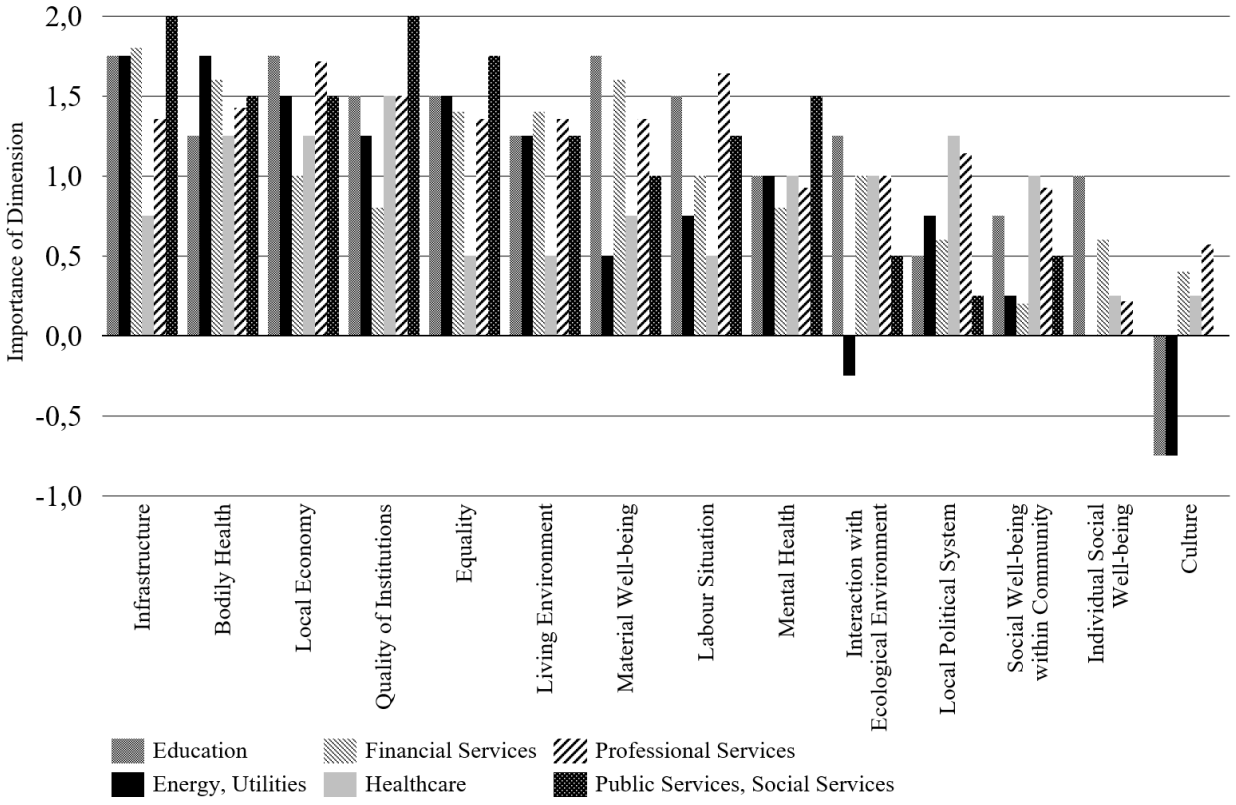

Figure 8: Quantitative results: Overview of findings on industry level

Respondents from organisations operating in public and social services value changes in mental health higher than respondents from other industries. While rating from respondents in this industry resulted in an average rating of 1,5 (n=4), the overall average of all industries for this dimension is 0,82 (n=41).

Furthermore, respondents from the energy and utilities industry (n=4; avg=-0,25) attribute changes in interaction with ecological environment a significantly lower importance than other respondents (n=41; overall avg=0,6). In contrast, this dimension is valued highest by respondents from the education industry (n=4; avg=1).

Respondents from energy and utilities industry (n=4; avg=0,25) as well as financial services industry (avg=0,2; n=5) value changes in social well-being within community significantly lower than organisations from other industries (n=41; overall avg=0,56).

Lastly, respondents from the energy and utilities (n=4; avg=-0,75) as well as education industry (n=4; avg=-0,75) value changes in culture as being of significantly lower importance than the rest (n=41; overall avg=-0,05). Interestingly, without considering these two industries, the average lies at 0,31.

Table 12 below gives an overview of dimensions of highest as well as lowest importance to the respondents per industry. Thereby, the average score to these dimensions is given in brackets. Furthermore, the number of respondents that represent the individual industry sectors is given.

However, when analysing all industries, regardless of the number of respondents per group, patterns regarding their rating behaviour have been observed. While respondents from two industries rate more positive, respondents from three industries seem to rate rather critical when reviewing the importance of the single measurement dimensions. Industry groups can thus be clustered according to their rating behaviour. The two outliers that tend to rate dimensions rather positive compared to the other industry groups, are research (n=1, avg=1,21) and professional services (n=7, avg=1,18), since respondents from these industries rated the different measurement dimension highest with regards to their importance. Respondents that are considered negative outliers rated dimension rather critical and with an average score below high importance. These are represented by respondents of the healthcare (n=4, avg=0,84), energy and utilities (n=4, avg=0,80), and the agriculture industry (n=1, avg=0,6). Respondents from education (n=4, avg=1,14), industrials (n=1, avg=1,14), media and creative industries (n=2, avg=1,14), public and social services (n=4, avg=1,07) as well as the financial services industry (n=5, avg=1,01) make up for the group that rates rather close to the median. This has to be considered when assessing the ratings per industry, since it might affect comparability.

Table 12: Top and bottom dimensions on industry level (average scores in brackets)

Industry	Number of respondents	Dimension of highest importance (incl. avg. rating)	Dimension of lowest importance (incl. avg. rating)
Agriculture	1	Changes in material well-being and quality of institutions (2)	Changes in interaction with ecological environment (-1)
Education	4	Changes in local economy, infrastructure, and material well-being (1,75)	Changes in culture (-0,75)
Energy and Utilities	4	Changes in infrastructure and bodily health (1,75)	Changes in culture (-0,75)
Financial Services	5	Changes in infrastructure (1,8)	Changes in social well-being within community (0,2)
Healthcare	4	Changes in quality of institutions (1,5)	Changes in culture and individual social well-being (0,25)

Industrials	1	Changes in material well-being and labour situation (2)	Changes in equality (-2)
Media and Creative Industries	2	Changes in quality of institutions and equality (2)	Changes in social well-being within community and individual social well-being (0)
Professional Services	7	Changes in local economy (1,71)	Changes in individual social well-being (0,21)
Public and Social Services	4	Changes in infrastructure and quality of institutions (2)	Changes in culture and individual social well-being (0)
Research	2	Changes in interaction with ecological environment (2)	Changes in culture (0)

5.3.2 Country of Origin

Table 13:Overview of key observations on country of origin level

#	Key Observation
1	Western organisations attribute higher importance to changes in infrastructure, changes in bodily health and changes in individual social well-being than organisations from BoP countries.
2	Organisations from BoP countries attribute higher importance to changes in material well-being compared to Western organisations.

This section deals with the quantitative results considering the country of origin of the respondents' organisations. Overall, results show that Western organisations attribute higher importance to changes in infrastructure than organisations from BoP regions. While respondents from organisations originating from Western countries have rated changes in infrastructure as being of very high importance (n=10; avg=1,62), respondents from organisations originated in BoP countries have only attributed an average of high importance to changes in infrastructure (n=31; avg=1,27).

Additionally, organisations from BoP regions attribute lower importance to changes in bodily health. Compared to respondents of organisations from other countries, participants from Asian organisation have in average rated changes in bodily health lower, which nevertheless resulted in an average rating of high importance (n=26; avg=1,01). Respondents from African organisations, however, have rated that changes in bodily health are of very high importance for measuring social impact at the BoP in average (n=5; avg=1,75).

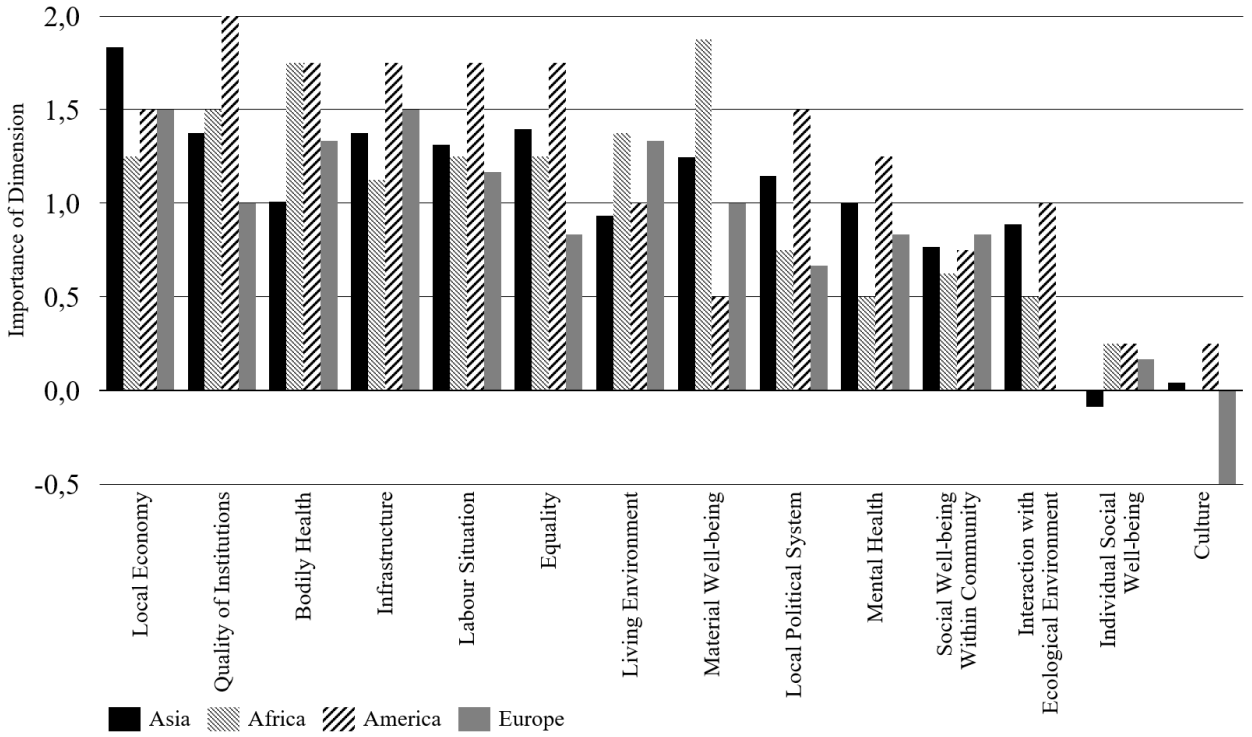

Figure 9: Quantitative results: Overview of findings on country of origin level

Results within the dimension of changes in material well-being show that respondents from organisations originating from BoP regions attribute significantly higher importance (n=31; avg=1,50) to changes in material well-being compared to respondents from organisations originating from Western countries (n=10; avg=0,75). While 80% of respondents from African organisations agree that changes in material well-being are of very high importance (n=5; avg=1,85), respondents from North American organisations rate changes in material well-being as being of medium to high importance only (n=4; avg=0,5).

Respondents from organisations from BoP regions furthermore attribute lower importance (n=31; avg=0,05) to changes in individual social well-being than organisations from Western countries (n=10; avg=0,21). With an average of -0,9, respondents from organisations originating from Asia (n=26) have rated lowest within this dimension.

Lastly, respondents from European and North American organisations are separated regarding the rated importance of culture. While respondents from organisations from the BoP (Asia and Africa) rate culture as being of neutral importance (n=31; avg=0,02), respondents from North American organisations rate it higher (n=4; avg=0,25) and respondents from European organisations rate it lower (n=6; avg=-0,5). Overall, respondents from North American organisations tend to rate higher across all dimensions, whereas respondents from European organisations rate rather low. While respondents from North American

organisations agree to 100% that changes in quality of institutions are of very high importance (n=4; avg=2), respondents from European organisations only rated it as being of high importance (n=6; avg=1).

Table 14: Top and bottom dimensions on country of origin level (average scores in brackets)

Country of Origin	Number of respondents	Dimensions of highest importance (incl. avg. rating)	Dimensions of lowest importance (incl. avg. rating)
Asia	26	Changes in local economy (1,83)	Changes in individual social well-being (-0,09)
Africa	5	Changes in material well-being (1,88)	Changes in culture (0)
North America	4	Changes in quality of institutions (2)	Changes in culture and individual social well-being (0,25)
Europe	6	Changes in infrastructure and local economy (1,5)	Changes in social well-being within community (0,2)

5.3.3 Country of Operation

Table 15:Overview of key observations on country of operation level

#	Key Observation
1	Changes in local economy and changes in quality of institutions are the dimensions that have been rated as being of highest importance, regardless of the respondents' country of operation.
2	Changes in individual social well-being is the dimension that has been rated as being of lowest importance, regardless of the respondents' country of operation.
3	Respondents from organisations operating in Africa and Latin America value changes in interaction with ecological environment lower than respondents from organisations operating in other countries.

When analysing the results clustered by the respondents' country of operation, it is important to state that the number of responses is higher for this group, due to the possibility of selecting multiple answers.

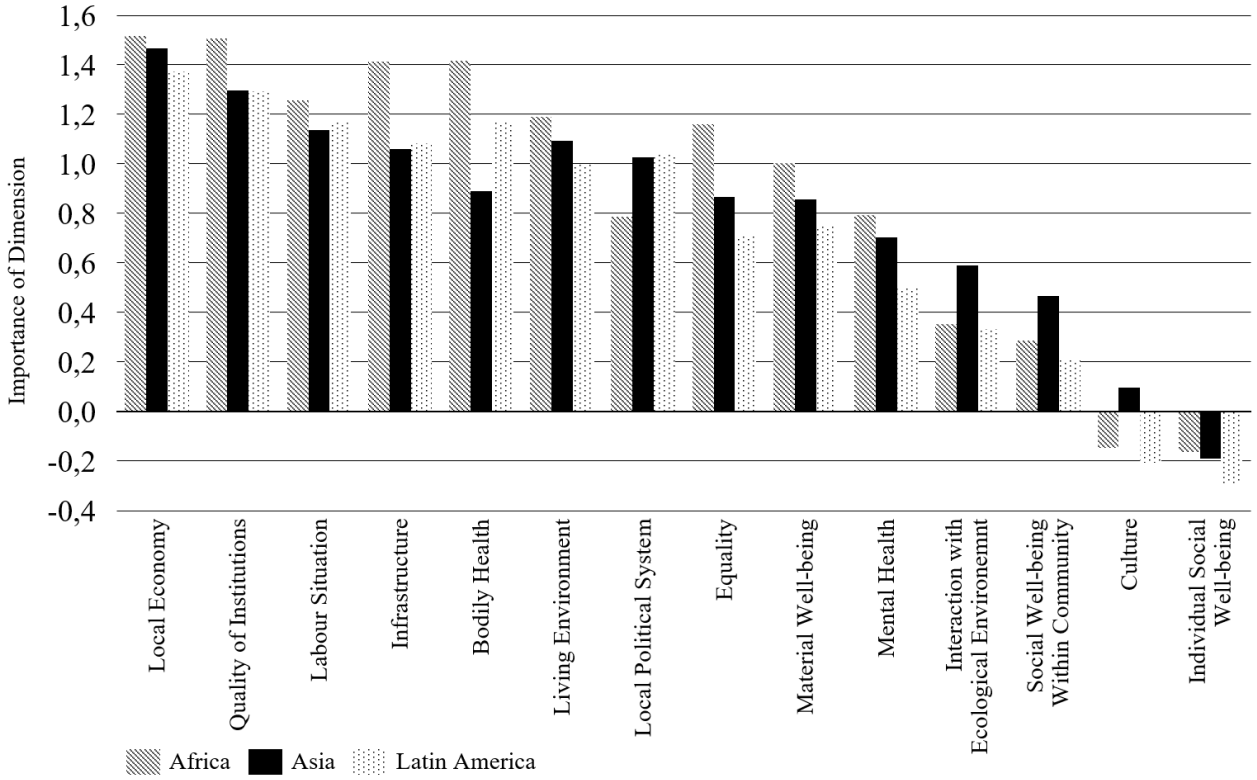

Figure 10: Quantitative results: Overview of findings on country of operation level

First of all, respondents from organisations operating in Africa (n=18; avg=0,35) and Latin America (n=32; avg=0,33) value changes in interaction with ecological environment significantly lower than respondents from organisations operating in other regions. Respondents from organisations operating in Asia value changes in interaction with ecological environment as being of higher importance (n=32; avg=0,59)

Furthermore, respondents from organisations operating in Africa and Latin America value changes in social well-being comparably low. While this dimension achieved an average rating of high importance overall (n=41; avg=0,66), respondents from organisations operating in Africa rated it only neutral (n=18; avg=0,29). Respondents from organisations operating in Latin America voted even lower (n=32; avg=0,33).

Table 16: Top and bottom dimensions on country of operation level (average scores in brackets)

Country of Operation	Number of respondents	Dimensions of highest importance (incl. avg. rating)	Dimensions of lowest importance (incl. avg. rating)
Africa	18	Changes in local economy (1,52)	Changes in individual social well-being (-0,16)
Asia	32	Changes in local economy (1,47)	Changes in individual social well-being (-0,19)
Latin America	32	Changes in local economy (1,38)	Changes in individual social well-being (-0,29)

5.3.4 Commercial Orientation

Table 17:Overview of key observations on commercial orientation level

#	Key Observation
1	All dimensions, except for changes in local political system, are rated higher by non-profit organisations compared to for-profit organisations.
2	Changes in local economy is the most important dimension for for-profit organisations, however, as stated in #1, non-profit organisations rated even higher for this dimension as well.
3	Changes in quality of institutions is the most important dimension for non-profit organisations, whereas, for-profit organisations value this dimension comparably low.

Within this section, results according to the commercial orientation of the respondents' organisation are presented. One respondent referred to his organisation as conducting both for-profit and non-profit business. Thus, the overall number of responses within this level of analysis is n=42.

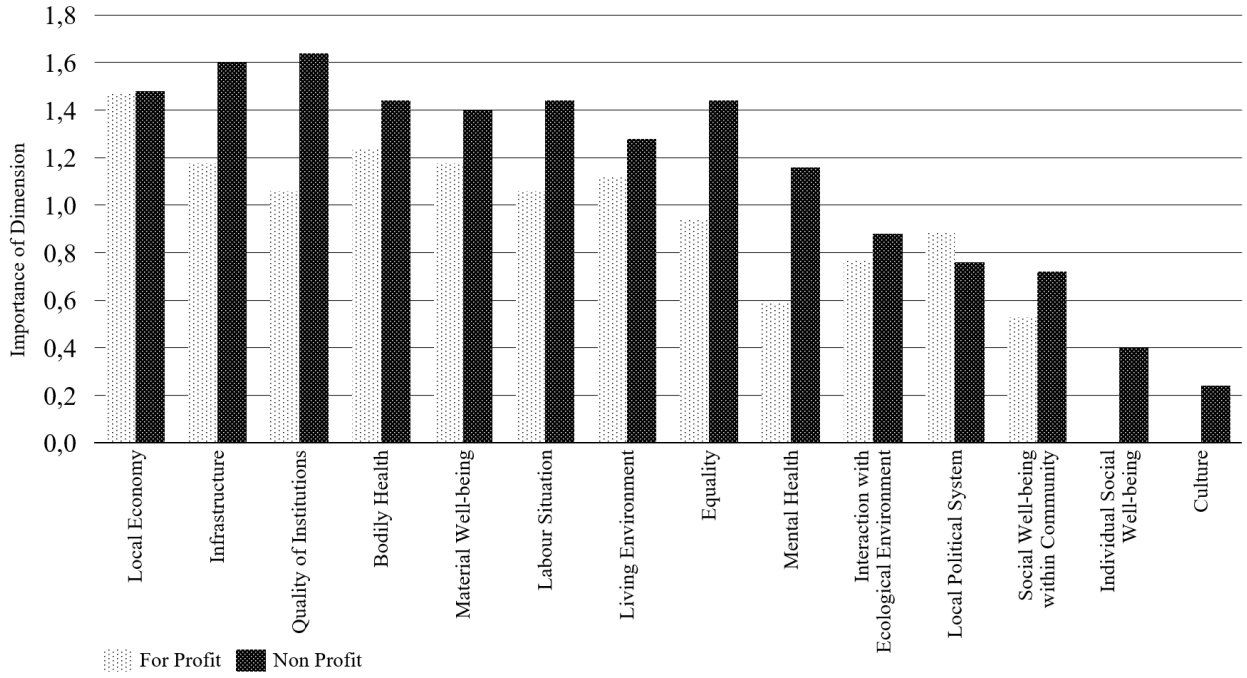

Figure 11: Quantitative results: Overview of findings on commercial orientation level

Overall, it is noticeable that non-profit organisations attribute higher importance to the given dimensions than for-profits. The only exception is represented by the dimension changes in local political system. With an average of 0,88 (n=17), respondents of for-profit organisation lay a slightly higher emphasis on this dimension than respondents from non-profit organisations (n=25; avg=0,76).

The second observation with regards to commercial orientation, is that changes in local economy is the dimension which is of highest importance to respondents of for-profit organisation (n=17; avg=1,47).

Furthermore, only a minimal higher level of importance is given by respondents of non-profits (n=25; avg=1,48), making this dimension the one that shows most compliance between for-profit and non-profit organisations.

