



Measuring the Social Impact of Training and Skills Development: Refining Value Factors for Corporate Impact Valuation

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Abstract

Title: Measuring the social impact of training and skills development: Refining value factors for corporate impact valuation

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Measuring social impact in a consistent, comparable, and monetised way is currently a key challenge in impact accounting. This thesis investigates how the Value Balancing Alliance's existing measurement of the social impact of corporate training and skills development can be improved. An exploratory qualitative research design is employed, based on a literature review, expert interviews, and an analysis of corporate sustainability reports. The findings show that, similar to the VBA approach, other existing corporate valuation approaches also predominantly rely on earnings-based measures to capture the social impact of training, as income is a representative and comparable indicator. The thesis proposes refinements to the VBA value factor by incorporating indicators that reflect the effectiveness of training initiatives, such as completion rates, certification rates, or promotion rates, as multipliers within the existing framework. This ensures the model reflects impact not only based on training hours but also on whether training initiatives are effective.

Key words: Social Impact Measurement, Impact Accounting, Training and Skills Development, Social Value, Corporate Impact Valuation

Resumo

Título: Mensuração do impacto social da formação e do desenvolvimento de competências: Aperfeiçoamento dos fatores de valorização para a avaliação do impacto corporativo

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A mensuração do impacto social de forma consistente, comparável e monetizada constitui atualmente um desafio central na contabilidade de impacto. Esta dissertação investiga de que forma a metodologia existente da Value Balancing Alliance para a mensuração da formação corporativa e do desenvolvimento de competências pode ser aprimorada. Adota-se um desenho de investigação qualitativa exploratória, baseado numa revisão da literatura, em entrevistas com especialistas e na análise de relatórios de sustentabilidade corporativa. Os resultados demonstram que, de forma semelhante à abordagem da VBA, outras metodologias existentes de valorização corporativa também se baseiam predominantemente em medidas fundamentadas nos rendimentos para captar o impacto social da formação, uma vez que o rendimento constitui um indicador representativo e comparável. A dissertação propõe aperfeiçoamentos ao fator de valor da VBA através da incorporação de indicadores que reflitam a eficácia das iniciativas de formação, tais como taxas de conclusão, taxas de certificação ou taxas de promoção, como multiplicadores no âmbito do quadro metodológico existente. Desta forma, assegura-se que o modelo reflita o impacto não apenas com base nas horas de formação, mas também em função da eficácia das iniciativas de formação.

Palavras-chave: Mensuração do Impacto Social; Contabilidade de Impacto; Formação e Desenvolvimento de Competências; Valor Social; Avaliação do Impacto Corporativo

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1. Introduction

Over the past century, the concept of corporate value has undergone a fundamental transformation (Durand et al., 2019). Historically, corporate value was mostly attributed to financial performance, with metrics such as revenue, profit, and shareholder return defining success and guiding managerial decision-making (Friedman, 1970). These monetary indicators provided a standardized way to compare firms, allocate resources, and evaluate performance (Souder et al., 2023). Today, corporate value revolves around a much broader understanding of what makes a company successful. As societies develop and markets become more complex, stakeholder relations and social expectations surrounding companies also change (Freeman, 1984). In the past, corporate value was mainly linked to financial performance, but today this understanding goes beyond monetary results. Social and environmental effects of a company's value creation process are now seen as essential parts of corporate value (Ortiz-de-Mandojana et al., 2015). Increasingly, customers, regulators, and investors expect companies to act responsibly and not solely focus on short-term profit but look for long-term value creation. In the same way that financial success has traditionally been captured through indicators, the emerging components of corporate value, which include social and environmental factors, also need to be measured to demonstrate accountability and credible evidence of their impact (Lin et al., 2024).