Changes in quality of institutions is the dimension of highest importance to non-profit organisations, which rated this dimension as being of very high importance (n=25; avg= 1,64). For-profit organisations, however, value this dimension less and rated it as being of high importance in average (n=17; avg=1,06).

Table 18: Top and bottom dimensions on commercial orientation level (average scores in brackets)

Commercial Orientation	Number of respondents	Dimensions of highest importance (incl. avg. rating)	Dimensions of lowest importance (incl. avg. rating)
Non-Profit	25	Changes in quality of institutions (1,64)	Changes in culture (0,24)
For-Profit	17	Changes in local economy (1,47)	Changes in culture and individual social well-being (0)

5.3.5 Organisation Size

Table 19: Overview of key observations on organisation size level

#	Key Observation
1	There is a negative correlation between organisation size and the importance of the dimensions changes in local economy, changes in infrastructure, and changes in labour situation.
2	There is a positive correlation between organisation size and the importance of the dimensions changes in interaction with ecological environment and individual social well-being.

This section presents results by grouping the respondents regarding their organisation's size. In order to structure the results, organisations have been grouped in three sub-groups: small organisations with less than 100 employees, medium-sized organisations with 100 to 500 employees, and large organisations with more than 500 employees.

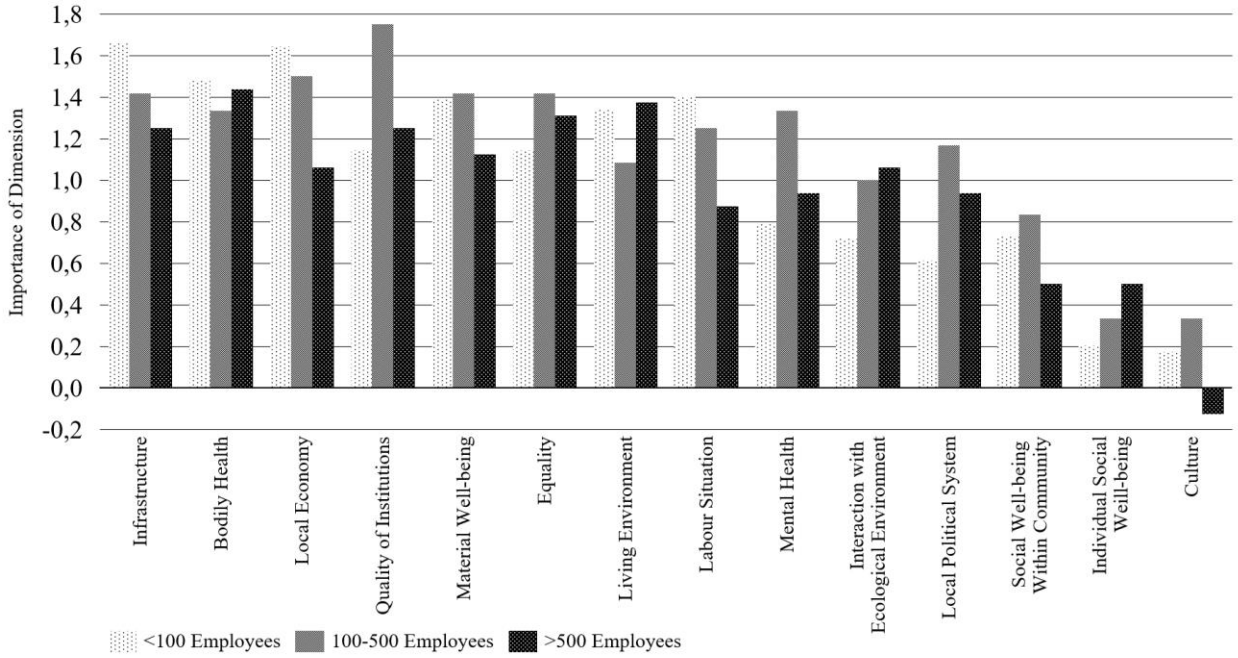

Figure 12: Quantitative results: Overview of findings on organisation size level

Firstly, a negative correlation between organisation size and the degree of importance of changes in local economy has been found. While respondents of small (n=17; avg=1,64) and medium-sized organisations (n=12; avg=1,5) value this dimension as being of very high importance, respondents of large organisations (n=12; avg=1,06) rate the dimension as being of high importance only.

Secondly, a negative correlation has also been observed for one of the dimensions that achieved the highest overall score: changes in infrastructure. Respondents from small organisations (n=17; avg=1,66) value this dimension highest, large organisations (n=12; avg=1,25) lowest and medium-sized organisations (n=12; avg=1,42) rate in between.

Additionally, there is a negative correlation between organisation size and the level of importance of changes in labour situation. The dimension is valued highest by respondents of small organisations (n=17; avg=1,4), followed by respondents of medium-sized organisations (n=12; avg=1,25), and rated lowest by respondents of large organisations (n=12; avg=0,88).

In contrast, a positive correlation has been observed between organisation size and level of importance of changes in interaction with ecological environment. The larger the firm is, the higher is the result for this dimension. Respondents of large organisations (n=12; avg=1,06) rated the dimension slightly higher than respondents of medium-sized organisations (n=12; avg=1). The dimension is valued with the lowest importance by respondents of small organisations (n=17; avg=0,72).

Lastly, despite the low overall level of importance of the dimension changes in individual social well-being, another positive correlation has been found between this dimension and the size of organisations. It is valued highest by respondents of large organisations (n=12; avg=0,5), followed by respondents of medium-sized organisations (n=12; avg=0,34), and lastly, small organisations (n=17; avg=0,21).

Table 20: Top and bottom dimensions on organisation size level (average scores in brackets)

Organisation Size	**Number of respondents**	**Dimensions of highest importance (incl. avg. rating)**	**Dimensions of lowest importance (incl. avg. rating)**
Small (<100)	17	Changes in infrastructure (1,66)	Changes in culture (0,17)
Medium (100-500)	12	Changes in quality of institutions (1,75)	Changes in culture and individual social well-being (0,33)
Large (>500)	12	Changes in bodily heath (1,44)	Changes in culture (-0,13)

6 Presentation of Qualitative Findings

As described in the methodology chapter, qualitative interviews were used in order to gather information concerning the measurement approach. Additionally, interviewees have been asked to qualitatively assess and validate certain quantitative findings. In order to achieve this goal, the interviewed experts have been selected carefully according to their expertise in the fields of interest (see sub-section 4.2.2). Fields of interests have been defined by analysing the quantitative data. Anomalies or outstanding results have been extracted in order to confront the experts with the data. Each expert has been confronted with the quantitative findings that fit his or her area of expertise or origin. Within the interviews, the experts have been confronted dimension-wise. Thus, findings to the questions *What should be Measured?* and *Who should Measure What?* will be presented within one section that is structured along the respective dimensions. Before doing that, qualitative findings related to the question *How should Social Impact be Measured?* are presented.

6.1 How should Social Impact be Measured?

6.1.1 Importance of Measuring Social Impact at the BoP

As described in section 5.1.1, survey respondents rated the importance of social impact measurement as being of very high importance in average. When conducting the expert interviews, the interviewees have been confronted with this result and have been asked to elaborate on the reasons that motivate them to measure social impact.

Five out of five experts agreed that measuring social impact is of very high importance. One reason for the high importance of measuring social impact that has been named by three experts (experts 1, 3 and 4) is that by measuring the social impact of a project, the mechanism behind the achievement of social impact can be understood. This in turn enables organisations to adapt and reapply the interventions in order to transfer the effects to other communities and to utilise the learnings achieved. Thereby, both efficiency and effectivity of interventions can be increased. This procedure furthermore helps to develop proof of concepts for certain interventions.

> "*The first things that might come to one's mind are to track the progress or to proof the stakeholders / funders. However, the main reason of measuring is to proof that an implementation model works. This again enables organisations to transfer and implement a model from one community to another and thus to replicate the impact. This gives us proof and leverage that it worked in one community and allows us to better convince stakeholders for further projects."* – Expert 4, Energy4Impact, Kenya

> *"First we need to deliver the outcome, so are we really achieving the impact that we are saying? We thereby can include the learnings in decision-making processes. So, when we measure and see we are not having the intended impact we can change the direction and improve e.g. the delivery system or the business in terms of strategy."* – Expert 3, One Dollar Glasses, Germany

Two experts (expert 3 and 4) furthermore stated that social impact measurement is executed in order to proof progress of interventions to stakeholders and donors. Another expert from a South African consulting company additionally elaborated on the importance of showing social responsibility within local communities for organisations operating in South Africa. He stated that having social impact is culturally embedded in that area and that organisations are only able to be successful when giving something back to the community.

> "*I think there is a lovey term that I heard in the Nordics. […] It says that I cannot be successful unless the community around me is successful. […] If we do not set social impact a critical business priority inside our business it is not good for the economy, for businesses in the long-term it's not socially sustainable. If you read any South African visions or business documentary there is always one chapter that is specifically about environmental or social impact. […] Companies get scored on how they leverage and empower and invest into local communities."* – Expert 5, Deloitte, South Africa

Another reason for measuring social impact was that governments are able to base decisions and steer programs based on the continuous assessment of social impact. In order to do that successfully, data has to be collected on the ground within local communities. The data from several communities can then be consolidated on higher levels in order to support policy making.

> "*[…] social impact is an important information for governments who are responsible for improving the quality of life communities. It is necessary for them in order to make decisions. But since governments do not have access to the ground base and they do not have data, it is really hard to make decisions."* – Expert 2, Observer Research Foundation, India

6.1.2 Degree of Standardisation

While analysis of quantitative data leads to divided results regarding the degree of standardisation of social impact measurement methods (see sub-section 5.1.2), interviewed experts were more united regarding this question. Five out of five experts said that flexibility is more important to them compared to standardisation for different reasons. One is that standardisation is just not achievable due to the very diverse environments and influencing factors among different communities at the BoP. Even within the same region, two communities might be characterised completely different.

> *"The degree of standardisation mostly depends on the scope and level of what one is trying to measure. Standardised tools are only comparable to a certain degree, since the circumstances may vary too much in order to achieve high comparability. For example, results from a highly standardised tool in a high-income community cannot be used in low-income communities. Standardised tools which are good for comparison reasons can only be used if it utilised within one community with the same scope."* – Expert 4, Energy4Impact, Kenya

Expert 2, currently working at the BoP in Africa and India, furthermore pointed out that flexibility is important in order to understand the specific characteristics of the communities and take them into account when setting up projects and measuring social impact.

> *I might consider the more flexible option. Because when you think about the places where the people are living and when you are trying to understand what would work in a specific community, you have to understand what would work for a certain population in a certain part of the world in the context of BoP. Then, situations are different, conditions are different. In some places, technology is more advanced for example.* – Expert 2, Observer Research Foundation, India

Another expert from the professional services industry stated that flexibility will be more important than standardisation due to the high dynamic markets at the BoP. One expert from the healthcare industry (expert 3) said that she would have preferred a higher degree of standardisation when she was new to social impact measurement. With increasing experience, she learned that it is just not possible to achieve that throughout the different characters of the local communities. An expert from the research industry (expert 1), however, stated that a certain degree of standardisation is needed in order to achieve validity and reliability of results.

> "*For me personally, it is definitely important to have a flexible and especially adoptable tool. Specifically, when looking at it for example from culture, which is a topic so diverse, it is very important to be adaptable when measuring social impact***.** *Nevertheless, in terms of validity and viability, some amount of standardisation is important. I would say, probably a little less than a 50-50 equal distribution, as flexibility still needs to be focused on in the first place."* – Expert 1, Observer Research Foundation, India

Yet, multiple experts agreed that comparability – when not achievable through a certain degree of standardisation – can be achieved by a high degree of transparency, when reporting results of social impact measurement. In addition, two experts mentioned that transparency likewise leads to a better understanding of how impacts are achieved in a certain environment and thus allows for abstraction, transferability to other communities and repeatability. Expert 4 from the energy industry furthermore pointed out that

guidelines can be developed on higher levels in order to allow for flexible implementation and adaption to local circumstances.

> "*In case one is using a flexible tool which is based on own mindset and interpretation, results get less comparable. However, by transferring assumptions and existing environmental impacting factors, results can still be used to predict income with similar projects in different regions."* – Expert 4, Energy4Impact, Kenya

> "*Transparency is a good way to enable people to still somehow compare the different measurement approaches. But there will be no way to develop a standardised model for all regions. However, replicability can be reached through transparency since it allows for a good understanding and abstraction from local circumstances and to think about their effects in other communities."* – Expert 2, Observer Research Foundation, India

6.1.3 Challenges of Current Measurement Approaches

In the final stage of the semi-structured interviews, experts were once again confronted with their organisations current social impact measurement approach. This was felt to be necessary by the authors, in order to further increase the brief insights already gained through the final two questions of the survey (see sub-section 5.1.3). Experts therefore have been asked about current measurement approaches and potential associated problems in detail. In addition, experts have been asked to describe what they consider to be the ideal way of measuring social impact at the BoP.

When asking the experts for current social impact measurement approaches at the BoP, all responses pointed in a similar direction. Four of five experts stated that surveys, field visits and case studies are the most frequently used approaches for data collection and social impact measurement.

> "*[…] collect data through their field level workers – either offline or online, whatever is available for them and the communities […] So utilising questionnaires and field visits. You need to verify conditions on the ground."* – Expert 2, Observer Research Foundation, India

> "*So, the organisation or the programme that I worked with works quite closely on development projects across Asia and Africa. I know there are surveys undertaken. I know there are big surveys taken up in in Africa."* – Expert 3, One Dollar Glasses, Germany

> "*There are mainly two different alternatives. The first one is to rely on secondary data from e.g. a regional administrative or from NGOs. The other one is to collect primary data on our own, e.g. by talking to households in the local communities or to engage in discussions with people. Online surveys are another important tool for us. Furthermore, case studies can be helpful, if the projects*

> *has a larger scope. Generally that is highly depending on the specific type of project."* – Expert 4, Energy4Impact, Kenya

This has been confirmed by experts operating in Asia and Africa. Furthermore, three of the experts mentioned that partnering up with local NGOs or other local organisations such as universities or for-profit organisations is an option for collecting data in the local communities. Expert 4, however, said that relying on secondary sources and data from other organisations is only sufficient for validation purposes, rather than for the assessment of achieved impact, since the evaluation of every BoP intervention has different requirements when it comes to data.

> "*[…] we usually contact local organisations in the places we want to collect data in. These are mostly NGOs. They have their workers and they are familiar with the community. We give them financial support so that they can conduct the surveys on our behalf."* – Expert 2, Observer Research Foundation, India

> "*[…] However, relying on secondary data, especially for validation purposes, can be done as well and is best if it is combined with getting insights and thoughts by directly speaking to the people and collecting primary data."* – Expert 4, Energy4Impact, Kenya

Experts furthermore named several shortcomings, when it comes to their current social impact measurement approaches. One factor that has been elaborated on by two experts operating at the BoP in Asia and Africa refers to data quality. From their experience, good ground workers operating within the local communities are irreplaceable for high data quality. The less they are embedded in the local communities, the lower is the data quality. This is caused by the fact that people at the BoP are concerned about their privacy and safety and will only cooperate when they are familiar with the person who approaches them.

> "*It is a big problem, not being able to see these challenges and side effects in the final reports. This comes along with the quality of people you are able to get on the ground. Resources are limited, but poor ground-work will lead to poor results. […] So, being able to get the actual s of what happens at the ground and being able to transform that to useful data."* – Expert 4, Energy4Impact, Kenya

> "*Collecting certain sets of data is not easy since people are concerned about their privacy and security. Religion is an important factor as well. When you share data, you might become a victim of something. Response rates will be better when there is trust and familiarities."* – Expert 2, Observer Research Foundation, India

Additionally, outsourcing of data collection to organisations with little to no experience in social impact interventions and the associated data collection will lead to poor quality results as well. Furthermore, outsourcing of data collection, or access to secondary data is often costly. In addition, the quality of secondary data is often questionable. One expert from Asia, moreover, elaborated on the representativeness of samples within primary and secondary data collection processes. Often, women and minority groups are underrepresented, leading to distorted impressions, she said.

> "*But I can agree that generally, for evaluation, in order to operationalise the impact you need one in the project country that does this. Either your organisation has one or you need an external evaluator, which can be quite costly. In my organisation data is mostly collected from our side." –* Expert 3, One Dollar Glasses, Germany

> *"For me personally, looking at the impact for women, is one very important point when it comes to measuring social impact. And doing that across various dimensions. Especially in Asia and Africa there are biases existing due to only focusing on men. This way, a valuable and important view on understanding social impact is left out." –* Expert 1, Observer Research Foundation, India

Lastly, assessing long-term impact has been named as a challenge by an expert from Africa. He stated that it is comparably easy to measure outcomes that are quantifiable immediately after the intervention, while measuring long-term effects and their implications on desired impacts still is a challenging task. It requires a very good understanding of the targeted community and environments in order to be able to e.g. discount things by what would have happened anyways or effects that have been achieved by other interventions.

> "*So, I think the measurement of how organisations have contributed towards social impact is pretty easy to do. And it is really important as said. What I would like to see which is very idealistic. It is very easy to give, but what would be important is to see how this giving translates into real impact and real value. I'd want to see how communities fundamentally change and there is a shift in sustainable prosperity and not only uplifting them somehow. I am not sure whether or not we are measuring sustainably of initiatives, but most organisations only measure how they contribute to social impact initiatives." –* Expert 5, Deloitte, South Africa

For the purpose of counteracting the potential fallacies described above, four out of five experts said that quality of the ground workers in the local communities is essential. As mentioned above, embeddedness in the local community as well as data collection expertise is perquisite for high-quality data. Thus, ideally people with social impact experience and a good standing within targeted communities are selected or trained to execute the ground work. Existing networks should furthermore be utilised.

> "*It is a big problem, not being able to see these challenges and side effects in the final reports. This comes along with the quality of people you are able to get on the ground. Resources are limited, but poor ground-work will lead to poor results. […] So, being able to get the actual s of what happens at the ground and being able to transform that to useful data."* – Expert 4, Energy4Impact, Kenya

> "*Collecting certain sets of data is not easy since people are concerned about their privacy and security. Religion is an important factor as well. When you share data, you might become a victim of something. Response rates will be better when there is trust and familiarities."* – Expert 2, Observer Research Foundation, India

Furthermore, two experts stated that data collection should be performed continuously and in a digital way in order to allow for up-to-date and high-quality data analysis. However, ensuring a representative sample and listening to smaller groups is required for a comprehensive and realistic result as well. Moreover, digital infrastructure and skills are lacking at the BoP, so that data processing takes a long time and data quality sometimes decreases dramatically. Most experts, however, agreed that collecting data in the local communities is inevitable for comprehensive and realistic social impact measurement.

> "*Afterwards, data will be collected through surveys (online or offline) and analysed. Ideally, this is a continuous process. Data can then be used to steer the projects, and aggregated data can be used to support policy decisions on higher levels."* – Expert 2, Observer Research Foundation, India

> *"I mean I wish that we can get the data digitally from the project country to evaluate that would be the biggest wish if you ask for my current situation right now. When you ask for social impact you need to have the data and you need to have system ready. Without data you cannot see anything. When we talk about data, this really is part of the impact sphere, qualitative good data is the foundation of measurement and that is often done via paper which takes up a lot of time."* – Expert 3, One Dollar Glasses, Germany

6.2 What should be Measured and Who should Measure What?

As briefly touched upon above, qualitative findings to the research questions regarding what measurement dimensions should be utilised and how firm characteristics affect the choice of such measurement dimensions are presented dimension-wise within this section. It has to be noted that four dimensions are not included in the following sub-sections, as either not enough experts with the required background to these topics responded to the interview enquiries of the authors (this applies for changes in quality of

institutions and changes mental health) or too little conspicuities were found among the quantitative results (this applies for changes in equality and changes in labour situation).

6.2.1 Changes in Local Economy

Quantitative results show that changes in local economy is one of the two most important dimension when it comes to measuring social impact at the BoP (see section 5.2). Multiple experts agreed on this fact and stressed the significant value of the economic situation of people in BoP regions. Expert 5, who is experienced with digital as well as innovation topics as part of the top management of Deloitte South Africa, highlighted that local economy is especially important for people at the BoP, due to the fact that a vibrant economy enables people and the society to uplift from poverty. The unemployment rate in South Africa is a serious problem, he stated. The fact that economies are usually not industrialised makes traditional employment additionally difficult. However, creating a vibrant service-based economy would allow for employment of people that are of lower skill and are usually considered unemployable. The unemployed or unemployable would thus get a chance to seek employment, leading to a more prosperous society. Moreover, he stressed that at the BoP, many unemployable people are forced into entrepreneurial activity. This entrepreneurial activity hence plays a vital role in creating a vibrant economy.

> *"[…] I think what important is, if you can improve a vibrant services-based economy, it unlocks the ability to drive a form entrepreneurship, what I call micro-entrepreneurship. So, if you for example create a vibrant service-based economy, then I can create jobs for people that are typically of low skill."* – Expert 5, Deloitte, South Africa

6.2.2 Changes in Infrastructure

Quantitative results show that next to changes in local economy, changes in infrastructure are of highest importance for measuring social impact at the BoP. During the interviews, the importance of changes in infrastructure has been both confirmed as well as questioned. For an Indian researcher and urban development expert (expert 2), changes in infrastructure is rightly one of the two dimensions that scored highest regarding its importance in the survey. This dimension affects, through its very nature, all other dimensions. It provides basic access to e.g. healthcare, housing, waste handling, access to water and toilets. According to expert 2, transport related infrastructure as well as social infrastructure, e.g. access to bank accounts are of particular importance. Additionally, infrastructure is a very broad term and several topics are part of it. Overall this highlights the significance of the dimension changes in infrastructure when it comes to measuring social impact at the BoP. However, when referring to infrastructure as one of the most important dimensions, he stresses the even higher significance of earning money and gaining economic benefits, which still is of highest priority to people at the BoP.

> *"[…] Infrastructure affects everything and can be seen as a foundation to the other dimensions. It is thus very important and rated with high importance among the respondents. However, income is the most important thing to people at the BoP. Since without infrastructure you would still be able to live, while money secures you a meal in the evening. So, a house to live in and daily food supplies are the first things you think about in the morning, when you belong to the poorest of the poor."* – Expert 2, Observer Research Foundation, India

Statements of expert 3 are in line with the aspects mentioned by expert 2 regarding the basic character of the topic of changes in infrastructure. According to her, infrastructure can be seen as foundational and needs to exist in the first place, before other things can be built upon. However, next to changes in local economy, she personally would have seen changes in bodily health or even well-being, especially material well-being, as being of higher importance for measuring social impact.

One aspect she claims to be related to the high ratings of the infrastructure dimension is the ease of measurement. In the context of social impact measurement and its highly tangible character, she stressed that compared to e.g. changes in bodily health, the impact on infrastructure can be measured more easily. Expert 1, an Indian researcher and social justice expert, e.g. referred to changes in infrastructure as being measurable more easily with an impact that is well known in general and easy to understand by third parties.

> *"Additionally, another point would be that it is probably easier to measure e.g. infrastructure than bodily health. I think from my experience, impact is very tangible and it is very difficult to catch what is meant by that. Infrastructure on the other hand is very easy to measure and it can be broken down into KPIs. With indicators, infrastructure then can be broken down. But it is quite a nice foot for thought is that your survey shows this result for high importance of infrastructure. I personally would not have thought this."* – Expert 3, One Dollar Glasses, Germany

6.2.3 Changes in Bodily Health

Quantitative results show that changes in bodily health are valued lower by respondents from organisations originating from BoP regions. Thereby, respondents from Asian organisations value the dimension comparably low, whereas respondents from Africa value it rather high. As mentioned above, expert 3 pointed out that while comparing the different dimension asked for in the survey, next to changes in bodily health, other dimensions appear to be easier to measure. This can be seen as one reason to the circumstance that changes in bodily health are rated as being of high importance "only", but not with highest importance what could have been expected, given the dimension's fundamental character. She also referred to the broadness of the health dimension, which is partly covered via changes in quality of institutions as well, as that dimension refers to quality of health facilities.

Moreover, expert 2 mentioned that people at the BoP, especially in India, make different prioritisations related to health compared to people in other areas. Thus, he refers to a different mindset and different living situations among the marginalised that lead to different prioritisations of dimensions and explains that e.g. changes in bodily health are not of highest importance, as long as it is not a recurring problem.

> "*Due to the other problems that they [the people at the BoP] have been facing over the years, bodily health is not a priority. Even though they are falling sick again and again. It is just a different mindset. As I said. A place to live in is important. Then comes work in order to earn money to feed the family."* – Expert 2, Observer Research Foundation, India

6.2.4 Changes in Material Well-being

Quantitative results show that this dimension is valued especially high by respondents originating from BoP countries. Multiple experts referred to the high importance of the personal economic situation and material well-being for people at the BoP several times. The social impact and evaluation expert from Kenya (expert 4) stressed that for people in the African BoP, income, or in other words economic benefits, are of outmost importance, since this enables them to feed themselves and their families in order to survive. However, part of that economic situation is the limited understanding for long-term investments of people living at the BoP, who always tend to spend the money as soon as they have it, rather than making investments that pay off over longer periods of time. Due to this fact, other measurement dimensions lose their importance in direct comparison.

> *"Investments in electricity or solar technology will help people to produce energy and sell it to others in the community, making them entrepreneurs and enabling them to generate economic income. We are convinced that there is no sustainability in business without ownership. But people have to understand that only higher investments now will enable them to earn income from it later."* – Expert 4, Energy4Impact, Kenya

Similarly, expert 2, the urban development expert and researcher from India, highlighted that money and income enables people at the BoP to access other things such as infrastructure. That stresses the significant value this dimension has, making it a fundamental requirement for people living in the BoP environment.

> *"Overall I agree that infrastructure and local economy are the most important things at the BoP. I would say that earning money is supreme for people at the BoP since this determining whether they will have a meal in the evening or not, or whether they are able to travel. Money allows them to access other things, including infrastructure aspects as well."* – Expert 2, Observer Research Foundation, India

6.2.5 Changes in Living Environment

Quantitative results show that respondents from large organisations stated that changes in living environment are of second highest importance to them. On an overall level, however, this dimension only scored average importance. In this context, one expert from a large Indian organisation (expert 2) referred to the affluent class working in large organisations as having different social and economic backgrounds. To them, changes in living environment are more important due to the fact that they are not struggling as much with fundamental issues such as access to infrastructure.

> *"Persons with different social and economic backgrounds, and living/working in different environments, can have different perceptions. Hence, for the better off, the affluent class working in large organisations, changes in living environment are more important, as they may not be struggling as much with access to infrastructure, or the quality of governance."* – Expert 2, Observer Research Foundation, India

6.2.6 Changes in Local Political System

Changes in local political system is the only dimension that has been rated higher by respondents from for-profit organisations than by non-profits. Expert 3 is experienced in non-governmental operations in Asia as well as Latin America. According to this expert, respondents from non-profit organisations rated changes in the local political system lower compared to for-profits because of the lower authority and power NGOs have. She mentioned that especially smaller NGOs do not have the influence to shape or change local political systems.

In that regard, the expert refers to the importance of establishing an NGO-culture. In other words, trying to change the mindset of people in order to generate win-win scenarios, instead of giving out products for free. As part of their marketing concept, she mentioned that establishing partnerships with local health-workers is of utmost importance. Through this, awareness for the product can be gained in local communities while, in addition, entrepreneurial networks at the BoP can be built .

> *"We need acceptance for our delivered service by the people we are serving. Additionally, awareness is a big topic. […] We also try to establish partnerships with local health-workers as part of our marketing-concept and thus gain awareness for our product in the communities. That is the entrepreneurial network we are building at the BoP."* – Expert 3, One Dollar Glasses, Germany

6.2.7 Changes in Interaction with Ecological Environment

This dimension has been rated as being of comparably low importance by respondents from organisations operating in the energy and utilities industry as well as organisations operating in Africa and Latin America.

When talking to expert 4, who is experienced in the energy sector in Kenya, it has been observed that low ratings for the dimension changes in interaction with ecological environment are related to the lower priority people at the BoP attribute to dimensions that do not directly deliver economic benefits to them. Hence, above mentioned observations are rather less impacted by the specific industry.

> *"People at the BoP just have more difficult problems to solve rather than caring for the environment. They will focus on achieving economic benefits for their families in order to get food on the table. However, for us, changes in interaction with ecological environment is of high importance."* – Expert 4, Energy4Impact, Kenya

6.2.8 Changes in Individual Social Well-being

Quantitative results show that changes in individual social well-being have been valued less by respondents from organisations originating from BoP countries, especially respondents from Asia attributed low importance to this dimension. Expert 1 referred to changes in well-being on an individual and personal level, as being of lower importance than social well-being within the community. According to her, the latter one is of higher priority to the people at the BoP, since the community is more important to the people than their individual well-being. Especially women are very community focused in terms of their norm of understanding social well-being in the first place.

> *"People in this kind of setting [the BoP] would rate community simply higher. When looking at it from a gender perspective, especially for women, the community becomes the most important norm for understanding well-being. E.g. the family and other relatives as well as neighbours, all those come before individual social well-being even gets a chance."* – Expert 1, Observer Research Foundation, India

In the same way, expert 5 agreed to this and stated that social well-being within community is rightly expected to be of higher importance than individual social well-being.

6.2.9 Changes in Social Well-being within Community

Apart from considering what was mentioned before by expert 1 regarding the importance of social well-being within community in sub-section 6.2.8, the dimension changes in social well-being within community overall, scored comparably low. However, it reaches higher importance than changes in individual social well-being.

On an industry level, especially respondents of the energy and utilities industry as well as the financial services industry have rated this dimension relatively low. The expert from the energy industry concluded

that priorities of people at the BoP lie in short-term economic benefits rather than focusing more on, as he calls them, *soft factors* like social well-being.

The representative of the professional and financial services industry (expert 5) confirmed the opinions that have been perceived on this topic. He referred to a study in which people that are negatively affected by the employment and economic situations in BoP countries, would first ask for economic sustainability, healthcare, nutrition and infrastructure, whereas aspects of social well-being were not an important topic.

> *"This study covered 43 countries when I am correct, and they asked what people perceived to be the most important task. At the top, people would ask for jobs, in other words economic sustainability, second was healthcare, then water and the fourth one was traditional infrastructure. Social mobility or well-being within surface on the other hand was not in the top range. I remember most social tasks carried low percentage points.* – Expert 5, Deloitte, South Africa

It furthermore stands out that especially respondents of organisations operating in Africa and Latin America value changes in social well-being within community comparably low. In contrast to that, expert 5 additionally stressed the importance of the community for every entrepreneur. According to him, one of the "*three economic pillars that can unlock employment in the lower pyramid, is collaborative consumption"* (appendix A.4.5). This way entrepreneurs are able to justify ownership while the community can access assets as if they owned them. Important for collaborative consumption in order to work however, are certain degrees of social well-being within the community

> *"In creating jobs at the lower end of the pyramid, of highest importance is social connectivity and sense of community. So, my view is, if you can combine social communities and closeness and empower that with some kind of technological solutions, you can create transparent trusted networks. So, a critical thing for entrepreneurs is for the community to buy in the entrepreneur. So, entrepreneurship needs social connectivity in order to get traction."* – Expert 5, Deloitte, South Africa

That economic and social benefits go hand in hand is one aspect expert 5 stressed specifically. According to him, social benefits without any form of economic benefit, which can serve as good motivator, might not add value to the community. Real value can only be added to BoP communities, if there are both positive social and positive economic benefits.

> *"I might be a bit cynical. But you only change people's behaviour if there is economic interest. I think both go hand in hand and social benefit is certainly important, but economic benefit is a good motivator. So, if there is no economic benefit, the social might not add value. A positive*

> *economic as well as social benefit on the other hand adds value."* – Expert 5, Deloitte, South Africa

6.2.10 Changes in Culture

Quantitative results show that changes in culture are valued especially low by the education as well as energy and utilities industry. The expert from the energy industry indicated that changes in culture belong to the aforementioned soft factors as well. Low ratings for the importance of both changes in social well-being within community and changes in culture seem to be valued less by people at the BoP due to a lower priority.

> *"I would conclude from my experience in energy and healthcare that economic benefits are one of the most important factors for people at the BoP in Africa. Their short-term focus on economic benefits makes it really hard to bring something in place that is focusing on more "soft" factors like culture, social well-being or environmental issues. However, education might help on the long-run to create awareness regarding long-term outputs of investments and shift the focus to the other dimensions as well in order to get a better overall result."* – Expert 4, Energy4Impact, Kenya

Expert 1, who is experienced in cultural issues in India refers to culture as being hyper-localised and thus very hard to understand and measure. She further indicates that culture cannot be assessed and scaled up very easily, which can be seen as one reason for the low rating by respondents of the education sector as well as the overall low rating for this dimension. However, culture, as an approachable topic, is of very high importance. The expert referred to a project in which was concluded that building cultural bridges between people from different regions is the very first step in order to have any social impact.

> *"First of all, before starting any social impact project, one need to get an understanding of cultural local norms, and then needs to bridge this cultural understanding. It is thus important to work with culture and gain some form of flexibility perhaps."* – Expert 1, Observer Research Foundation, India

7 Analysis

In a manner similar to the previous sections, the analysis chapter will be structured along the three questions asked in this thesis: *How should Social Impact be Measured?, What should be Measured?* and *Who should Measure What?*. Due to the exhaustive and comprehensive presentation of the findings of the data collection in the previous chapters, the following sections will focus on conflation of quantitative and qualitative findings in order to give an overview of this thesis' final results. Results of the analysis will be presented following a bottom up scheme, meaning that the main cognition for each level of analysis will be highlighted before discussing the actual analysis.

7.1 How should Social Impact be Measured?

7.1.1 Importance of Measuring Social Impact at the BoP

As elaborated on in sub-section 5.1.1, social impact measurement is a topic of high relevance for scholars and practitioners at the BoP. The fact that social impact measurement has been rated as being of very high importance within the data collection of this thesis again underlines the need for measurement methods that are applicable at the BoP. This once more emphasises the relevance of this thesis in elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP by answering the three research questions stated above.

Quantitative and qualitative results show that measuring social impact has been considered as being of very high importance among all respondents. As demonstrated in the sub-sections above, the main reason to measure social impact is to understand the mechanism of how impacts are achieved in order to enable abstraction and reapplication and thus increase efficiency and effectiveness of interventions. Additionally, social impact measurement helps to prove progress to donors and stakeholders as well as people within local communities. Continuous social impact assessment in the local communities and the aggregation of the results furthermore helps policy and decision makers to steer programmes and interventions for the purpose of increasing overall well-being and social equality.

7.1.2 Degree of Standardisation

One important aspect of answering how social impact at the BoP should be approached is the adequate degree of standardisation of an applicable measurement method. Analysis conducted in this thesis shows that even though a high degree of standardisation is desirable for some reasons (e.g. increased comparability), very different local environments and influencing factors as well as the need to understand and adapt to them make the implementation of highly standardised methods practically impossible at the BoP. An applicable method for measuring social impact at the BoP should thus be flexible, rather than standardised. Comparability may then still be achieved by high transparency, which would also enable

scholars and practitioners to increase their knowledge and understanding of mechanisms of social impact at the BoP and thus allow them to abstract, replicate and multiply the impacts achieved.

This is backed by interesting conspicuities that have been observed in analysis and synthesis of quantitative and qualitative results. The spread of quantitative results covers the whole bandwidth from highly standardised to highly flexible with an average in the neutral middle. Hence, it does not allow for a clear interpretation. Qualitative results, on the other hand, paint a clearer picture. All respondents, regardless of their industry, country of origin, country of operation, commercial orientation and organisation size clearly stated that flexibility outweighs standardisation. This contradicts the quantitative results and again demonstrates the ongoing debate regarding the appropriate degree of standardisation among scholars and practitioners. However, there was consensus among the interviewed experts that a certain degree of standardisation is indeed desirable for e.g. comparability reasons. Nevertheless, the fact that varying environments and influencing factors require an adaption to the needs of every local community at the BoP lets experts conclude that flexibility outweighs standardisation. Five out of five interview experts stressed the importance of being able to adapt to specificities of the given situation in order to be able to measure social impact precisely.

The high spread might also be explained by the variance in the respondents' experience. Quantitative results show a negative correlation between the degree of standardisation and the respondents' experience. One expert confirmed this phenomenon by explaining that she aspired a high degree of standardisation and comparability in the beginning of her career. With increasing experience, she discharged this thought due to the reasons mentioned above.

Despite the requirement for a certain degree of standardisation, results show that comparability can still be achieved by high transparency when reporting social impacts. This not only helps to bridge certain specificities of single communities but also leads to a better understanding of how social impacts are achieved and how they are affected by the different influencing factors in a specific environment. This, in turn, enables scholars and practitioners to understand and abstract certain mechanisms of social impact and allows them to replicate and multiply these mechanisms to other communities.

7.1.3 Challenges of Current Measurement Approaches

Within this thesis, recent approaches to social impact measurement at the BoP have been analysed (see sub-section 3.1.1). Results showed that recent approaches to measuring social impact at the BoP utilise existing and structured social impact measurement methods very rarely, indicating that existing methods are characterised by being too standardised and do not allow for individual adaption to specific BoP characteristics. Subsequently, seven characteristics of the BoP have been extracted from current literature

that need to be considered when measuring social impact. These characteristics have been confirmed by the collected data and emphasise the challenging characteristics of the BoP for standardised methods. It can thus be concluded that social impact measurement methods for the BoP need to be characterised by a high degree of flexibility.

Quantitative and qualitative data shows that the seven characteristics are not only relevant for scholars, but also play an important role for practitioners and experts with experience in social impact measurement at the BoP. Thus, when approaching social impact measurement at the BoP, the seven characteristics related to the four categories of infrastructure, governance, market and triple bottom line need to be considered.

Even though the characteristics have not directly been part of quantitative and qualitative data collection, the characteristics have repeatedly been confirmed when asking for recent and current measurement approaches to social impact measurement as well as associated challenges and potential improvements. Table 21 below, provides an overview of the seven characteristics derived from literature (see sub-section 3.1.2) and the respective quantitative and qualitative observations.

One characteristic that has neither been confirmed nor been rejected is the triple bottom line aspect. Literature suggests that social impact measurement should include impacts among all three dimensions of the triple bottom line, namely economic, ecological and social. Quantitative results, however, do not confirm this, since dimensions related to social and environmental aspects have been rated as being of comparably low importance. Nevertheless, dimensions related to social and environmental aspects still achieved good results (see section 5.2). This being said, further elaboration on this topic within the qualitative part of this thesis sheds light on the reasoning behind these results. In general, experts agree with literature by stating that all three aspects of the triple bottom line have to be considered when approaching social impact measurement at the BoP. However, dimensions that are related to economic aspects are of outmost important to people at the BoP. Thus, achieving improvements in dimensions related to economic aspects as well as other fundamental topics can be seen as perquisite to achieving impacts in dimensions related to social and environmental aspects.

While experts do agree with the importance of all three triple bottom line aspects for the purpose of achieving sustainable social impacts at the BoP and thus none of them should be neglected when measuring it, the very high importance of economic benefits for people at the BoP has shaped qualitative results. These show that achieving economic benefits is required in order to accomplish impact in the first place, since social and environmental aspects are not of highest priority for people at the BoP. However, experts agree that dimensions related to social and environmental aspects cannot be left aside when measuring social

impact but have to be integrated in later steps of interventions, when fundamental economic grievances have been mitigated.

Table 21: BoP characteristics and respective observations from research

Categories	Characteristics	Exemplary Observations (quant./qual.)
Infrastructure	Lack of basic infrastructure setup (water, roads, electricity and technology)	**Qual.:** Lack of technological infrastructure and electricity; Deficient physical infrastructure such as roads
Infrastructure	Inconsistent data availability and reliability	**Quant.:** Lack of available data **Qual.:** Low data quality; High cost of secondary data; Lack of digital skills
Governance	Lack of general standards and requirements for SIM	**Quant.:** Lack of methodologies; Lack of metrics
Market	Informal market setup	**Qual.:** Deficient political structures; Unreliable data from local reporting schemes
Market	Various customer profiles (culture, language and education)	**Qual.:** Hyper-localised characteristics such as individual languages in each community
Market	Various initiators with different intentions	**Qual.:** Limited applicability of secondary data; Huge differences with regards to required data
Triple Bottom Line	Unbalance with regards to social, economic and environmental aspects	**Qual.:** Achievement of economic benefits are perquisite to other impacts, however, others not to be neglected

7.2 What should be Measured?

While looking at the dimensions that should be utilised when measuring social impact at the BoP, quantitative and qualitative results allow for a grouping of dimensions regarding their importance. In general, none of the dimensions under analysis has scored below neutral with regards to its importance for measuring social impact at the BoP. This indicates that the list of dimensions developed in this thesis is generally suited for measuring social impact at the BoP. The fact that the open-ended question asking for additional dimensions did not lead to the necessity to include further dimensions furthermore confirms the comprehensiveness of the dimensions selected. Overall results allow for a grouping of dimensions in the groups of *economic benefits*, *fundamentals* and *optionals*. Dimensions related to *economic benefits* and *fundamentals* are thereby of highest importance when measuring social impact at the BoP.

Even though all dimensions have been rated as being of at least neutral importance, results show clear gradations with regards to the importance of the single dimensions and thus allow for a grouping of the dimensions into three subgroups: *economic benefits*, *fundamentals* and *optionals*. Quantitative results show that dimensions related to *economic benefits* are the ones that have been rated as being of highest importance. This confirms the findings from literature (see section 3.2), indicating that economic factors play an important role for poverty alleviation. Furthermore, experts stressed the importance of *economic benefits* for people at the BoP, since they directly relate it to feeding themselves and their families. *Economic benefits* thereby contain the dimensions changes in local economy, changes in material well-being and changes in labour situation.

Furthermore, dimensions that can be referred to as being fundamental to a better life and social impact have been rated as being of high importance when it comes to measuring social impact at the BoP as well. Thus, dimensions related to the group *fundamentals* include changes in infrastructure, changes in quality of institutions, changes in bodily health, changes in equality and changes in living environment. The importance of these dimensions does not only support findings from literature (see section 3.2), but also relate to what experts have stated in the interviews. Measurement dimensions that belong to the group of *fundamentals* are indeed considered as being of high importance since they are perquisite to improvements in other areas (e.g. changes in infrastructure; see sub-sections 3.2.2 and 6.2.2). However, the high rating of dimensions related to *fundamentals* does not necessarily correspond with the prioritisations of people at the BoP. While changes in bodily health for example are indeed of high importance when it comes to measuring social impact, people at the BoP still will prioritise *economic benefits* and neglect grievances in bodily health as long as they do not prevent them from generating income (see sub-section 6.2.3).