The growing importance of social and environmental performance can be attributed to expanding regulatory obligations for non-financial disclosure and to increasing stakeholder scrutiny of corporate behavior (Lin et al., 2024). The past decade has seen rapid changes in the sustainability reporting landscape, driven by new legislative initiatives such as the European Union's Corporate Sustainability Reporting Directive (CSRD) and global standard-setting efforts like the International Sustainability Standards Board's (ISSB) Sustainability Disclosure Standards (Directive, 2022; IFRS S1, n.d.; IFRS S2, n.d.). These initiatives require companies to provide accountable information on their sustainability-related activities and impact. However, while these regulatory standards focus on ensuring compliance and comparability, investors demand additional information that is financially material, allowing them to assess how sustainability measures affect corporate value (Durand et al., 2019). The contrast between regulators seeking standardized disclosure and investors prioritizing value has led to the coexistence of numerous reporting frameworks and standards (Friedman & Ormazabal, 2024). Consequently, a variety of frameworks and standards have been developed, including Integrated Reporting, ESG metrics, and, more recently, impact accounting.

Though there are numerous non-financial reporting standards, they share similar challenges and limitations. Unlike financial accounting, which follows straightforward monetary valuation methods, non-financial reporting lacks a unified conceptual and methodological foundation. On top of that, social and environmental effects are often intangible and context-dependent, making them difficult to quantify and compare across organizations, industries, and time periods. The complexity of non-financial reporting is also reflected in the fact that “[a]s a multidimensional construct, there are choices around how and whether to aggregate different performance dimensions. Aggregation can make metrics easier to process but can also lead to errors” (Friedman & Ormazabal, 2024, p.1588). Although recent regulations such as the CSRD and the ISSB’s Sustainability Disclosure Standards have strengthened the requirements for non-financial reporting, significant gaps remain in their enforcement and reliability. The current reporting system, therefore, remains vulnerable to managerial manipulation and selective reporting, essentially leading to greenwashing (Armour et al., 2022). These challenges and limitations only represent a small part of the picture, with the speculative nature of estimates, lack of standardized presentation formats, and inconsistent third-party information, further adding uncertainty to the interpretation of non-financial reporting (Friedman & Ormazabal, 2024).

Considering both the increasing demand from investors for value-relevant sustainability information and the limitations of existing reporting frameworks, impact accounting offers an approach to integrate social and environmental impact into corporate value measurement. Impact accounting started in 2019 at the Harvard Business School as an Impact-Weighted Accounts Project. The idea behind impact accounting is to develop a standardized method to identify, measure, and value corporate impacts into monetary values (Conde et al., 2025). This approach allows organizations to internalize externalities and incorporate them into financial analyses, aligning sustainability performance with core business strategies. This goes beyond narrative reporting, as it allows non-financial impacts to be assessed within the same unit of measurement as financial outcomes. As of today, different organizations such as the Value Balancing Alliance (VBA), the International Foundation for Valuing Impact (IFVI), and Impact Economy Foundation (IEF) are developing impact accounting frameworks. The VBA and the IFVI, in particular, have been collaborating with the aim of establishing a common and universal impact accounting methodology. As part of this collaboration, the development of the methodology is structured around specific value factors, each capturing a type of corporate impact across social and environmental dimensions (*Value Balancing Alliance and International Foundation for Valuing Impacts Announce Partnership*, 2023). Among the value factors, the training and skills development value factor represents an evolving element of the methodology. Within the

accounting framework, the training and skills development value factor represents a component of the social dimension and acts as a key indicator of human capital. The current value factor, developed by the VBA, is operationalized as a formula that measures the value of corporate training through the expected increase in employees' future earnings, based on variables such as training hours, average wages, and turnover rates (Value Balancing Alliance, 2022). However, academic research shows that investments in human capital go beyond employees' future earnings. Not only does training and skills development contribute to greater economic value to firms, but it also enhances confidence, self-efficacy, and adaptability on an individual level, strengthens the quality of the labor force, promotes greater inclusion in economic participation, and facilitates economic transition and modernization on a societal level (Riley et al., 2016; Aguinis & Kraiger, 2008). Capturing these broader effects requires a more comprehensive approach, which reflects the multidimensional impacts on individuals, organizations, and society. Despite these broader effects, the current VBA formulation remains limited in how it captures the value of corporate training and skills development. In particular, it overlooks differences in training effectiveness, meaning that the success of a training initiative is not reflected in the calculation. It also does not distinguish between different types of training programs, even though training activities may vary substantially in their objectives, content, and potential impact. Moreover, with its focus on increases in employees' future earnings, the value factor excludes other relevant dimensions of training impact, such as employees' subjective well-being and other societal effects of a potentially more productive workforce.