Changes in mental health, changes local political system, changes in interaction with ecological environment, changes in social well-being within community, changes in individual social well-being and changes in culture are the dimensions that have achieved average scorings below 1. Qualitative results confirm that these dimensions are rather specific and cannot be seen as being of high importance for measuring social impact at the BoP in general. Thus, they form the group *optionals*. Being in this group, however, does not mean that respective dimensions should be neglected when measuring social impact. Scholars and practitioners aiming to evaluate specific aspects of social impact can and should select the necessary dimensions from the group of *optionals* in order to achieve the aspired measurement goal and adapt the measurement approach to the local communities and their needs.

Table 22: Categorisation of measurement dimensions

Group	Dimension	Avg. Importance
Economic Benefits	Local Economy	High (1,46)
Economic Benefits	Material Well-being	High (1,29)
Economic Benefits	Labour Situation	High (1,27)
Fundamentals	Infrastructure	High (1,46)
Fundamentals	Quality of Institutions	High (1,41)
Fundamentals	Bodily Health	High (1,37)
Fundamentals	Equality	High (1,27)
Fundamentals	Living Environment	High (1,22)
Optionals	Mental Health	High (0,98)
Optionals	Local Political System	High (0,88)
Optionals	Interaction with Ecological Environment	High (0,80)
Optionals	Social Well-being within Community	High (0,66)
Optionals	Individual Social Well-being	Neutral (0,27)
Optionals	Culture	Neutral (0,17)

The quintessence of both quantitative and qualitative data collection is that dimensions related to *economic benefits* are of outmost importance when it comes to social impact measurement at the BoP. This is mainly due to the fact that people at the BoP prioritise things differently compared to people living in more developed countries. Furthermore, social impacts achieved in dimensions related to *economic benefits* often lead to direct improvements for people at the BoP. Thus, in many cases impacts in the dimensions related to *economic benefits* are the ones that should be prioritised in order to enable the achievement of social impacts in other dimensions. Experts furthermore elaborated on the fact that impacts related to dimensions of the *economic benefits* group are the ones that are achievable more easily compared to impacts related to dimensions of *fundamentals* or *optionals*. Dimensions such as changes in local political system for example

are difficult to achieve for initiating organisations, especially when they are rather small (see sub-section 6.2.6).

Impacts in dimensions related to *economic benefits* thus function as door opener to impacts in other dimensions, since *economic benefits* are of outmost importance for people at the BoP. This has been stressed by different experts in the interview and is a fact that has to be considered when setting up projects at the BoP. According to the experts, people at the BoP often struggle with understanding long-term characters of interventions, e.g. due to insufficient education. This might lead to rejection of interventions in certain communities, in case no short-term improvement is given as well. In such cases, the dimension changes in culture might play an important role. Qualitative results show that culture can be an important factor when it comes to projects that require high acceptance within local communities. In such projects, culture should not only be utilised as an optional measurement dimension but should rather be seen as perquisite to achieve other impacts. Bridging cultural differences might be required first, before impacts can be achieved.

Experts furthermore elaborated that the ease of measurement of certain dimensions is an important and often limiting factor when it comes to social impact measurement at the BoP. This has to be considered when utilising dimensions. Quantitative results show a positive correlation between ease of measurement and the degree of importance of dimensions. While for example assessing changes in local economy is a rather developed field in theory and practice and might allow for the utilisation of existing data, changes in culture are rather difficult to assess or quantify and require e.g. in-depth understanding of mechanisms within local communities.

7.3 Who should Measure What?

The third research question, asking for how characteristics of the initiating organisation affect the choice of social impact measurement dimensions, will be elaborated on in the following sub-sections. Analysis shows that all characteristics extracted from literature have an impact on the choice of the dimensions for measuring social impact at the BoP. Only on the level of country of operation, no significant differences have been found. Additionally, findings on this level of analysis are mainly in line with findings on an overall level regarding the question *What should be Measured?*. Across all levels of analysis, dimensions related to *economic benefits* or *fundamentals* always have been rated as being of highest importance. However, differences on the particular level of analysis have been found and will be presented below. A detailed list of the top three priority dimensions for each group of the organisational characteristics can be found in appendix A.5.

7.3.1 Industry

Overall, quantitative and qualitative analysis on industry level underline the importance of dimensions related to *economic benefits* and *fundamentals*. However, characteristics related to the industry of the initiating organisations affect the choice of dimensions for measuring social impact at the BoP and should thus be considered. Once more, this highlights the importance of a certain degree of flexibility a social impact measurement method for the BoP should have.

Detailed results of the highest important dimensions for a particular industry can be found in sub-section 5.3.1 and appendix A.5.1. Additionally, appendix A.6 gives an overview of the number of times each dimension has been rated as being of highest and lowest importance by each industry. Among all industries, dimensions related to either *economic benefits* or *fundamentals* have been rated as being of highest importance. Only research industry deviates from that. For them, changes in interaction with ecological environment is of highest importance.

Even though results on industry level confirm overall results, different industries make different prioritisations regarding the importance of dimensions. While respondents from organisations operating in the financial services industry rated changes in infrastructure as being of highest importance, respondents from the professional services industry considered changes in local economy as being of highest importance. Respondents from public and social services, however, rate changes in quality of institutions and changes in equality as being among the dimensions of highest importance, while the first dimension related to *economic benefits* only occurs on the third place. This does not only confirm overall results, but also underlines the importance of a certain degree of flexibility. Organisations should not be forced to utilise measurement dimensions that might not be of high relevance to them. They should rather be able to customise the measurement methods and thereby consider the overall importance of dimensions related to *economic benefits* and *fundamentals*.

Dimensions that belong to the group of *optionals*, however, should not be neglected prematurely, since their relevance for measuring social impact can be significant in specific cases. Results show that many industries refer to dimensions related to *optionals* as being among the top three dimensions (see appendix A.5.1). Changes in local political systems, for example, are of second highest importance to respondents from healthcare, industrials as well as media and creative industries. Besides attributing the highest importance to changes in interaction with ecological environment, respondents from the research industry additionally rated changes in living environment and changes in mental health as being of the second highest importance. This again underlines that organisations should be able to adapt measurement approaches individually to their needs and the needs of the local communities. Hence, measurement dimensions related to the group

of *optionals* still play an important role in some cases and should definitely be considered when measuring social impact.

7.3.2 Country of Origin

Analysing results of this thesis on the level of country of origin contributes to answering the question of how characteristics of the initiating organisation affect the choice of measurement dimensions. As already observed in previous sub-sections, organisations from different regions value dimensions differently. It can thus be concluded that the country of origin of the initiating organisation has an impact on the choice of the measurement dimension when it comes to measuring social impact at the BoP. Organisations from Western regions, for example, attribute higher average importance to changes in infrastructure, bodily health and individual social well-being, whereas organisations from BoP regions attribute significantly high importance to changes in material well-being. The differences observable on this level of analysis again underline that a certain degree of flexibility is required in order to enable organisations to select the measurement dimensions regarding their needs and possibilities.

Respondents from organisations from African countries fall off the grid by, on the one hand, attributing noticeably high importance to changes in bodily health, which is contrasting to the results on the higher level of analysis described above. And, on the other hand, by attributing noticeably higher importance to changes in material well-being, which is in line with the ratings of other BoP organisations. Furthermore, respondents from Asian organisations, for example, value changes in local economy as being of highest importance, while within the rating of respondents from African organisations, it is not even among the top three (see appendix A.5.2). However, qualitative results confirmed that changes in local economy are important for measuring social impact in Africa as well and should thus still be considered. Such differences furthermore emphasise that social impact and the related prioritisations vary between different regions and should thus be adapted accordingly.

Thus, not only characteristics of the initiating organisation on industry level affect the choice of measurement dimensions, but also the organisation's region of origin. Thereby, differences are not limited to the level of Western versus BoP regions but are also observable on a more individual level. However, Western organisations might be required to critically reflect their conceptualisation of social impact, since they might try to achieve social impacts with a Western mindset, without considering that for people in the BoP, requirements for a better life are completely different.

7.3.3 Country of Operation

When analysing the effects of characteristics of initiating organisations on the choice of measurement dimensions on the level of country of operation, quantitative and qualitative results are generally in line

with results on the other levels of analysis as described in the sub-sections above. Results show that the country of operation, as long as this includes only BoP countries, does not have a significant effect on the choice of dimensions for measuring social impact. While there are small deviations among the results on this level of analysis, the dimensions that have been rated as being of highest and lowest importance are congruent (see sub-section 5.3.3 and appendix A.5.3).

Analysis on the level of country of operation shows that the two dimensions changes in local economy and changes in quality of institutions are the two dimensions of highest importance, regardless of the specific region. Small deviations are only observable when analysing the dimensions that have been ranked as being of third highest importance. In Latin America, changes in labour situation and bodily health are of third highest importance. This coincides with Asia, where changes in labour situation are rated third as well. Additionally, results from Latin America concur with results from Africa, where next to changes in infrastructure, changes in bodily health are rated as being of third highest importance (see appendix A.5.3). The high scoring of changes in local economy and quality of institutions on this level of analysis confirms the quantitative and qualitative findings on an overall level, suggesting that dimensions related to *economic benefits* and *fundamentals* are of highest importance for measuring social impact at the BoP. Interestingly, individual social well-being is the dimension that has been rated as being of lowest importance across all groups on this level of analysis. This, additionally, is in line with the overall results.

7.3.4 Commercial Orientation

An effect of the commercial orientation of the initiating organisation on the choice of the measurement dimensions can be observed within the results as well. While to for-profit organisations, changes in local economy are of highest importance for measuring social impact at the BoP, this dimension is only of third highest importance to non-profit organisations. Non-profit organisations attribute highest importance to changes in quality of institutions, which is rated comparably low by for-profits. Changes in infrastructure are among the top three of both non- and for-profit organisations (see appendix A.5.4). Non-profit organisations furthermore attributed higher importance to all dimensions except for changes in local political system. This dimension has been rated slightly higher by for-profits. Experts explained this phenomenon by the fact that especially for NGOs and small non-profit organisations, changes in local political system are very hard to achieve. However, according to the experts this dimension still is relevant and should be considered when assessing social impact.

Thus, when analysing the ratings grouped by the organisations' commercial orientation, dimensions related to *economic benefits* and *fundamentals* are once again attributed with highest importance. This is confirmed by the experts in the interviews, who have both for-profit and non-profit backgrounds. It again stands out that deviations from this scheme are explainable through the different and very individual goals of the

respective organisations. Regarding the dimensions that have been rated as being least important, no surprises have been detected.

7.3.5 Organisation Size

Parallel to previous findings, analysis on the level of organisation size shows that this organisational characteristic has an impact on the choice of measurement dimensions (see appendix A.5.5). This is supported by the variation among the highest rated dimensions across organisations of different sizes as well as by the positive and negative correlations observed. The top three dimensions across all groups related to organisation size, however, are again covered by dimensions related to *economic benefits* and *fundamentals* and are thus in line with the overall results.

The only exception to this is that large organisations rated the dimension changes in living environment, which belongs to the group of *optionals*, as being of second highest importance to them. According to expert 2, this can be explained by considering the different social and economic backgrounds as well as living and working environments of working classes. The affluent class, which tends to work in rather large organisations, might value changes in living environment more because people do not have to care about fundamental issues such as the access to infrastructure or the quality of governance as much as people working in smaller organisations. This being said, respondents working in small or medium sized organisations face more fundamental challenges and thus attribute a higher importance to dimensions related to *economic benefits* and *fundamentals*.

8 Discussion & Conclusion

The bottom of the pyramid proposition brings together what is currently part of public debates as well as discussions among scholars and practitioners: maintaining a competitive edge while taking responsibility and improving the lives of the marginalised. While measuring traditional economic growth objectives towards maintaining a competitive edge is a well-developed field in theory and practice, the assessment of social impact has long been neglected. Still, some approaches to measuring social impact exist. These, however, are developed in Western contexts or follow specific agendas and have limited applicability for the BoP. Consequently, the aim of this thesis was to contribute to current literature by elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP. In order to narrow down this ambitious goal, the aim has been structured by the following three research questions:

RQ1: How should social impact measurement be approached at the BoP?

RQ2: Which measurement dimensions should be utilised when measuring social impact at the BoP?

RQ3: How do characteristics of initiating organisations affect the choice of measurement dimensions for measuring social impact at the BoP?

Currently, only little is known about how social impact measurement should be approached at the BoP. On a generic level, approaches towards measuring social impact are well-researched, so that constructs like the social impact value chain or generic approaches towards measuring social impact can help to get a basic understanding of the topic. However, current literature shows significant gaps in more specific areas, in particular when it comes to the BoP. Scholars and practitioners within this field most often rely on case studies and individual assessments of social impact and only apply structured approaches very rarely. A more detailed investigation of recently performed approaches to social impact measurement at the BoP shows that these approaches and their underlying constructs are characterised by large variations, leading to the question of whether social impact measurement methods at the BoP can and should be characterised by a certain degree of standardisation or not. While this is an ongoing debate among scholars and practitioners, the large variety and high specificity of BoP characteristics furthermore underlines the importance of the discussion and suggests that methods for measuring social impact at the BoP should be rather flexible.

Additionally, literature shows large gaps regarding the question of which measurement dimensions should be utilised when measuring social impact at the BoP. Thus, within this thesis dimensions, variables and proxies for measuring social impact have been extracted from existing social impact measurement methods

and literature. Their suitability has been further examined in the context of the BoP. This resulted in a comprehensive list of dimensions, variables and proxies from the categories of economic and material well-being, health, constitutions, environment, and social well-being.

As little is known about how to measure social impact at the BoP and what measurement dimensions should be utilised, the question of whether the choice of utilised dimensions is affected by the characteristics of the initiating organisations is largely untapped as well. Indeed, this topic has received some attention in literature by asking for whether or not social impact is a generalisable construct that can be analysed without a specific context, which is referred to as single sector versus multisector approach. Within this thesis, literature has been reviewed with regards to the contextualisation applied when measuring social impact at the BoP. In most cases, contexts have been created by organisational characteristics. These characteristics include industry, country of origin, country of operation, commercial orientation and organisation size.

How should Social Impact be Measured?

Results of this thesis contribute to current literature regarding the question of how social impact measurement should be approached at the BoP in three aspects. Firstly, social impact measurement methods need to be characterised by a certain degree of flexibility in order to be applicable at the BoP. This cognition improves current knowledge on the topic by contributing to the dispute among scholars regarding the question of whether a measurement method should be rather standardised, and thus allow for higher comparability or rather flexible in order to allow for the consideration of specific characteristics of the BoP and the local communities.

Secondly, this thesis shows that lacking comparability resulting from the utilisation of flexible social impact measurement methods can be compensated by a high degree of transparency within measurement approaches. This contributes to current literature by pointing out new ways of how a high degree of comparability can be achieved while at the same time being able to apply flexible methods and considering the specific characteristics of the BoP and the local communities.

Thirdly, this thesis confirms that social impact measurement is a topic of very high importance for scholars and practitioners at the BoP. Thereby, this thesis is one of the first to confirm this and to furthermore elaborate on the reasons behind social impact measurement at the BoP while showing that understanding the mechanisms behind impact creation as well as the ability to abstract and reapply these mechanisms is key for scholars and practitioners at the BoP.

What should be Measured?

Additionally, this thesis contributes to current literature by answering the question of which measurement dimensions should be utilised when measuring social impact at the BoP in three aspects. Firstly, results of

this thesis show that all dimensions derived from literature and from existing social impact measurement methods show a certain degree of importance for the BoP. Thereby, the dimensions changes in local economy and changes in infrastructure are of highest importance, while changes in individual social well-being and changes in culture are of lowest importance for measuring social impact at the BoP. However, the lower importance of these dimensions does not mean that they can or should be neglected, since analysis shows that they are important in specific cases. These findings complement current literature by confirming the applicability of general dimensions for the BoP, which was unknown to scholars before.

This leads over to the second contribution of this thesis regarding the question of what should be measured. Besides complementing knowledge concerning the relevance of dimensions in existing literature, this thesis furthermore contributes to current knowledge by developing groups of dimensions that allow scholars and practitioners to select and prioritise the utilised dimensions within future approaches to measuring social impact at the BoP. Results show that dimensions related to *economic benefits* and *fundamentals* should always be considered when measuring social impact at the BoP, given their high importance at the BoP. Dimensions related to *optionals* can additionally be utilised in order to assess social impacts more comprehensively and individually.

Thirdly, this adds to the debate regarding the degree of standardisation outlined above by providing a common set of measurement dimensions as well as an indication for their prioritisation. This allows for flexible and individual adaption of the measurement approach, while ensuring comparability and representativeness between different approaches. In that way, scholars and practitioners are able to comprehend, abstract and replicate the mechanisms behind achieved impacts, which turned out to be one of the main motivations behind measuring social impact at the BoP.

Who should Measure What?

This thesis furthermore contributes to the current literature by answering the question of how characteristics of initiating organisations affect the choice of measurement dimensions for measuring social impact at the BoP by making two major contributions. Firstly, results show that characteristics of initiating organisations do have an impact on the choice of measurement dimensions. This adds to current knowledge by shedding light on a topic that is new to scientific research and helps to better understand how organisations should choose measurement dimensions in order to measure social impact at the BoP. The comprehensive overview of the preferred dimensions per organisational characteristic can be found in appendix A.5. While presenting a new path in literature, this not only reveals valuable insights for practitioners, but also lays a valuable foundation for further research.

Secondly, analysis shows that variations in the choice of measurement dimensions resulting from organisational characteristics are in line with the overall results and only occur within the groups of *economic benefits* and *fundamentals*. This confirms the cognitions stated above, saying that dimensions related to *economic benefits* and *fundamentals* are of outmost importance for measuring social impact at the BoP, regardless of underlying organisational characteristics. Nevertheless, existing variations should not be neglected, and organisations should be enabled to choose measurement dimensions flexibly regarding their needs. This once again supports the results of this thesis with regards to the degree of flexibility, a social impact measurement method at the BoP should have. Flexibility allows organisations to choose from dimensions related to *economic benefits*, *fundamentals* and *optionals*, enabling them to follow their preferences and adapt social impact measurement approaches to their specific needs, while still maintaining a common base. When presenting these results, this thesis contributes to current literature by being one of the first approaches to investigate differences and deliver insights regarding the choice of measurement dimensions in the context of organisational characteristics and again lays a valuable foundation for further research.

In summary, this thesis makes multiple contributions to current literature. While elaborating on the factors that have to be considered when developing a social impact measurement method for the BoP, the three questions elaborated on above have been answered. Thereby, this thesis makes valuable contributions to current knowledge for scholars and practitioners and fosters a better understanding of how social impact measurement should be approached at the BoP, which measurement dimensions should be utilised and how organisational characteristics affect the choice of measurement dimensions. Scholars and practitioners can build upon the cognitions of this thesis and benefit from the progress made towards the knowledge regarding how not only traditional economic growth objectives, but also social impacts of BoP endeavours can be measured and made explicit. This furthermore increases the momentum in the relevance of the BoP proposition itself since it can thereby answer calls for more inclusive forms of capitalism.

9 Limitations and Implications for Future Research

9.1 Reflections and Limitations

Even though this thesis provides valuable contributions to social impact measurement and BoP literature, the research approach conducted in this thesis is characterised by five main limitations. Firstly, when analysing data regarding the third research question, the sample size of the study conducted reaches its limits. Even though the authors have taken all measures available to increase sample size, a total of 41 responses is not sufficient to derive reliable insights on a level of analysis of such great detail. Due to the large number of industries, single groups of respondents are characterised by being too small. Furthermore, the variation in group size is too large in order to allow for satisfactory comparability. Group sizes have always been provided when presenting the findings, so that this limitation is made transparent and recognisable. The authors of this thesis call upon other researchers with better access to BoP experts to replicate the study with a larger sample size in order to challenge the results of this thesis and increase reliability of the results.

Secondly, biases in survey creation and interview execution can never be excluded completely. However, as extensively described in section 4.4, the authors declare to have undertaken all possible measures to mitigate possible biases. Scholars are invited to repeat the study for the purpose of verifying the results and adding further robustness. While performing interviews, the authors have not been able to find experts that are able to give an interpretation of quantitative findings with regards to the dimensions changes in quality of institutions and mental health. Additionally, the time available per interview was limited by the schedule of the experts resulting in a limited scope of the interviews. Thus, questions related to the research industry could not be asked as comprehensively as the authors would have preferred.

Furthermore, when asking for dimensions that are potentially missing in the second survey question, 17 respondents addressed aspects that have already been covered by certain dimensions. This indicates that respondents might have not been able to completely understand the dimensions under investigation, even though each dimension was accompanied by at least two variables with the intention of giving background information. This may have been insufficient in order to completely exclude any biases.

Fourthly, the correlation between the ease of measurement of a dimension and the degree of importance it achieved during data collection might indicate a bias among the respondents. Even though, the high importance of the respective dimensions can be explained by current theory as well, participants might have followed the line of least resistance by attributing higher importance to dimensions that are easy to assess, rather than attributing higher importance to the ones that seem to be more complex.

Lastly, measurement dimensions that are part of the group of *optionals* are also dimensions that can be considered as being rather soft. Thus, these dimensions are harder to measure and require higher degrees of embeddedness and in-depth understanding of local communities. This might have contributed to the lower overall ratings for these dimensions.

9.2 Implications for Future Research

Results of this thesis have several implications for future research. By further elaborating on the question *What should be Measured?*, researchers can contribute to closing the gap of social impact measurement and BoP literature by investigating the correlation between the ease of measurement of a dimension and the degree of importance it has for social impact measurement at the BoP. This helps to deepen the understanding of whether organisations should apply certain measurement dimensions despite the fact that assessing them is more complex.