As a result, the existing value factor captures only a partial representation of the value created through corporate training, highlighting a gap in the current impact accounting methodology in reflecting the multidimensional outcomes of training and skills development. Addressing this gap is essential to capture the true value of human capital development and strengthen the impact accounting framework in valuing social dimensions. To this end, this thesis addresses the following research questions:

- 1) What is the current state of measurement approaches for training and skills development?
- 2) How can the training and skills development value factor be improved to capture the effectiveness and broader impact of corporate training on employees, organizations, and society in a more comprehensive and holistic way?

Based on this research, an improved formula for capturing the social impact of training and skills development is proposed.

2. Literature Review (Theoretical Foundation)

2.1 Theoretical perspectives on the value of training and skills development

The idea that human knowledge, skill, and competencies generate both economic and social returns is not new. Already in *The Wealth of Nations* (1776), Adam Smith argues that the abilities of individuals are a part of national wealth and productivity, and therefore are of economic value. The theory of human capital, which emerged in the mid-20th century, further developed this idea. With economists such as Theodore Schultz (1961) and Gary Becker (1964), starting to view education and training not just as a form of consumption - a corporate investment with no future return - but as a form of productive investment. According to this perspective, knowledge, training, and competencies acquired through education and on-the-job learnings enhance an individual's productivity and contribute to higher earnings and economic growth. However, while this theory focuses on the economic explanation for investing in human capital, it has been criticized for its narrow focus on financial outcomes, mainly increased income and productivity. Other broader dimensions, such as psychological, social, and institutional, are not considered. More recent research shows that training and skills development go beyond economic benefits and have individual and societal benefits (Sen, 1999). Nobel Prize winner, Amartya Sen (1999) argues in his capability approach, that development is also the expansion of people's real freedom, essentially their capabilities to choose and pursue the kind of life they value. Development leads to better access to further education, healthcare, political participation, and economic opportunities, allowing individuals to overcome poverty, social exclusion, and other forms of unfreedom. This perspective shifts the focus away from the economic benefits of training and skills development and attributes benefits to human well-being and agency. In addition, the European Commission highlights in a publication (2012) that training is fundamental to personal development. It helps to improve soft skills such as problem-solving, adaptability, and communication, and therefore enhances employability. Besides, these skills help promote autonomy, confidence, and lifelong learning, improving individuals' adaptability and resilience, especially in times of economic and technological change (European Commission, 2012). Ultimately, the individual benefits of training and development go beyond economic gains and are part of the foundation of social well-being.

Beyond the increase in productivity, organizations also benefit from the social dimension of training and skills development. When employees gain confidence and improve their skills in adaptability and communication, it translates into higher levels of engagement, collaboration, and commitment within the workspace (Glance et al., 1997). These outcomes help foster a more

positive organizational culture and strengthen the social capital through trust, shared values, and relationships that help people to work effectively together. These social dynamics foster innovation by encouraging knowledge sharing and joint problem-solving (Aguinis & Kraiger, 2008). Besides, as training helps build resilience on an individual level, this effect is also reflected on an organizational level. Teams that learn, develop the ability to respond more effectively to change and uncertainty, which strengthens the organization's overall stability. This way, training generates value that extends beyond individual improvements and enhances the social environment of organizations (Aguinis & Kraiger, 2008).