Although literature indeed acknowledges the importance of economic dimensions when achieving and assessing social impact, this thesis contributes to existing cognitions by showing that dimensions related to *economic benefits* and *fundamentals* are of outmost importance for BoP interventions while dimensions related to *optionals* such as environmental and social aspects are more secondary. As stated multiple times, this does not mean that dimensions related to *optionals* should be neglected completely, especially given the background of climate change and social inequality. Further research should elaborate on the threshold of where the need for improving *economic benefits* and *fundamentals* is sufficiently satisfied in order to be able to achieve social and environmental impacts as well.

Additionally, results indicate that there might be bias in the conceptualisation of social impact at the BoP by organisations from Western countries. While quantitative results show that respondents from organisations originating from the BoP attribute higher importance to dimensions related to *economic benefits*, respondents from organisations from Western countries attribute higher importance to dimensions related to *fundamentals*. Even though, this difference might be rather small, the authors call upon future research to investigate whether the conceptualisation of social impact at the BoP by Western organisations is biased and whether the different conceptualisations are rather obstructive or beneficiary to achieving social impacts at the BoP.

Lastly, results of this thesis indicate that some of the general measurement methods under investigation (see section 2.3) might be applicable for the BoP since they are characterised by a certain degree of flexibility and do not prescribe a fixed set of dimensions to be utilised (see sub-section 3.2.1). This thesis calls upon scholars to research whether such measurement methods are compatible with the findings of this

thesis regarding the selection of measurement dimensions developed. Methods like Theories of Change, Blended Value Accounting or Social Return on Investment might serve as a fertile starting point.

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Appendix

A.0 Overview of Search Terms Performed in Previous Literature Review

A.0.1 Search Terms performed as a Basis for Method Extraction

Keyword(s)	Search results	Abstracts read	Articles read	Articles used in Literature review
TI=(social AND impact AND measur)*	212	100	19	8
TI=(social AND impact AND assess)*	590	100	16	3

A.0.2 Search Terms Performed for Extraction of Relevance per Method

Method	Search Term	Results	Citations
Social and Extended Life Cycle Assessment	TS=((extended OR social) AND ((life AND cycle) OR (lifecycle)) AND assessment) AND AK=(social AND impact)	146	4013
Theories of Change	TS=(theories change AND social AND impact) AND AK=(social AND impact)	81	1653
Wood's Measurement Approach	TS=(wood AND social AND performance AND social AND impact)	88	1397
Poverty and Social Impact Analysis	TS=(Poverty AND social AND impact AND analysis) AND AK=(social AND impact)	48	1175
Benefit-Cost Analysis	TS=(cost AND benefit AND analysis) AND AK=(social AND impact)	83	1066
Fortune Corporate Reputation Index	TS=(corporate AND reputation AND index AND social AND impact)	65	998
Blended Value Accounting	TS=(((Blended AND Value AND Accounting) OR bricolage) AND social AND impact)	75	817

Balanced Scorecard	TS=(balanced AND scorecard AND social AND impact)	112	817
Ongoing Assessment of Social Impacts	TS=(((OASIS OR (ongoing AND social AND impact AND assessment)) AND social AND impact)) AND AK=(social AND impact)	21	664
Social Return on Investment	TS=(sroi OR (social AND return AND on AND investment)) AND AK=(social AND impact)	72	631
Sustainability Scorecard	TS=(Sustainability AND scorecard AND social AND impact)	46	451

A.1 Comprehensive List of Measurement Categories, Dimensions, Variables , Proxies and respective Sources

It has to be noted that in case no specific proxies have been found, it is referred to the methodological approach suggested by the literature for the purpose of quantifying the respective variable.

Category	Dimension	Variable	Proxy	Source
Economic and Material Well-being	Material Well-being	Standard of Living	UN Indicators/ Survey/ Interview	Vanclay, 2002
Economic and Material Well-being	Material Well-being	Income	Personal Income	Vanclay, 2002; Kato et al., 2017; Baliamoune-Lutz & McGillivray, 2006; Battiston et al., 2013; Brandolini & D'Alessio, 1998; Klasen, 2000; Mitra et al., 2013; Wagle, 2014; Yu, 2013
Economic and Material Well-being	Material Well-being	Income	Family Income	Vanclay, 2002; Kato et al., 2017; Baliamoune-Lutz & McGillivray, 2006; Battiston et al., 2013; Brandolini & D'Alessio, 1998; Klasen, 2000; Mitra et al., 2013; Wagle, 2014; Yu, 2013

Economic and Material Well-being	Material Well-being	Income	Economic Success	Vanclay, 2002; Kato et al., 2017; Baliamoune-Lutz & McGillivray, 2006; Battiston et al., 2013; Brandolini & D'Alessio, 1998; Klasen, 2000; Mitra et al., 2013; Wagle, 2014; Yu, 2013
Economic and Material Well-being	Material Well-being	Level of Material Wealth	Property Value/Price	Vanclay, 2002; Kato et al., 2017; Bérenger & Verdier-Chouchane, 2007; Dubois & Trani, 2009; Klasen, 2000; Mitra et al., 2013; Trani et al., 2011
Economic and Material Well-being	Material Well-being	Level of Material Wealth	Owning Assets / Ownership	Vanclay, 2002; Kato et al., 2017; Bérenger & Verdier-Chouchane, 2007; Dubois & Trani, 2009; Klasen, 2000; Mitra et al., 2013; Trani et al., 2011
Economic and Material Well-being	Material Well-being	Level of Material Wealth	Land Ownership	Santos, 2013; Vanclay, 2002; Kato et al., 2017; Bérenger & Verdier-Chouchane, 2007; Dubois & Trani, 2009; Klasen, 2000; Mitra et al., 2013; Trani et al., 2011
Economic and Material Well-being	Material Well-being	Economic Dependency and Vulnerability	UN EVI Indicators - Macro Level	Vanclay, 2002
Economic and Material Well-being	Labour Situation	Employment Status	Occupational Prestige and Types of Income	Smyth & Vanclay, 2017; Kato et al. 2017
Economic and Material Well-being	Labour Situation	Employment Status	Employment Status (formal/ informal)	Kato et al., 2017; Dubois & Trani, 2009; Trani et al., 2011
Economic and Material Well-being	Labour Situation	Workload	Performance/ Indirect/ Subjective/ Physiological Measures (e.g. Speed &	Vanclay, 2002

			Accuracy or heart rate)	
Economic and Material Well-being	Labour Situation	Working / Labour Conditions	Working Conditions	Kato, 2017; Lelli, 2001
Economic and Material Well-being	Local Economy	Level of Unemployment	Percentage of Unemployment in Community	Kato et al., 2017; Brandolini & D'Alessio, 1998; Sarkodie et al., 2014; Wagle, 2014
Economic and Material Well-being	Local Economy	Distribution of Local Economy	UN EVI Indicators - Macro Level	Vanclay, 2002
Economic and Material Well-being	Local Economy	Transfer and Taxes	Transfer and Taxes - Individual/ Macro	Coudouel et al., 2006; World Bank Group, 2015
Economic and Material Well-being	Local Economy	Savings, loans & (Micro)Credit Access	Surveys/ Interviews (Savings, Loans & (Micro)Credit Access)	Smyth & Vanclay, 2017
Economic and Material Well-being	Local Economy	GDP	GDP (statistics, depending on country)	Kato et al., 2017; Mitra, 2013
Economic and Material Well-being	Local Economy	Inflation	Inflation (statistics, depending on country)	Kato et al., 2017; Mitra, 2013
Health	Bodily Health	Primary Life Necesseties (Nutrition, Air, Sanitation)	Frequency of Eating	Kato et al., 2017; Anand et al., 2005
Health	Bodily Health	Primary life necesseties (Nutrition, Air, Sanitation)	BMI	Kato et al., 2017; Batana, 2013; Yu, 2013
Health	Bodily Health	Actual Health	Life Expectancy	Kato et al., 2017; Baliamoune-Lutz, 2004

Health	Bodily Health	Actual Health	Human Development Index (HDI) by the UN Development Programme)	Vanclay, 2002
Health	Bodily Health	Actual Health	Crude Birth Rate, Mortality Rate	Kato et al., 2017; Lechman, 2014
Health	Bodily Health	Actual Health	Perceived Health Level	Kato et al., 2017; Batana, 2013; Wagle, 2014; Yu, 2013
Health	Bodily Health	Actual Health	Health Conditions in general	Kato et al., 2017; Chiappero-Martinetti, 2000; Trani & Bakhshi, 2008
Health	Bodily Health	Actual Health	Percent of stunted Children in Household	Kato et al., 2017; Klasen, 2000
Health	Bodily Health	Actual Health	Health Insurance Coverage	Kato et al., 2017; Mitra, 2013
Health	Bodily Health	Actual Health	Fertility Rate	Kato et al., 2017; Lechman 2014
Health	Mental Health	Mental Health	Daily Functioning, Remembering Things and Learning new Things	Kato et al., 2017; Trani & Bakhshi , 2008
Health	Mental Health	Mental Health	Mental Well-being or Psychological Well-being	Kato et al., 2017, Chiappero-Martinetti 2000; Lelli 2001; Trani & Bakhshi, 2008
Health	Mental Health	Mental Health	Ability to Focus/ Concentrate, Freedom from Stress, Lack of Sleep	Kato et al., 2017; Anand et al., 2005

Constitutions	Quality of Institutions	Quality of Education	Quality of Services & ongoing Funding & Maintenance Arrangements	Atkisson & Hatcher, 2001; Smyth & Vanclay, 2017, Kato et al., 2017
Constitutions	Quality of Institutions	Quality of Education	Educational attainment level by degree or years attended	Kato et al., 2017; Anand et al. 2005; Klasen, 2000; Mitra, 2013; Wagle, 2014
Constitutions	Local Political System	Political Activism	Activists Groups (number, distribution, inflow)	Kato et al., 2017; Wagle, 2014
Constitutions	Local Political System	Workload and Viability of Government or Formal Agencies	Capacity/ Productivity/ Performance (e.g. of regulatory agencies)/ Time and Delay per Project Approval	Vanclay, 2002
Constitutions	Local Political System	Workload and Viability of NON-Government or Informal Agencies	Capacity/ Productivity/ Performance (e.g. of community services)	Vanclay, 2002
Constitutions	Local Political System	Integrity of Government	Corruption, Drug Sales, illegal Mining, Fishing, Sex-work, Theft/ Crime, Smuggling & Poaching	Vanclay, 2002
Constitutions	Local Political System	Integrity of Government	Electoral Participation, Fair Elections	Anand et al. 2005; Kato et al., 2017; Mitra, 2013; Wagle, 2014
Constitutions	Local Political System	Integrity of Government	Transparency and Corruption	Kato et al., 2017; Mitra, 2013
Constitutions	Local Political System	Legal Rights and Human Rights	Arrests/ Imprisonment/ Torture/ Harrasment/ (Fear	Vanclay, 2002

			of) Loss of free speech	
Constitutions	Local Political System	Political Liberties, Participation and Civil Rights	Degree of Participation in Politics and Decision Making Processes/ Participations in (In)formal Organisations	Vanclay, 2002; Kato et al., 2017; Baliamoune-Lutz, 2004
Environment	Ecological Environment	Natural Resource Assets (Individual/ Common): Forests, Waterbodies, Cropland & Pasture, etc.	Trends in Land & Resource Use: Deforestation, Land Degradation, Land Speculation & Overfishing	Smyth & Vanclay, 2017
Environment	Ecological Environment	Natural Resource Assets (Individual/ Common): Forests, Waterbodies, Cropland & Pasture, etc.	Tenure Arrangements for Land & Common Property	Smyth & Vanclay, 2017
Environment	Ecological Environment	Natural Resource Assets (Individual/ Common): Forests, Waterbodies, Cropland & Pasture, etc.	Competing Land-use Demands & Elite Capture	Smyth & Vanclay, 2017
Environment	Ecological Environment	Climate Change (Natural Disaster)	CO2 Emissions	Atkisson & Hatcher, 2001; Smyth & Vanclay, 2017; Kato et al., 2017; Bérenger & Verdier-Chouchane, 2007
Environment	Ecological Environment	Biophysical Changes	Productivity of Agricultural Land-use/ Food Supply	Vanclay, 2002

Environment	Living Environment	Quality of Environment	Nuisance Factors (dust, noise, risk, blasting, artificial light, security)	Vanclay, 2002; Smyth & Vanclay, 2017
Environment	Living Environment	Physical Quality of Housing	Adequate Housing, Shelter	Kato et al., 2017; Anand et al., 2005; Battiston et al., 2013; Klasen, 2000; Vanclay, 2002
Environment	Living Environment	Social Quality of Housing	Quantity of Social Contacts / Friends / Family Roots	Vanclay, 2002
Environment	Living Environment	Personal Safety	Perception of Safety	Vanclay, 2002; Kato et al., 2017; Klasen, 2000
Environment	Living Environment	Crime and Violence	Crime in the Neighborhood	Vanclay, 2002; Kato et al., 2017; Anand et al., 2005
Environment	Living Environment	Crime and Violence	Mistreatment	Kato et al., 2017; Trani et al., 2011
Environment	Living Environment	Media – Radio, Newspapers, Television, Internet	Expansion/ Development of Technology	Smyth & Vanclay, 2017
Environment	Infrastructure	Access to Education	Access and Quality of Services & ongoing funding & Maintenance Arrangements	Atkisson & Hatcher, 2001; Smyth & Vanclay, 2017; Kato et al., 2017
Environment	Infrastructure	Access to Health facilities (Hospitals, Doctors, etc.)	Access to Health Facilities and Doctors	Kato et al., 2017; Baliamoune-Lutz & McGillivray, 2006; Brandolini & D'Alessio, 1998; Chiappero-Martinetti, 2000; Dubois & Trani, 2009; Klasen, 2000; Lelli, 2001; Trani et al., 2011, 2013
Environment	Infrastructure	Adequacy of Physical Infrastructure	Access to Water and Sanitation Toilets	Vanclay, 2002, Kato et al., 2017; Battiston et al., 2013; Lechman, 2014; Qizilbash

				& Clark, 2005; Santos, 2013
Environment	Infrastructure	Adequacy of Physical Infrastructure	Access to Electricity	Kato et al., 2017; Santos, 2013
Environment	Infrastructure	Adequacy of Physical Infrastructure	Main Sources of Energy for Cooking	Kato et al., 2017; Klasen, 2000
Environment	Infrastructure	Adequacy of Physical Infrastructure	Access to Roads	Kato et al., 2017; Santos, 2013
Environment	Infrastructure	Adequacy of Social Infrastructure	Quality of Services & ongoing Funding & Maintenance Arrangements	Vanclay, 2002, Smyth & Vanclay, 2017
Social Well-Being	Community Social Well-Being	Memberships in Sociocultural Organisations	Statistics/ Survey/ Interview	Kato et al., 2017; Wagle, 2014
Social Well-Being	Community Social Well-Being	Changed Demographic Structure	National Statistics/ Interviews/ Surveys (Birth Rates, Death Rates)	Vanclay, 2002
Social Well-Being	Community Social Well-Being	Social Tension and Violence	National Statistics/ Interviews/ Surveys (Physical, Psychological, ...)	Vanclay, 2002
Social Well-Being	Community Social Well-Being	Community Cohesion, In-migration & Out-migration	Neighbourliness, Belonging, Engagement, Safety, Access/ Quantity of Social Contacts	Smyth & Vanclay, 2017

Social Well-Being	Community Social Well-Being	Community Perceptions of Project, Conflict & Legacy issues	Interviews/ Survey - Opinitons/ Perceptions (Quantity)	Smyth & Vanclay, 2017
Social Well-Being	Community Social Well-Being	Relational Social Capital – Trust and the Type of Relationship	Family Ties, Friendship, Business Relations, or Rapport with Co-workers	Ansari et al., 2012; Bolino et al., 2002; Cicourel, 1973; Nahapiet & Ghoshal, 1998
Social Well-Being	Individual Social Well-Being	Autonomy	Freedom from early Marriage/ Engagement	Kato et al., 2017; Trani et al., 2013
Social Well-Being	Individual Social Well-Being	Autonomy	Self-respect, Confidence	Kato et al., 2017; Anand et al., 2005
Social Well-Being	Individual Social Well-Being	Autonomy	Practical Reason: Perceived Well-being and Decision-making Power	Kato et al., 2017; Anand et al., 2005
Social Well-Being	Individual Social Well-Being	Uncertainty	Statistics/ Survey/ Interview	Vanclay, 2002
Social Well-Being	Individual Social Well-Being	Frequency of Social Activities	Frequency of Interaction with other Individuals/ Friends, Number of Friends	Kato et al., 2017; Brandolini & D'Alessio, 1998; Chiappero-Martinetti, 2000; Lelli, 2001; Wagle, 2014
Social Well-Being	Individual Social Well-Being	Aspirations, Fears, Expectations	Statistics/ Survey/ Interview	Vanclay, 2002; Smyth & Vanclay, 2017
Social Well-Being	Individual Social Well-Being	Satisfaction with Leisure Time	Questions regarding Leisure Activities	Kato et al., 2017; Chiappero-Martinetti, 2000
Social Well-Being	Equality	Access to Legal Advice	Equal local Distribution of Counsellors	Vanclay, 2002

Social Well-Being	Equality	Impact Equality	Fair Distribution of Impacts across Communities	Vanclay, 2002
Social Well-Being	Equality	Gender Equality	Physical Integrity	Vanclay, 2002
Social Well-Being	Equality	Gender Equality	Personal Autonomy	Vanclay, 2002
Social Well-Being	Equality	Gender Equality	Equity of Education	Vanclay, 2002
Social Well-Being	Equality	Gender Equality	Political Emancipation	Vanclay, 2002
Social Well-Being	Culture	Cultural Values	Moral Rules, Norms	Vanclay, 2002; Smyth & Vanclay, 2017
Social Well-Being	Culture	Cultural Values	Beliefs, Identities	Vanclay, 2002; Smyth & Vanclay, 2017
Social Well-Being	Culture	Cultural Values	Rituals	Vanclay, 2002; Smyth & Vanclay, 2017
Social Well-Being	Culture	Cultural Values	Language	Vanclay, 2002; Smyth & Vanclay, 2017
Social Well-Being	Culture	Cultural Values	Dress	Vanclay, 2002; Smyth & Vanclay, 2017

A.2 Overview of Questions for Questionnaire

#	Question	Type	Mandatory	Category
1	From your perception, how would you rate the importance of the following dimensions for assessing social impact of BoP projects?	Close-ended question; 5-point Likert scale	Yes	Social Impact Measurement at the BoP
2	According to your perception and experience, are there any specific criteria missing in the	Open-ended question	No	Social Impact Measurement at the BoP

	list above? If yes, please briefly elaborate.			
3	According to your perception and experience, how important is standardisation among social impact measurement tools?	Close-ended question; 5-point Likert scale	Yes	Social Impact Measurement at the BoP
4	According to your perception and experience, how important is measuring social impact	Close-ended question; 5-point Likert scale	Yes	Social Impact Measurement at the BoP
5	In which industry is your organisation operating in?	Close-ended question; Drop-Down	Yes	Meta-Question
6	What is your organisations region of origin?	Close-ended question; Drop-Down	Yes	Meta-Question
7	In which regions does your organisation operate?	Close-ended question; Multiple choice	Yes	Meta-Questions
8	What is your organisations commercial orientation?	Close-ended question; Multiple choice	Yes	Meta-Questions
9	If applicable, please briefly elaborate on your answer of question 8 above	Open-ended question	No	Meta-Questions
10	What is your organisations size?	Close-ended question; Multiple choice	Yes	Meta-Questions
11	Are you experienced with projects at the BoP (e.g. in rural India or with people having an income of USD 1-2 per capita per day) with the goal of creating positive social impact? Please indicate your personal experience at the BoP below (number of years).	Close-ended question; Multiple choice	Yes	Meta-Questions / BoP experience

12	If applicable, please indicate the type of projects you are experienced with.	Open-ended question	No	Meta-Questions / BoP experience
13	If applicable, please indicate problems you might have experienced with measuring social impact in such projects.	Open-ended question	No	Social Impact Measurement at the BoP

A.3 Results from certain Open-ended Survey Questions (Questions 2 and 13)

A.3.1 Answers to Survey Question 2 and respective Coverage Dimensions

Respondent ID	Answer to Survey Question 2	Covered by the Dimension
2	"Access to financial services, access to mobile phones and network quality"	Infrastructure
6	"Hope the last item 'change in equality' includes the cast structure that institutionalizes and justifies inequality in the society . Most of India's poor are landless lower casts. Religious differences also plays a role. In the Northers states most of the poor are either lower cast Hindus or Muslims."	Equality
7	"Change in access to Health/Medical Insurance"	Bodily Health
15	"Changes in health (not health care or access to facilities) and changes in family (birth/death/marriage etc) have big impact."	Bodily Health
19	"I think the capacity building block could be an interesting part of the criteria. Change in capacity of the local health management (such as training of additional required personnel in the specific field e.g. in the health or education sector). That may account for institution part. Secondly, it would be change in capacity of the local management system (such as in the sphere of social business or social entrepreneurship where local people are hired and given specific training e.g. leadership or couching training so that they are able to manage and lead the business on their own - local ownership)"	Bodily Health

22	“Access to govt subsidies, proximity to employment,”	Labour Situation
23	“Change in quality of family life, change is public services (transport, utility, etc), change in business competitive landscape, change in culture of corruption, change in accountability of public offices, change in empowerment of civic organizations and grass root associations.”	Social Well-being within Community; Individual Social Well-being
24	“Change in consumption ,change in customer ability to buy and change in business policy”	Local Economy
25	“For a BOP category, especially in rural India, keeping children in primary schools on a regular basis by itself is a big task.”	Infrastructure
26	“Access to support for eg. from the government or social funding like in Europe”	Quality of Institutions
28	“Availability of banking and credit facility, agriculture, NGOs and proximity to economic hubs“	Infrastructure
29	“Various social security schemes and their effective implementation would have a bearing on the BOP population. Some of these schemes also help with asset building. Capturing these might improve the understanding of social impact of BOP projects.”	Material Well-being
30	“Agriculture and agri-based industries and technology interventions are conspicuous by its absence here. Irrespective of the fast-changing nature of India's economy and the growth of urbanisation, the country still remains largely agrarian and rural. The benefits of technology are yet to felt in these primary sectors. “	Infrastructure
31	“- "SOCIAL WELL-BEING WITHIN COMMUNITY" should include marriages, same-sex marriages etc. - Healthcare can be a separate category “	Social Well-being within Community; Bodily Health
32	“I would add access to digital infrastructure, especially for women can impact BOP. The survey mentions roads, I would widen that to connectivity in rural India, of villages, regions, being connected to bigger urban centres by rail, road, bridges and such.”	Infrastructure
35	“Education level and access to educational institutions. Especially primary and secondary education.”	Infrastructure; Quality of Institutions

36	"Active communities of self-help groups, could also have a positive impact."	Social Well-being within Community; Bodily Health

A.3.2 Answers to Survey Question 13 and Indicated Challeges

Respondent ID	Answer to Survey Question 13	Indicated Challenge
1	"India is a very complex social web of people from largely varied backgrounds and belief systems. With more than 11 official languages, 5-6 major religions and thousands of localized customs and traditions, it is simply not possible to prepare a 'one size fits all' social impact monitoring tool for the country as such. The more holistic the impact assessment, the more challenging it becomes. Thus, the approach may encompass baseline values to be determined first for each case and then run a social impact measurement tool ensuring that the indicators are reset each time for different contexts. To understand, social change in India, one needs to shed all pre-conceived ideas and assumptions of social development and deep delve into the social fabric of each community to understand their behaviour and pattern in different contexts."	Deficient Definitions of the underlying Concept or Methodology; Lack of standardised Metrics
2	"Donors don't have a clear idea of what they want to have measured or it is inconsistent between projects and hence not comparable. Surveying in general can be difficult especially now that in-person surveys are harder to conduct due to COVID (harder to reach BOP, especially those without reliable access to a mobile phone). Difficulty to get correct numbers when asking people about their income etc. (indirect methods to determine this are required). Limited capacity and funding available within our NGO to evaluate impact-related data points."	Deficient Definitions of the underlying Concept or Methodology; Lack of Resources; Lack of available Data
3	"Mostly will be linked to financial ability of most company to invest money on research and follow up again after a year or two to the same clients to find improvement or not."	Lack of Resources
4	"Lack of clear methodologies to measure impact; Lack of good-will in utilization of research results in decision making; bias among data collectors in reporting; Most outlined methodologies and guidelines by international	Deficient Definitions of the underlying Concept or Methodology; Lack of Measurement Methodsd

	organizations guiding social research are not replicable in a local community context"	
6	"It is difficult to establish the direction of causation: If access to modern lighting and modern cooking fuels leads to economic activity and development or development leads to demand for lighting (electricity) and modern cooking fuels"	Deficient Definitions of the underlying Concept or Methodology;
7	"Lack of clear standardized metrics to measure changes in poverty and other development indicators"	Lack of Measurement Methods; Lack of standardised Metrics
10	"Government adoption to the new system of education rendered the tool redundant. Most of agricultural products are consumed in the farm before harvesting thus calculating income is just approximation"	Deficient Definitions of the underlying Concept or Methodology; Lack of standardised Metrics
11	"Given the early-stage nature of companies we invest in it can be challenging to measure outputs vs. outcomes"	Deficient Definitions of the underlying Concept or Methodology
19	"1.) Lack of sources/ studies on the RELIABLE indicators 2.) Lack of local capacity in the project country to monitor and/or measure social impact of the project 3.) Challenges of getting honest feedback from the stakeholders (especially the children group) 4.) High investment in cost and time"	Lack of Resources; Lack of available Data
23	"lack of well set measurement tools applicable for the specific project, lack of local data matching standardized international measurement tools, lack of followup studies in measuring social impact, and there is national monitoring and evaluation guideline but is too general"	Lack of Measurement Methods; Lack of standardised Metrics; Lack of available Data
26	"Where the money trails goes. Lack of supervision of funds for improvement in schools"	Lack of Resources
28	"Lack of measuring tools for direct impact"	Lack of Measurement Methods
31	"Striking a balance between standardized and flexible approaches"	Deficient Definitions of the underlying Concept or Methodology

32	"In India, data can be difficult to access, to parse through, there is also a lack of gender aggregated data"	Lack of available Data
35	"Language barriers, lack of information, difficult to standardise measures"	Deficient Definitions of the underlying Concept or Methodology; Lack of available Data
37	"1. Limited resources and capacity of Social Enterprises.(Specifically early stage ones) 2.Some time lack of commitment from Top management."	Lack of Resources
38	"Measuring social impact or change takes time. Its important to understand and assess the outputs (both positive and negative) of a certain product/service provided in underserved markets."	Lack of Resources
39	"Lack of adequate data and documentation leading to problems in measuring impact"	Lack of Resources; Lack of available Data

A.4 Interview Transcripts

A.4.1 Interview Transcript Expert 1

Dear interviewee, thank you very much for your time today. In our master's thesis, we are elaborating on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid. In order to investigate the importance of different measurement dimensions, we have conducted a survey that led to interesting results and revealed some anomalies which we want to address in the interview today. With your expertise, you will help us to better understand the results and enable us to contribute to current literature. If it is okay for you, we will record today's session in order to transcribe it afterwards. Data will be anonymised, as it has also been done for the survey.

Background Questions:

1. **Industry**

   Interviewer: In what Industry are you operating?

   Interviewee: It is relatively hard to classify, since we are doing research on social impact but at the same time we are conducting several projects and support organisations in achieving impacts.

2. **Experience**

   Interviewer: What is your personal BoP experience (time and type of projects)?

Interviewee: I have worked on many different projects in India and the neighbour countries. Most projects consist of planning and evaluating social impact interventions. I have done this for several years now.

Questions related to Dimensions:

3. Dimension: Culture

Interviewer: With an average neutral score, *changes in Culture (e.g. obtainment/destruction of rituals, rules and local languages)* is the measurement dimension with lowest importance according to the respondents. (high agreement and high contrast to other results) From your experience, do you agree with the results of the survey? How can you explain them?

Interviewee: From my own experience, I would have rated culture as well lower as other dimensions. Most other dimensions such as Local Economy or Infrastructure remain measurable, in other words: the impact of these other dimensions is more known as well as easier to understand. This leads to the fact that these other dimensions are just easier to map and also adapt along the way of performing social impact measurement.
However, culture as a dimension for measuring social impact is still very important. It's just so that others can be more generally and easily implied. Culture is so hyper localised, changes are different and hard to understand as well as to measure on a more general level. It is localised to every place and region in terms of e.g. language, religions, and so hard to understand and measure when only seeing the subhead of culture. Therefore, I would say that in terms of detailed measurement, other dimensions just have higher priorities due to ease of measurement.

Interviewer: What we also observed in regard to the culture dimension was that respondents, especially the energy and utility sector as well as the education sector, value changes in culture significantly less important than others. How can you explain the results for energy/utilities and education industry?

Interviewee: I am trying to think of why that is. Unfortunately for the energy sector I do not know anything about that sector. Regarding the education sector, again, if we look at Asia or Africa, we are looking at models that are stable and replicable. The whole idea is that for any social impact the project has to be something that can be scaled up in order to reach as many people as possible. Which is why culture does not come up as we are looking at different metrics. And thus, it is hard to scale up.

Interviewer: In your opinion, would you still say that it is important to assess culture as a dimension, and if so, how would you assess it?

Interviewee: I think culture is very important to measure and it cannot be left out. I would like to ask, who are the ones that rated culture high?

Interviewer: Just one moment please. So, industry wise we can say that sectors that rated changes in culture comparably high are respondents from the professional services, media, and healthcare.

Interviewee: And when looking at culture you are looking at everything on a general level right?

Interviewer: Yes correct, so in the survey we described it as changes in rules, beliefs, rituals and languages.

Interviewee: So, to answer your question. This makes me think about a report project performed in 2018 in Bangladesh, where me and my colleagues were looking at health and trying to introduce refugees that have been displaced to health in the first place. My reporting was between education and health. We have been looking for more tangible information on heath in that time. For example, do refugees come into hospitals and how to bring in those changes?
In the course of this project, we found that understanding culture was very important to first of all our reporting as well as to understand how development agency were approaching the whole topic of health with refugees.
Refugees back home have not been exposed to health facilities and had a certain mistrust in taking institutional health by people in refugees camps in Bangladesh. One reason for this was conservatism. Thereby it is important to understand that those people have not felt something like this back home and have not been introduced to the whole topic of health in the same way. Due to their different cultural background, refugees, e.g. pregnant women in labour, wouldn't visit health facilities, simply because they have not been exposed to this in their home country and would not leave their houses for giving birth to their children
In this project, we found that first of all building cultural bridges was of utmost importance. Otherwise in this example, women would not come to the hospitals. Actually, this shows that culture is of a very high importance all the time.

Interviewer: So, would you agree that it is not that important to preserve the culture as hard as it is, because it is also important to make changes and allowing people to open up and taking the opportunities to go to hospitals for example. So maybe it is more important to bridge culture rather than preserving it?

Interviewee: First of all, before starting any social impact project, one need to get an understanding of cultural local norms, and then needs to bridge this cultural understanding. It is thus important to work with culture and gain some form of flexibility perhaps.

Interviewer: So, we can conclude it might be better to see culture as some kind of a meta-level criterion which must be understood in the first place in order to gain any kind of impact?

Interviewee: Yes that is correct. In the example of the research project, it was not enough to only build hospitals, as people wouldn't visit it for certain reasons of cultural issues. It was furthermore important to understand and bridge cultural differences and talk to those refugees on the ground. What I also want to mention that even though I am from India, there still were certain degrees of cultural differences and I as well came in as an outsider and had to learn and adapt in terms of how to handle things in Bangladesh.

4. **Individual Social well-being**

Interviewer*: Changes in Individual Social Well-Being (e.g. increase/decrease in autonomy or satisfaction with leisure-time)* scored comparably low. In average, the respondents assess its importance as being neutral. Social well-being within communities on the other hand is valued comparably higher. Interestingly, respondents from **education** industry rate changes in individual social well-being as being of significantly higher importance than respondents from other industries.

In your opinion, why are changes in individual social well-being rated low overall, and why is it rated that high in education? Would you agree?

Interviewee: First of all, I would say social well-being within communities is just rated higher in the BoP and of a higher priority for people living at the BoP which might be reason for a higher rating of this dimension. People in this kind of setting would rate community simply higher. When looking at it from a gender perspective, especially for women, the community becomes the most important norm for understanding well-being. E.g. the family and other relatives as well as neighbours, all those come before individual social well-being even gets a chance.

Interviewer: And again, in terms of the education industry, which rated this dimension significantly higher than others. What would be your take on that one?

Interviewee: In terms of the education industry, education would be perceived as an individual undertaking, even though everything is tied up with community and duty.

Questions regarding Measurement Tool on Meta-Level:

5. **Importance of Social Impact Measurement**

Interviewer: Overall, importance of social impact measurement has been assessed as being very high. Would you agree with that and **what are your main reasons for measuring social impact**?

Interviewee: The first and most important reason is so it becomes replicable. If we can measure social impact it can be also reapplied in various other cases e.g. for development

Interviewer: So, with replicability you mean that when you see the progress with one model in one project that you can reapply that in another project for example?

Interviewee: Yes, absolutely. Moreover, it is good and important for the exchange of learning, and more cooperation in development and social outcomes.

6. **Degree of Standardisation**

Interviewer: Respondents were divided with regard to the degree of standardisation of social impact measurement tools. How would you assess the trade-off between standardisation (and comparability) vs. flexibility?

*Interviewee: For me personally, it is definitely important to have a flexible and especially adoptable tool. Specifically, when looking at it for example from culture, which is a topic so diverse, it is very important to be adaptable when measuring social impact**.** Nevertheless, in terms of validity and viability, some amount of standardisation is important. I would say, probably a little less than a 50-50 equal distribution, as flexibility still needs to be focused on in the first place. So, bottom line would be, I personally prefer adaptability and flexibility above standardisation, but certain amounts of comparability are still interesting.*

Interviewer (Showing different alternatives on the slide): Which of the following options would you choose? ***Either*** "Comprehensive", "Trade-Off" or "Individual"?

Interviewee: Which option to choose would highly depend on the funds and amount of time and resources available. I would say that the perfect fit is somewhere in between the comprehensive and the individual alternative. But as mentioned earlier, it is highly depending on the particular context with regards to time, funds, depth and the objectives someone is trying to focus on. In the end, it is always good to have choices.

7. **Current measurement approach**

Interviewer: Is your organisation or a project you have currently worked with measuring social impact? If yes, how?

Interviewee: So, the organisation or the programme that I worked with works quite closely on development projects across Asia and Africa. I know there are surveys undertaken. I know there are big surveys taken up in in Africa. However, those are quite foreign policy related and I do not think we have done much there on social impact, but I might not be fully aware right now.

Interviewee: So, you would say you have mostly developed surveys in order to get a picture of the situation?

Interviewee: Yes, definitely.

Interviewer: Okay so, actually that is also what we thought a lot about. Ideally you have some data like rates available. But e.g. changes in culture or other soft dimensions cannot be measured without asking the people directly right? And the sample size then is of course also depending on the resources available.

Interviewee: Yes, yes I agree. Even for a survey that was the debate in the last months. The project is done in Africa and looks at India's development projects in East- and West-Africa, in this is a debate going on whether to ask individuals, look at experts or universities, or to get an agency to do it. These questions still have not been d out completely. An agency is offering their solutions for a specific budget, but the problem might be the quality of the study and the respondents, which is unknown. In general, data is mostly collected through surveys.

8. Ideal measurement approach

Interviewer: Alright, now we would like to ask you one final question concerning you ideal measurement approach, the approach of your dreams so to say. How would you like to measure social impact at the BoP in future?

Interviewee: For me personally, looking at the impact for women, is one very important point when it comes to measuring social impact. And doing that across various dimensions. Especially in Asia and Africa there are biases existing due to only focusing on men. This way, a valuable and

important view on understanding social impact is left out. And yes, I think for me that would be the most important aspect.

A.4.2 Interview Transcript Expert 2

Dear interviewee, thank you very much for your time today. In our master's thesis, we are elaborating on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid. In order to investigate the importance of different measurement dimensions, we have conducted a survey that led to interesting results and revealed some anomalies which we want to address in the interview today. With your expertise, you will help us to better understand the results and enable us to contribute to current literature. If it is okay for you, we will record today's session in order to transcribe it afterwards. Data will be anonymised, as it has also been done for the survey.

Background Questions:

1. **Industry**

   Interviewer: In what Industry are you operating?

   Interviewee: I am operating in the research industry

2. **Experience**

   Interviewer: What is your personal BoP experience (time and type of projects)?

   Interviewee: I have several years of experience at the BoP in India. This reaches from focus group discussions and visits in different communities to international projects in the topic fields of inclusion, sustainability, social development and infrastructure. My focus area are the marginalised people in rural and urban areas of India. We are also visiting the "poorest of the poor" in order to see and understand the degree of inclusion and exclusion in the local communities.

Questions related to Dimensions:

3. **Dimension: Infrastructure and Local Economy**

   Interviewer: Changes in Infrastructure (e.g. increase/decrease in access to health facilities or adequacy of physical infrastructure) is one of the dimensions with the highest average score overall, together with changes in local economy (e.g. increase/decrease in level of unemployment or ability to generate savings). **From your experience, can you explain this phenomenon?**

   Interviewee: Can you give me an idea who the respondents are?

Interviewer: The respondents are a group of 42 people from all over the world, mainly from India and Africa. They are experienced in very different industries and have rated the importance of the dimensions according to their own experience and perceptions. The appeared at the very beginning of the survey and respondents were able to rate them on a Likert Scale from very high importance to very low importance.

Interviewee: I see, so they are the respondents of the survey you sent! So, certainly all the aspects mentioned in the survey are important for social impact measurement. The question is, what does infrastructure mean here? Infrastructure can have different meanings to different respondents. I have just participated in a Webinar and there were some discussions emerging regarding the meaning of infrastructure. For the BoP population, infrastructure would mean several things. It would comprise the facilities that are available for their movement in the city or town (transport related infrastructure). It would also mean availability of drinking water supply, because that falls into the category of infrastructure.. Furthermore, health facilities, education and other social infrastructure related components are important. So, this is a very broad term. If someone is living in a deprived city or town in India, one answer is: yes, infrastructure is important for them. But you would have to expand your arguments with regards to the different interpretations of what Infrastructure means. For most people, infrastructure is important – but differentiation of different kinds of infrastructure is important. Overall I agree that infrastructure and local economy are the most important things at the BoP. I would say that earning money is supreme for people at the BoP since this determining whether they will have a meal in the evening or not, or whether they are able to travel. Money allows them to access other things, including infrastructure aspects as well. However, in the context of BoP and Infrastructure, I would say that most important infrastructure aspects are access to housing, waste handling, access to water and toilets. Furthermore, transport related things are important and other factors of social infrastructure (e.g. access to bank accounts). However, I would think that income is the foremost thing.

To sum it up: Infrastructure affects everything and can be seen as a foundation to the other dimensions. It is thus very important and rated with high importance among the respondents. However, income is the most important thing to people at the BoP. Since without infrastructure you would still be able to live, while money secures you a meal in the evening. So, a house to live in and daily food supplies are the first things you think about in the morning, when you belong to the poorest of the poor.

Interviewer: Can you then explain why living environment (e.g. increase/decrease in quality of housing or personal safety) is not rated higher in the survey?

Interviewee: Okay so I might have an answer to that. It might not be the correct one but is represents my opinion. It is a valid point. But in a poor community, environment becomes secondary. They are able to manage in a poor environment as well, but the main requirement is daily income.

I have seen many places in the world, and when I compare for example sanitation conditions, I sometimes see really poor examples. But for the people living there, this is normal. They are able to manage within that environment. It is not good for their health and the health of their children, but they are managing and surviving. So, it is not affecting their health in a very significant way. In this case, the environment becomes a secondary issue for them. It is not affecting them as badly as poverty does.

4. Dimension: Bodily Health

Interviewer: You have just mentioned bodily health. We can see that it is rated quite highly. What we have observed is that people from BoP regions have rated health as being significantly less important than it seems to be for people from other regions (e.g. America or Europe). Respondents from Asia ascribed lowest importance to this dimension. Can you imagine of an explanation for that?

Interviewee: I do not know about the situation in Africa, Europe and America. But you said that India value it less than others. I think – when looking at this in the context of the BoP population – this phenomenon can be explained by looking at the priorities. As mentioned earlier, people give little importance to bodily health. Their priorities are more important necessities. The situation in Asian countries is quite different compared to other parts of the world, where the situation is better – especially compared to India. Due to the other problems that they have been facing over the years, bodily health is not a priority. Even though they are falling sick again and again. It is just a different mindset. As I said. A place to live in is important. Then comes work in order to earn money to feed the family.

5. Dimension: Changes in living environment

Interviewer: Respondents from large organisations (>500 employees) stated that the dimension Changes in Living Environment (e.g. increase/decrease in quality of housing or personal safety) is of second highest importance to them when it comes to measuring social impact at the BoP. This is interesting because this dimension only scored average in all other analyses. For respondents from small and medium-sized organisations, however, changes in infrastructure and changes in

quality of institutions are the dimensions of highest importance. Which is less surprising, since both are among the overall top-rated dimensions as well. How would you explain this?

Interviewee: The opinions received seem normal to me. Persons with different social and economic backgrounds, and living/working in different environments, can have different perceptions. Hence, for the better off (affluent class working in large organisations), changes in living environment are more important, as they may not be struggling as much with access to infrastructure, or the quality of governance. The other group (S&M organisation) would be facing a different set of challenges, which could be more important to them.

Questions regarding Measurement Tool on Meta-Level:

6. Degree of Standardisation

Interviewer: Respondents were divided with regard to the degree of standardisation of social impact measurement tools. How would you assess the trade-off between standardisation (and comparability) vs. flexibility?

Interviewee: Could you elaborate a little more on that?

Interviewer: In the results we can see that there is no consensus among the participants with regards to the question whether a social impact measurement tool should be rather standardised – and thus enable comparability, or whether it should be rather flexible in order to allow for individual adjustments to individual situations, environments and influencing factors.

Interviewer: Ah, I see! I think I might consider the more flexible option. Because when you think about the places where the people are living and when you are trying to understand what would work in a specific community, you have to understand what would work for a certain population in a certain part of the world in the context of BoP. Then, situations are different, conditions are different. In some places, technology is more advanced for example. So, if the technology or infrastructure is in place, then the opinions of the population would be different. Conditions and priorities vary from place to place. It is important to adapt to different circumstances. Do you have developed a tool already?

Interviewer: We are currently in the process of development. After conducting a structured literature review, we are now developing approaches towards a tool for measuring social impact at the BoP.

Interviewee: Here, I am slightly unable to understand, what you are asking from me. If you have a tool, or ideas for utilisation or ways to generate responses in order to see what works best…

Interviewer: …we have some ideas already and the plan is to utilise the input from the experts through the survey and the interviews in order to move towards the tool. We want to understand the importance of the dimensions…

Interviewee:… okay, so it is a common practice nowadays to develop a broad idea / guideline in order to give it to a local agency with an understanding in the respective area. This agency is then able to organise the information according to the priorities of the specific areas. Resources also play a really important role.

That idea came into my mind when I thought about the Smart City Program in India. It is a good example. India wants to develop 100 smart cities. They want to improve the conditions in those cities. Some cities have been selected, depending on the size of the state. How this relates to your work is as follows: The task for the government was to develop a broad framework of what the parameters for smart cities are in order to enable the respective city governments to develop an own vision that fits their needs and influencing factors. They are breaking down from the broad governance. It is thus important not to dictate things but to provide guidelines and then give room for interpretation in order to customise to requirements and surroundings. The best way is to tailor things. An expert in the respective focus area is needed in order to understand priorities and necessities to customise the general policies provided. With your knowledge and background, you cannot know what to measure in rural India. So, it is important to have an idea what is going on in the local place itself.

Interviewer: Is there a way you can still think about comparability in such an approach?

Interviewee: Transparency is a good way to enable people to still somehow compare the different measurement approaches. But there will be no way to develop a standardised model for all regions. However, replicability can be reached through transparency since it allows for a good understanding and abstraction from local circumstances and to think about their effects in other communities. The differences have to be kept in mind all the time.

7. Importance of Social Impact Measurement

Interviewer: Overall, importance of social impact measurement has been assessed as being very high. Would you agree with that and what are your main reasons for measuring social impact?

Interviewee: One is definitely that social impact is an important information for governments who are responsible for improving the quality of life communities. It is necessary for them in order to make decisions. But since governments do not have access to the ground base and they do not have data, it is really hard to make decisions.

Governments need to make decisions for people without purchasing power since they are the ones relying on the government. People with purchasing power are able to care for themselves. It is thus important that governments focus on improving the life of the poor. Often, many things are done because of lack of information. It is only now that the government of India is launching a national urban digital mission. In February 2021 they have launched it with the intention to collect data on many of the things that you are saying in each and every city of the country. It includes sanitation, quality of drinking water, consumption and the like… hundreds of indicators. Until now, there is no such data available. They have opened many websites and asked local departments and NGOs as well as private organisations to compile data and upload on the website. That way, the government wants to be able to make quality decisions.

Your contribution is very important due to the lack of information and data in order to base decisions on.

8. Current measurement approach

Interviewer: When we are now talking about data collection and measuring. How are you and your organisation approaching this right now?

Interviewee: Okay, so from the government point of view, I would say the hierarchy plays an important role. You can't have this as a one time process, since things are changing every day. The departments with infrastructure and funds would thus be asked to collect data through their field level workers – either offline or online, whatever is available for them and the communities – and that is one way for the government to proceed. So utilising questionnaires and field visits. You need to verify conditions on the ground.

From the researcher perspective, we usually contact local organisations in the places we want to collect data in. These are mostly NGOs. They have their workers and they are familiar with the community. We give them financial support so that they can conduct the surveys on our behalf. Collecting certain sets of data is not easy since people are concerned about their privacy and security. Religion is an important factor as well. When you share data, you might become a victim

of something. Response rates will be better when there is trust and familiarities. Then, online surveys are a great tool to collect large amounts of data nowadays.

Interviewer: Would you think that discount factors also play an important role when measuring social impact?

Interviewee: Yes, they really do! I have worked on a project for water supply in Une. The goal was to provide tap water to each house. This increased the quality of life for the people tremendously. However, we had to ensure that the water quality is good so that the people are able to drink it without having negative effects. The chances are high that the water might be dirty and diseases spread through the community. In such case, knowledge and experience with the respective topics is necessary. Knowledge and expertise in local governments and local projects is also sometimes missing, e.g. when it comes to waste handling. Then, lots of money is invested in solutions that are not having the desired effect. Here, effects can also be negative again.

9. Ideal Measurement Approach

Interviewer: As a last question, if you could now imagine, what would an ideal measurement approach look like?

Interviewee: This is a tough question I need to think about. When we look at it from a top-down perspective, it would be a good approach to have an overarching goal and derive a catalogue of dimensions for measuring social impact on a high level (e.g. government) It is important to have a connection of the overall goal and the respective dimensions/indicators.

This catalogue would serve as a guideline that allows for regional and cultural interpretations in order to create the best fit for the local interventions in the communities. Local governments or organisations on a lower level would then be able to select the relevant dimensions and underlying indicators in order to track their progress within a certain project and adjust them regarding local circumstances.

Within the subsequent tracking and data collection process, it is then really important to have a very clear picture of the respective communities in order to represent the diversity of the community and ensure representativeness and inclusion. All voices must be heard. Afterwards, data will be collected through surveys (online or offline) and analysed. Ideally, this is a continuous process. Data can then be used to steer the projects, and aggregated data can be used to support policy decisions on higher levels.

A.4.3 Interview Transcript Expert 3

Dear interviewee, thank you very much for your time today. In our master's thesis, we are elaborating on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid. In order to investigate the importance of different measurement dimensions, we have conducted a survey that led to interesting results and revealed some anomalies which we want to address in the interview today. With your expertise, you will help us to better understand the results and enable us to contribute to current literature. If it is okay for you, we will record today's session in order to transcribe it afterwards. Data will be anonymised, as it has also been done for the survey.

Background Questions:

1. **Individual Background**

   Interviewer: To start off, it would be great if you could give us some background on your organisation and personal BoP experience (time and type of projects)?

   Interviewee: I am the monitoring and evaluation coordinator in One Dollar Glasses, a social business non-profit organisation based in Erlangen, Germany.. Our vison is to create sustainable basic obstacle infrastructure and thus provide a sustainable access to all people in need of glasses. We therefore also utilise entrepreneurship structures in the local areas. I have joined the organisation in 2019. I studied water-resources management that's my background. But realised there is huge demand when it comes to social impact management and I liked the monitoring and evaluating which is why I joined One Dollar Glasses. Right now, I am trying to find a feasible way to measure the impacts generated in project countries.

   We have a lot of challenges, and the most important one would concern capacity and data collection. I am based in Germany and we have our project countries. Often there is a lack of local people in project countries that supervise the whole impact measurement process. The biggest challenge concerns digital data collection tools, as most of data is collected in paper form so far. High quality data is one of the most important factors of a good social impact measurement approach, which itself is so broad.

Questions related to Dimensions:

2. **Dimension: Bodily Health**

   Interviewer (giving overview of results on the slide): Because your organisation works within the healthcare sector, we have prepared some question concerning this industry as well as the dimension concerning this topic. We observed that changes in Bodily Health (e.g. improvement/deterioration of access to life necessities or life expectancy) have been rated as being

of comparably high importance among respondents with different backgrounds. However, why is it not the most important topic, as one could think of Bodily Health as being the most important issue to every person? Changes in Local Economy (e.g. increase/decrease in level of unemployment or ability to generate savings), Changes in Infrastructure (Increase/Decrease in access to health facilities or adequacy of physical infrastructure) and Changes in Quality of Institutions (e.g. increase/decrease of quality of education or quality of health facilities) have been rated higher. From your experience, how would you assess this phenomenon?

Interviewee: Your results are very interesting, because Infrastructure is actually ranked first among all dimensions. I personally would have expected bodily health and local economy as being of highest importance. But I think it depends how you define social impact. In my organisation we define impact as economic and social impact. When it comes to infrastructure, I think that you need to have an existing infrastructure and system in order for things to take place. This might be reason for why infrastructure is most important rated. But this is very interesting, because for me personally local economy, the bodily health or even well-being, especially material well-being, is of higher importance for social impact.

Interviewee: One point I would like to mention is that as part of our definition or understanding of infrastructure we include e.g. access to health facilities. So, this might be one reason for high rankings as some would imply a bridge of infrastructure to the topic of health as well.

Interviewee: Additionally, another point would be that it is probably easier to measure e.g. infrastructure than bodily health. I think from my experience, impact is very tangible and it is very difficult to catch what is meant by that. Infrastructure on the other hand is very easy to measure and it can be broken down into KPIs. With indicators, infrastructure then can be broken down. But it is quite a nice foot for thought is that your survey shows this result for high importance of infrastructure. I personally would not have thought this.

Interviewer: Interestingly, even for organisations from the healthcare industry value changes in other dimensions (e.g. quality of institutions) are rated as being of higher importance than changes in bodily health. Bodily health seems to be an important issue, but why is it not of highest priority?

Interviewee: It might be the same reason as already mentioned before. Additionally, the topic of health is already included in quality of institutions via quality of health facilities.

3. **Dimension: Changes in Culture**

Interviewer*:* We talked to a woman from India and she mentioned that cultural differences of perceptions are a very important issue as well. Meaning that e.g. people would not come to give

birth at hospitals if there was not someone that would talk to them about this in case it is unknown to them. In other words, someone that bridges cultural differences is highly important. Do you have any thoughts on this as well?

Interviewee: I can agree with your point that acceptance and awareness for your service by the people that you are serving is a specifically important point in order to make real impact. Because there are high misconceptions about the product of eye glasses. We need acceptance for our delivered service by the people we are serving. Additionally, awareness is a big topic. For this reason, "outreachers", the persons in our organisation that inform the people on the ground, drive around the city and inform people furthermore with help of posters. We also try to establish partnerships with local health-workers as part of our marketing-concept and thus gain awareness for our product in the communities. That is the entrepreneurial network we are building at the BoP. What we target at, is establishing an NGO-culture. This is one challenge as you try to change the mindset of people, so it is a win-win-scenario, not just giving free products and that's it.

4. **Income and Investments / Economic Benefits**

Interviewer: When we talked to one respondent from Kenya, he mentioned that people living at the BoP in Africa are really focused on short-term financial benefits in order to be able to buy food. He mentioned it is hard for them to understand the long-term character of investments in general. Is that also one problem you are facing?

Interviewee: Yes, I would agree with that point. I have been living in Malawi for two years, which is a country hugely affected by Malaria and HIV. Whenever you go to the market and you try to help people with eyeglasses, people would first consider these, let's call them more serious aspects. However, eye problems can also have a huge effect on ones live and thus affect ones living conditions. This always has to do with awareness. So, there is the link of how to make people aware of their problem.

Interviewer: Yes, so that is what we concluded as well. It seems to be that many economic related dimensions such as local economy or infrastructure are rated that higher is it has to do with the priorities of people at the BoP.

5. **Dimension: Local Political System**

Interviewer: Generally, respondents from **Non-Profit** organisations value dimensions higher than For-profit organisations **except for** the dimension of changes in *local political systems* (e.g. integrity of government, legal rights). This is the only dimension For-Profits rate higher than Non-Profits. Do you agree with the results of the survey? How would you assess the them?

Interviewee: I think it goes back to the question, what the role of NGOs is. Mainly they do not have enough authority and power to change political climate in the project country. GFA is an international consulting company working internationally in developing countries and receive a lot of donor funding. On the level this organisation is involved in, they can change political systems as they have closer network and connection to government. Our organisation on the other hand is rather small and simply does not have such power. I personally would have rated this dimension low as well.

Interviewer: So, this might be especially true for NGOs operating in more regions and thus are not well-known in every country due to their spread and thus do not have the impact to change political systems there.

Interviewee: Yes, and this also highlights the need of having one person on the ground that coordinates networks in the project countries.

Questions regarding Measurement Tool on Meta-Level:

6. **Degree of standardisation**

   Interviewer: Respondents were divided with regard to the degree of standardisation of social impact measurement tools. How would you assess the trade-off between standardisation (and comparability) vs. flexibility?

   Interviewee: If I may share, if I look back to the first time when I joined the organisation, I would have preferred a standardised tool. So, I could achieve measurement through looking at standardised tools and protocols. But after years of being in this industry and having experience, it is very difficult to only rely on standardised tools. Every organisation has their own specifications. Thus, flexibility and the possibility to individually adapt the tool has a higher priority from my point of view right now. It would be really good if there would be an initiative, a platform where people can have a look and find a compilation of tools or best practices. So, a best-practice platform where people can have a look, learn and adapt to their needs.

7. **Importance of Social Impact Measurement**

   Interviewer: Overall, importance of social impact measurement has been assessed as being very high. Would you agree with that and **what are your main reasons for measuring social impact**?

   Interviewee: I see it in different dimensions. If I look at local populations that we are serving and what our project countries doing. First we need to deliver the outcome, so are we really achieving the impact that we are saying? We thereby can include the learnings in decision-making processes.

So, when we measure and see we are not having the intended impact we can change the direction and improve e.g. the delivery system or the business in terms of strategy.

The second dimension is from the side of the donor. Donors are nowadays requiring to see what impact projects have, in which they have financially invested.

Interviewer: This is also what we observed, many respondents in the survey as well as some interviewees mentioned that it is of course important for satisfying stakeholders and donors, but the more important aspect is the ability to compare and replicate models performed in different projects.

Interviewee: Exactly, measuring social impact in order to be able to replicate is a major reason as well. So, I would say replication is the word here.

8. Current measurement approach

Interviewer: Is your organisation measuring social impact? If yes, could you give us some insights on how you collect data?

Interviewee: Yes, I can give a couple of examples. Impact is very much related to monitoring and evaluation. We have established a follow-up evaluation where we identify the created impact. A compliance-check so to say. In schools for example we check whether students actually wear our glasses.

The second method we use, are questionnaires and evaluations 6 months after the project. We ask a couple of questions to see responses. Of course, I need to say that the Limitation is the base line from which we start off, which is still in implementation. From there you can see to which extend impact is generated from our interventions.

Interviewer: In theory there is the so called social impact value chain concerning output, outcome and impact. Is this something familiar to you?

Interviewee: Yes, we have that as well to analyse our impact. But to share with you one of my currently biggest challenges is that it is nice to have a map out, so we everything in the framework such as the impact value chain, but then how to continue? The question for me still is how to move on from this mapped out information. Are there some insights you might be able to give me on this?

Interviewer: What we learned through our survey and the interviews we have done so far is that many are collecting data quite flexibly by asking people directly and talking to the community via e.g. survey. So, connecting to the people and thus getting the responses seems to be one best-practice.

Interviewee: Going back to the point where I mentioned the best-practice initiative platform. But I think that would be nice to see. But I can agree that generally, for evaluation, in order to

operationalise the impact you need one in the project country that does this. Either your organisation has one or you need an external evaluator, which can be quite costly. In my organisation data is mostly collected from our side.

9. **Ideal measurement approach**

   Interviewer: How would you like to measure social impact at the BoP in future?

   Interviewee: I think I will choose to answer this question from a very basic point of view. I mean I wish that we can get the data digitally from the project country to evaluate that would be the biggest wish if you ask for my current situation right now. When you ask for social impact you need to have the data and you need to have system ready. Without data you cannot see anything. When we talk about data, this really is part of the impact sphere, qualitative good data is the foundation of measurement and that is often done via paper which takes up a lot of time. Right now, I need to key in responses into excel, and people that are supposed to send the data often have other tasks and this is not of highest priority for them.

A.4.4 Interview Transcript Expert 4

Dear interviewee, thank you very much for your time today. In our master's thesis, we are elaborating on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid. In order to investigate the importance of different measurement dimensions, we have conducted a survey that led to interesting results and revealed some anomalies which we want to address in the interview today. With your expertise, you will help us to better understand the results and enable us to contribute to current literature. If it is okay for you, we will record today's session in order to transcribe it afterwards. Data will be anonymised, as it has also been done for the survey.

Background Questions:

1. **Industry**

   Interviewer: In what Industry are you operating?

   Interviewee: I am operating in the energy industry, currently as a monitoring and evaluation Manager with a demonstrated history of working in the non-profit industry.

2. **Experience**

   Interviewer: What is your personal BoP experience (time and type of projects)?

   Interviewee: In the past five years, I have been working on different projects at the Bottom of the Pyramid. In Kenya, people with an income of 2 dollars or less per day are considered being part of the BoP. I started working as a field officer in health community projects and then did some jobs

as monitoring and evaluation manager for different projects and organisations from health, education and agriculture industry. Right now, I am working for an NGO that is targeting off-grid areas without access to energy and electricity. The company is trying to generate social impact by providing solar systems and mini grids in order to enable the people e.g. to cook. We furthermore work together with governments or businesses that are able to set up mini grids and sell the energy locally. We aim for communities that need assistance. Within those projects, I am working directly in the rural and BoP areas of Africa, currently in the area of Nairobi. I am the person on the ground getting in touch with the people in the communities.

Questions related to Dimensions:

3. General Observation: Energy Industry

Interviewer: Among all respondents, respondents from healthcare and energy/utility industry are the industry groups that generally rated mostly negative and critical compared to others. Examples are the dimensions of Culture, Social Well-being within communities, and Interaction with ecological environment. With your experience in healthcare and energy industry, do you agree with the more critical viewing point of respondents from these industries observable in the survey? How can you explain that?

Interviewee: Basically, I think for most communities, the dimensions you named are not of high priority. The highest priority is to generate an income in order to be able to put some food on the table. When it comes to the measurement dimensions, I can tell you that especially at the BoP in Africa, economic benefits are the most important thing to people in the communities. For example, I think that most communities do not see energy – and the products related to that – as a priority as well. They are rather looking for ways to generate income in order to be able to put food on the table. That is also a problem when it comes to long-term and more sustainable investments. It is not their priority. The local communities are more geared regarding the cost of acquisition for an investment rather than the long-term sustainability of investments. So, changing the mindset – e.g. when it comes to health or infrastructure investments – is important in order to reduce the focus on short-term economic benefits / outcomes. Currently, they are thinking "what is the economic benefit I get from utilising something" rather than being aware of the long-term returns.

Investments in electricity or solar technology will help people to produce energy and sell it to others in the community, making them entrepreneurs and enabling them to generate economic income. We are convinced that there is no sustainability in business without ownership. But people have to understand that only higher investments now will enable them to earn income from it later.

Interviewer: So, the economic benefits are not important for the intervening organisation but are important to the people at the BoP benefiting from the intervention?

Interviewee: Yes, exactly. Economic benefit is the number one priority for them since it enables them to survive. Organisation will invest when you demonstrate that there is a business case. That is pretty straight forward but convincing the people at the BoP of the long-term benefits is a more difficult task.

Regarding the examples and the negative rating from above, I would thus conclude from my experience in energy and healthcare that economic benefits are one of the most important factors for people at the BoP in Africa. Their short-term focus on economic benefits makes it really hard to bring something in place that is focusing on more "soft" factors like culture, social well-being or environmental issues. However, education might help on the long-run to create awareness regarding long-term outputs of investments and shift the focus to the other dimensions as well in order to get a better overall result. Many people at the BoP do not finish school but get rather dropped along the way and do not make it to secondary school. Thus, they have not learned to think that much into the future but rather think about short-term economic benefits that enable them to have some food on the table in the evening.

So, unless you do not get things for free, it will be hard to convince them. And giving things for free will most likely not lead to any sustainable improvement, because there is no ownership.

4. **Dimension: Interaction with ecological environment**

Interviewer: Respondents from organisations operating in energy/utilities industry value changes in *interaction with ecological environment* (e.g. Climate Change; Natural resource assets (individual/common): forests, waterbodies, cropland & pasture, etc.) significantly lower than others. In comparison, organisations from education industry value changes in interaction with ecological environment highest. Do you agree with the results of the survey? How can you explain them?

Interviewee: I guess, it depends on how you look at this question. If you look at it from the beneficiary's perspective, the answer will be the same as in the question above. People at the BoP just have more difficult problems to solve rather than caring for the environment. They will focus on achieving economic benefits for their families in order to get food on the table. However, for us, changes in interaction with ecological environment is of high importance. So, if you look from the organisational perspective, all the other factors play an important role as well.

Interviewer: In your opinion, is it still important to assess changes in interaction with ecological environment as a dimension, and if so, how would you assess/measure it?

Interviewee: It definitely is important to assess changes in interaction with ecological environment. However, I do not have enough expertise in this field in order to elaborate on how this can be done.

5. **Dimension: Material well-being**

Interviewer: Organisations from BoP regions value changes in *material well-being* (e.g. increase/decrease in income or value of owned assets) significantly higher than organisations from Western regions. Especially for organisations from Africa, changes in material well-being have very high importance: 80% of respondents from Africa value changes in material well-being as being of highest importance with an average rating of very high importance. Organisations from other countries like Asia and Europe comparably low and especially North America rated significantly low. With your expertise, how would you assess the importance of change in material well-being for measuring social impact at the BoP in general?

Interviewee: The answer is actually close to the first one as well. For the people at the BoP in Africa, material well-being or economic benefits are of highest importance since they are associating it with getting food on the table for their families. As I said before, educating people that investments can have sustainable and really good long-term effects that are even better on the long run compared to the benefits they are able to achieve directly.

A hypothesis might be that achieving social impact or interaction with the people at the BoP requires initiating organisations to create economic benefits to the poor. The only exception here are health interventions. Health programs often do not require "something in the pocket now". However, material well-being is of high importance to the people at the BoP. So, your survey results do represent the reality. Without economic benefits, there might be an intervention, but adoption will be low.

Interviewer: How do you assess or measure these economic benefits at the BoP? Are there any best-practices?

This can be done by self-reports. You conduct an online survey and ask people regarding their financial situation. Thereby comparing the money of people before and after the intervention. Other way to collect data would be an asset index. That is good, because some people are not financially knowledgeable and just spend everything they have. In that case, an asset index can be good. Then you collect information about the people and their conditions before, during and after the

intervention. You can also use proxy indicators. Those are a bit difficult due to the level of inflation and the economic situation of the culture

In general, either self-reporting / online surveys, indices or other indicators are used. It highly depends on measurement level and the country or region, therefore, we mostly depending on self-reporting and surveys.

Questions regarding Measurement Tool on Meta-Level:

6. **Degree of Standardisation**

Interviewer: Respondents were divided with regard to the degree of standardisation of social impact measurement tools. How would you assess the trade-off between standardisation (and comparability) vs. flexibility?

Interviewee: *The degree of standardisation mostly depends on the scope and level of what one is trying to measure. Standardised tools are only comparable to a certain degree, since the circumstances may vary too much in order to achieve high comparability. For example, results from a highly standardised tool in a high-income community cannot be used in low-income communities. Standardised tools which are good for comparison reasons can only be used if it utilised within one community with the same scope. But in terms of comparison, it might not be one on one and thus be hard through standardised tools.*

In case one is using a flexible tool which is based on own mindset and interpretation, results get less comparable. However, by transferring assumptions and existing environmental impacting factors, results can still be used to predict income with similar projects in different regions.

At the beginning of the project we will develop a profile and then compare the projects using the projects afterwards.

7. **Reasons for measuring social impact**

Interviewer: Overall, importance of social impact measurement has been assessed as being very high. Would you agree with that and what are your main reasons for measuring social impact?

Interviewee: The first things that might come to one's mind are to track the progress or to proof the stakeholders / funders. However, the main reason of measuring is to proof that an implementation model works. This again enables organisations to transfer and implement a model from one community to another and thus to replicate the impact. This gives us proof and leverage that it worked in one community and allows us to better convince stakeholders for further projects.

To summarise, there are mainly three reasons for measuring social impact: 1) To prove to donor which intervention has highest impact, 2) to replicate the model and reapply it in other projects. 3) To understand how a model worked and to be able to adapt and bring it to other communities/ventures (being able to learn and support even more communities).

8. Current measurement approach

Interviewer: Is your organisation measuring social impact? If yes, how do you collect data, what dimensions are covered, what proxies are used?

Interviewee: There are mainly two different alternatives. The first one is to rely on secondary data from e.g. a regional administrative or from NGOs.

The other one is to collect primary data on our own, e.g. by talking to households in the local communities or to engage in discussions with people. Online surveys are another important tool for us. Furthermore, case studies can be helpful, if the projects have a larger scope. Generally that is highly depending on the specific type of project.

I am personally leveraging a hybrid approach: gathering secondary data through partnering up with e.g. community centric organisations and then additionally getting in touch with people on the ground if there are still open points. However, it is often helpful to talk to organisations that are operating in a community already to leverage the data they have collected already.

9. Ideal measurement approach

Interviewer: How would you like to measure social impact at the BoP in future?

Interviewee: For me, getting stories and data from the communities is the best way. Speaking to people and getting the stories and the impressions directly is key. Each organisation gets and collects data based on their own objectives. With different organisations this might not align. So, collecting primary data is necessary and inevitable.

However, relying on secondary data, especially for validation purposes, can be done as well and is best if it is combined with getting insights and thoughts by directly speaking to the people and collecting primary data.

Interviewer: What are your shortcomings room for improvements? Problems encountered?

Interviewee: Often, organisations are trying to conduct interventions remotely, without visiting the local communities. Furthermore, most projects have unintended outcomes. Often interventions

solve one problem by developing another. It is important to always look at the other outcomes and side effects one project has. One project e.g. might give access to water, but the people might get sick due to the fact that only dirty water is available.

It is a big problem, not being able to see these challenges and side effects in the final reports. This comes along with the quality of people you are able to get on the ground. Resources are limited, but poor ground-work will lead to poor results. A good knowledge management would also be a really good thing, since we often have issues with that. So, being able to get the actual s of what happens at the ground and being able to transform that to useful data.

People generally like to show results without showing challenges that can highly influence the future of communities. It is important to not hide those challenges. Being able to get the actual s of what the outcomes are on a big picture are the biggest challenges that need to be targeted. Organisations need to have good people in the communities for that in order to understand side effects.

A.4.5 Interview Transcript Expert 5

Dear interviewee, thank you very much for your time today. In our master's thesis, we are elaborating on the factors that have to be considered when developing a social impact measurement method for the Bottom of the Pyramid. In order to investigate the importance of different measurement dimensions, we have conducted a survey that led to interesting results and revealed some anomalies which we want to address in the interview today. With your expertise, you will help us to better understand the results and enable us to contribute to current literature. If it is okay for you, we will record today's session in order to transcribe it afterwards. Data will be anonymised, as it has also been done for the survey.

Background Questions:

1. **Industry**

   Interviewer: In what Industry are you operating?

   Interviewee: I am operating in multiple industries. When speaking from my role at Deloitte, I am working in the professional services industry. Furthermore, I am working at the University and in a distributed ledger company, which is rather operating in the financial services industry.

2. **Experience**

   Interviewer: What is your personal BoP experience (time and type of projects)?

   Interviewee: I have several years of experience in BoP regions. Many years of my career, I have been searching for answers to the question of how business models can be adapted in order to be

successful at the BoP. This is not only of theoretical character, but also shaped some of my recent projects.

Questions related to Dimensions:

1. **Dimension: Local Economy**

   Interviewer: Among all respondents, Local Economy (e.g. increase/decrease in level of unemployment or ability to generate savings) has been rated as being of highest importance. Respondents from professional services industry rated this dimension even higher. Do you agree with the results of the survey? How can you explain them?

   Interviewee: So, I can't remember how I answered in the questionnaire, but it does make sense on the surface that the more vibrant an economy is, the easier it is to activate entrepreneurship ant the BoP. And yet encounter to that is, when you got a vibrant local economy than you typically don not have a BoP. That is the situation. So, what you find is a depressed economy is actually what it takes to unlock entrepreneurial action at the BoP. There is a nice example: In Germany one in every 20 people is self-employed, in Africa one in every three people is self-employed. This highlights the importance of the fact that no local economy forces people into self- employment and lock some kind of economic sustainability. That being said, I think what important is, if you can improve a vibrant services-based economy, it unlocks the ability to drive a form entrepreneurship, what I call micro-entrepreneurship. So, if you for example create a vibrant service-based economy, then I can create jobs for people that are typically of low skill. Locally in South Africa we've got a serious unemployment problem. The official unemployment rates are in the region of 30 percent, which is very high. And if measuring it, you have probably found if you measure the official unemployment in some African countries, their official unemployment rate, if measured correctly, would probably be far in access of that. And what makes traditional employment difficult is that the fact that economies are not industrialised, not vibrant and not expanding. However, if you create the service-based vibrant economy, you can employ the, what they call, unemployed or unemployable. So, an unemployable is someone that missed out on critical learning parts. So, for them to learn something new becomes really difficult.

   Interviewer: That is a really good explanation, because also many people argued that local economy is just one of those basic things that has such a high amount of influence in other topics as well. That this is just rated higher therefore.

Interviewee: *Yes, and again, I think what makes your study really interesting, complex and challenging, is that you have not one dimension but look at it from different perspectives. I do not know if you know the following story: But they say, when you put ten people in a room and then switch the light off and put an elephant in the middle of the room. Every person would touch another part of the elephant and would describe it differently and as something else. So, this is a challenge you have if you are in a vibrant, mature and highly industrialised economy like Germany or the US, the more vibrant the economy is so to say, the higher the appetite of the people to get an entrepreneur. They have easy access to funding, there are good platforms and if they are unsuccessful they can go back in the work environment. In an African economy I think a lot of entrepreneurship at the BoP is not because someone has ambition but because you have no choice. But that is one dimension, which does not mean that is all to it.*

2. **Dimension: Individual Social Well-being**

Interviewer: The second dimension we would like to ask you about is with regards to individual social well-being. Overall, Individual Social Well-Being (e.g. increase/decrease in autonomy or satisfaction with leisure-time) scored comparably low. In average, the respondents assess its importance as being neutral. Interestingly, 80% of respondents from the financial services industry agree on high importance of individual social well-being. Do you agree with the results of the survey? How would you assess the difference between financial services and the other industries regarding individual social well-being?

Interviewee*: So again, I think at the BoP there is probably a lot of time-availability. I actually sometimes refer to people of being money-poor but time-rich. But I don't think it is by choice but rather by default and the circumstances that create that.*

I don't know but individuals in the financial services sector would speak about mobility in other words to transition having autonomy and having the ability to transition through economic groups. If I look at that score, social well-being within community, I do not know how I would have scored that.

I am trying to be very pragmatic about that. If you ask people, and I'll like to refer to one study. Unfortunately, right now I cannot remember the exact title, though. However, it states that if you ask people in Africa that are negatively affected by employment and economic situation throughout the country. And I do not think Africa is not an automatous thing. It is very different from other African countries. This study covered 43 countries when I am correct, and they asked what people perceived to be the most important task. At the top, people would ask for jobs, in other words economic sustainability, second was healthcare, then water and the fourth one was traditional

infrastructure. Social mobility or well-being within surface on the other hand was not in the top range. I remember most social tasks carried low percentage points.

Interviewer: There was one other interesting thing to this dimension. As in contrast, changes in social well-being within communities (e.g. increase/decrease in memberships in sociocultural organisations or social tension and violence)) is the dimension that has been rated as being of lowest importance by respondents from financial services industry. How would you assess the differences within the financial services industry regarding individual social-wellbeing and social-wellbeing within communities?

Interviewee: *Can you give me the definition of individual social well-being and social well-being within community again, please?*

Interviewer: Yes of course, so individual social well-being is e.g. the increase/decrease in autonomy or satisfaction with leisure-time. Social Well-being within community on the other hand: e.g. increase/decrease in memberships in sociocultural organisations or social tension and violence)

Interviewee: I would have probably gone with social well-being within community higher than individual social well-being.

Interviewer: That is also what other interviewees referred to. Now what I would like to stress again is that individuals from the financial service industry in contrast rated individual social well-being higher than well-being within communities. How would you assess this contradiction?

Interviewee: It could either be a terminology thing or interpretation they use in this industry what would make people from the financial sector think about it this that way. Or perhaps personal bias. Individual well-being right now is a pretty big thing e.g. in burnout industries. In creating jobs at the lower end of the pyramid, of highest importance is social connectivity and sense of community. So, my view is, if you can combine social communities and closeness and empower that with some kind of technological solutions, you can create transparent trusted networks. So, a critical thing for entrepreneurs is for the community to buy in the entrepreneur. Entrepreneurship needs social connectivity in order to get traction.
One is ***distributing value chains.*** *That would be a way large institutions can distribute values to the entrepreneurs. So e.g. the large organisation fulfils the last mile, but the entrepreneur the last*

meter in a really affordable way. So that is the engagement of the corporate and the individual. Where you got the connection of the individual and the community is the ***collaborative consumption.*** *In some instances, the poor entrepreneur could not justify on an asset financially. But if they can get the community to get an asset. Then they can easily justify the ownership of that asset and at the same time the community benefits from that asset as if they owned it. The only way this collaborative consumption works would be that social well-being within community. So, you are integrated in the community and the community accepts the individual within.*

Interviewer: Would you maybe say in such a case the economic interest would outweigh the social interest?

Interviewee: I might be a bit cynical. But you only change people's behaviour in that regard if there is economic interest. I think both go hand in hand and social benefit is certainly important, but economic benefit is a good motivator. So, if there is no economic benefit, the social might not add value. A positive economic as well as social benefit on the other hand adds value. A company I cannot mention has done everything you can expect from a product, but what they failed to do was to get social gain from the product to the people of the community. Once they would fix that the product would be adopted by the community.

Questions regarding Measurement Tool on Meta-Level:

3. **Degree of Standardisation**

Interviewer: So now we would like to talk a little bit about the measurement method on the meta level. And we would like to start with the degree of standardisation. Overall, respondents were divided with regard to the degree of standardisation of social impact measurement tools. How would you assess the trade-off between standardisation (and comparability) vs. flexibility?

Interviewee: *From my experience, my preference would always be the latter. Whereas my academic background would suggest a more standardised approach but there are so many dynamics and nuances you have to take in account when measuring the impact. In all over Africa there are some things one could standardise, but there are so many dimensions you need to consider.*
In order to exemplify, let's look at the example of trying to measure what I deem to be successful entrepreneurship in Kenya with a certain degree of industrialisation and when I compare it with entrepreneurship in South Africa which is an economy six times bigger with high degrees of industrialisation. Then I could not choose the measurement for the impact of entrepreneurships in

both countries same because of the dynamics. And I think, social impact might suffer from the same challenges. So, you have different metrics and you need to be able to somehow normalise them I order to gain certain degrees of comparison.

4. Importance of Social Impact Measurement

Interviewer: Overall, importance of social impact measurement has been assessed as being very high. Would you agree with that and what are your main reasons for measuring social impact?

Interviewee: I think there is a lovey term that I heard in the Nordics. They referred to Nordic exceptionalism. It says that I cannot be successful unless the community around me is successful. I think many formal industries and organisations in economies that got a significant BoP, just like South Africa. So, we have got infrastructure comparable to Europe and on the other hand unemployment rates of 30%. If we do not set social impact a critical business priority inside our business it is not good for the economy, for businesses in the long-term it's not socially sustainable. If you read any South African visions or business documentary there is always one chapter that is specifically about environmental or social impact. That is really high importance. This goes beyond social impact, but around diversity as well. Companies get scored on how they leverage and empower and invest into local communities.

The one that they could do better is not just thinking of investing like giving a donation or a grant. But I would encourage companies thinking of sustainable investments. Teaching the community to become self-sustainable. Self-funding initiatives to properly empower communities to empower them to look after themselves.

Interviewer: This is really interesting to hear that in South Africa, considering social impact has already such a high weight on a larger platform.

Interviewee*: To give you another example, I recently founded my own entity. And I engage with my target clients and one of the things I do share with them is, how I am putting a portion of my profits aside to drive some kind of impact In the society. The profits can be either hard dollars, money that I invest in the community, or activities I do to uplift the community. And thus, my clients will see me in good light that I do this. This is a big theme in South Africa.*

A bank in South Africa cannot be successful without thinking about uplifting the BoP. Financial inclusion is a big theme. Organisations cannot be thinking about a bigger mine before thinking about uplifting people around them. It is a critical thing and a recognition.

So, this is the one theme, the other is South Africa's history. 30-40 years ago, we still had official laws of Apartheid. And I think as part of taking corrector measures that kind of behaviour is now have become embedded in South African culture.

Interviewer: Would you say this is political driven or does it come from the cultural and more intrinsic side?

Interviewee: Without a doubt, driving this change comes from a political catalyst. So, when you are having the transition between previous regime that kept the construct of Apartheid in place, and when that was replaced. It was really one of the political agendas to engineer in the economic constructs to spreading and distributing wealth far in the community. Job creation, infrastructure, empowerment. That was definitely an economic and political initiative in order to make this a priority and effectively transition. It started political and economically, but I think it definitely became embedded in the South African culture. You got to always consider the community whatever you do.

5. Current measurement approach

Interviewer: Are there any challenges you might have stumbled upon when measuring social impact in your organisation? When you trying to make explicit what you have given back to the community? Do you use a specific method or is this something very individual?

Interviewee: *So, I think the measurement of how organisations have contributed towards social impact is pretty easy to do. And it is really important as said. What I would like to see which is very idealistic. It is very easy to give, but what would be important is to see how this giving translates into real impact and real value. I'd want to see how communities fundamentally change and there is a shift in sustainable prosperity and not only uplifting them somehow.*
I am not sure whether or not we are measuring sustainably of initiatives, but most organisations only measure how they contribute to social impact initiatives.

Interviewer: That is also a pint we want to include in our thesis. In that regards I would like to refer to the social impact value chain. Where impact and a certain activity leads to output, outcome and lastly impact. Whereas the output and even outcome can be relatively easy to measure, impact is comparably hard to measure and understand.

Interviewee: *That is something really important as impact is really interesting and important to measure, but it is not something that can be measured in a small amount of time. So, for example it could well be that the entrepreneurship initiative that I enable now, could only bear fruit in a couple of years. So, the question is how you measure the impact I make right now.*

A.5 Dimensions of Highest Priority per Group of Respondents, including Average Ratings

It has to be noted that the list below only considers the top three priorities regarding average ratings.

A.5.1 Industry

Industry	Priority 1	Priority 2	Priority 3
Agriculture	Changes in material well-being and quality of institutions (2)	Changes in local economy, infrastructure, labour situation, living environment, equality and culture (1)	Changes in local political system, social well-being within community, individual social well-being, bodily health and mental health (0)
Education	Changes in local economy, infrastructure, and material well-being (1,75)	Changes in quality of institutions, labour situation and equality (1,5)	Changes in interaction with ecological environment, living environment and bodily health (1,25)
Energy and Utilities	Changes in infrastructure and bodily health (1,75)	Changes in local economy and equality (1,5)	Changes in quality of institutions and living environment (1,25)
Financial Services	Changes in infrastructure (1,8)	Changes in material well-being and bodily health (1,6)	Changes in living environment and equality (1,4)
Healthcare	Changes in quality of institutions (1,5)	Changes in local political system, local economy and bodily heath (1,25)	Changes in interaction with ecological environment, social well-being within community and mental health (1)
Industrials	Changes in material well-being and labour situation (2)	Local political system, living environment, local economy and social well-being within community (1)	Changes in interaction with ecological environment, infrastructure and culture (0)

Media and Creative Industries	Changes in quality of institutions and equality (2)	Changes in local political system, infrastructure, material well-being, labour situation, bodily health and mental health (1,5)	Changes in living environment and local economy (1)
Professional Services	Changes in local economy (1,71)	Changes in labour situation (1,64)	Changes in quality of institutions (1,5)
Public and Social Services	Changes in infrastructure and quality of institutions (2)	Changes in equality (1,75)	Changes in local economy, bodily health and mental health (1,5)
Research	Changes in interaction with ecological environment (2)	Changes in quality of institutions, living environment, infrastructure, material well-being, local economy, bodily health and mental health (1,5)	Changes in local political system, labour situation, social well-being within community and equality (1)

A.5.2 Country of Origin

Country	Priority 1	Priority 2	Priority 3
Asia	Changes in local economy (1,83)	Changes in Equality (1,39)	Changes in quality of institutions and infrastructure (1,37)
Africa	Changes in material well-being (1,88)	Changes in bodily health (1,75)	Changes in quality of institutions (1,5)
North America	Changes in quality of institutions (2)	Changes in infrastructure, labour situation, bodily health and equality (1,75)	Changes in local political system and local economy (1,5)
Europe	Changes in infrastructure and local economy (1,5)	Changes in living environment and bodily health (1,33)	Changes in labour situation (1,17)

A.5.3 Country of Operation

Country	Priority 1	Priority 2	Priority 3
Africa	Changes in local economy (1,52)	Changes in quality of institutions (1,51)	Changes in infrastructure and bodily health (1,42)
Asia	Changes in local economy (1,47)	Changes in quality of institutions (1,30)	Changes in labour situation (1,14)
Latin America	Changes in local economy (1,38)	Changes in quality of institutions (1,29)	Changes in labour situation and bodily health (1,17)

A.5.4 Commercial Orientation

Orientation	Priority 1	Priority 2	Priority 3
Non-profit	Changes in quality of institutions (1,64)	Changes in infrastructure (1,6)	Changes in local economy (1,48)
For-profit	Changes in local economy (1,47)	Changes in bodily health (1,24)	Changes in infrastructure and material well-being (1,18)

A.5.5 Organisation Size

Size	Priority 1	Priority 2	Priority 3
Small (<100)	Changes in infrastructure (1,66)	Changes in local economy (1,64)	Changes in bodily health (1,48)
Medium (100-500)	Changes in quality of institutions (1,75)	Changes in local economy (1,5)	Changes in infrastructure, material well-being and equality (1,42)
Large (>500)	Changes in bodily heath (1,44)	Changes in living environment (1,38)	Changes in equality (1,31)

A.6 Occurrences of Dimensions as Highest and Lowest rated on industry level

Dimension	# Highest Importance	# Lowest Importance
Changes Infrastructure	**4** (Education, Energy and Utilities, Financial Services, Public and Social Services)	**0**
Changes in Local economy	**2** (Education, Professional Services)	
Changes in Quality of Institutions	**4** (Agriculture, Healthcare, Media and Creative Industries, Public and Social Services)	**0**
Changes in Bodily Health	**1** (Energy and Utilities)	**0**
Changes in Material Well-being	**3** (Agriculture, Education, Industrials)	
Changes in Equality	**1** (Media and Creative Industries)	**1** (Industrials)
Changes in Labour Situation	**1** (Industrials)	**0**
Changes in Living Environment	**0**	**0**
Changes in Mental Health	**0**	**0**
Changes in Local Political System	**0**	**0**
Changes in Interaction with Local Environment	**1** (Research)	**1** (Agriculture)
Changes in Social Well-being within Community	**0**	**2** (Financial Services, Media and Creative Industries)
Changes in Individual Social Well-being	**0**	**4** (Healthcare, Media and Creative Industries, Professional Services, Public and Social Services)
Changes in Culture	**0**	**5** (Education, Energy and Utilities, Healthcare, Public and Social Services, Research)

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Social Impact Measurement at the Bottom of the Pyramid - Towards a Comprehensive Measurement Approach

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