At a societal level, training and skills development generate broader social value. Often, people are seen as the most important component of economic, social, and cultural development. Investing in training and consequently in people will help drive these components by enhancing collective knowledge (Aguinis & Kraiger, 2008). These advancements will not only benefit their own ecosystem through social inclusion and unity, but also extend beyond national borders by enabling societies to participate on an international level. Ultimately, the individual benefits of training and skills development go beyond economic gains and are part of the foundation for social well-being. In simple terms, training expands access to employment and reduces structural unemployment. With it comes cultivated professionalism, discipline, and a shared sense of responsibility, which in turn mitigates social risks such as marginalization and crime (Lochner, 2004). Yet, much of the existing literature and theories assume that training and skills development are effective and achieve the intended outcome. In reality, it depends on numerous factors related to training design, psychological factors of the learner, and environmental factors (Salas et al., 2012). Effective training and skills development need to consider the interplay of these variables. Salas et al (2012) highlight that training is a systematic process, and activities before, during, and after training collectively influence training effectiveness. Before training, effectiveness depends on training design, training need analysis, and learner readiness. During training, it depends on instructional methods and the learner's psychological factors, such as self-efficacy, motivation, and goal orientation. After training, effectiveness is sustained through environmental support, including feedback, reinforcement, and opportunities to apply new skills (Salas et al., 2012).

Despite the potential to create value on individual, organizational, and societal levels, training and skills development do not always achieve these outcomes to their full extent, and expected benefits may only be partially materialized in practice.

2.2 The logic model as a framework for understanding value creation in training and skills development

Given the wide range of economic, social, and psychological effects associated with training and skills development, academic literature often relies on the logic model as a conceptual framework to structure these different layers of value creation (Rodrigues et al., 2018). It can be seen “as a systematic and visual tool to present and share an organization’s understanding of the relationship among the resources required to operate a program, its related activities, and the intended changes or results” (Rodrigues et al., 2018, p. 4). This framework distinguishes between:

- a) inputs, which reflect the resources invested;
- b) the activities, which describe the actions undertaken using the resources;
- c) outputs, which represent the immediate and observable results of the activities;
- d) outcomes, referring to short- and medium-term changes resulting from the initiative; and
- e) impact, which captures the longer-term and broader effects that extend beyond the immediate changes.

The framework essentially structures value creation as a process linking resources, activities, and the resulting effects, which is often described as the theory of change.

The distinction between output, outcome, and longer-term impact in the logic model serves to better categorize the results and effects of an action according to their timing, scope, and degree of influence (Millar et al., 2001). Millar et al. (2001) highlight that organizations might have direct control over outputs, but they might not have influence on outcomes and impacts. These dimensions are more complex and often only unfold over time and are influenced by factors beyond managerial control. From a managerial perspective, the logic model helps to make clear how actions are expected to lead to results by outlining the steps between resources and desired achievements. With the separation the framework uses, it allows for a more realistic assessment of performance and underlines that value creation cannot be inferred directly from observable activities alone.

This distinction becomes especially important in the context of training and skills development, as most effects have a time lag, are partly subjective, and are difficult to measure. Within the logic model, elements of training processes and their effects can therefore be categorized along the stages of value creation (Ruiz-Coupeau et al., 2025). As for the inputs in training and skills development, these refer to the resources allocated to learning initiatives, including expenses,

training hours, and learning infrastructure. These inputs build the foundation for training and skills development activities, which are formal courses, workshops, seminars, e-learning, and on-the-job learnings. The immediate and observable outputs of these activities are, for example, the number of participants, completed training sessions, or certifications obtained. Those effects that are not immediate and observable in the context of training and skills development are changes at the individual and organizational level, such as improved skills and competencies, improved job performance, wage progression, or internal mobility, which reflect the outcomes. Beyond these effects, impacts include improved employability and wider societal benefits (Ruiz-Coupeau et al., 2025).

2.3 Measurement of training and skills development in academic literature

Given the many economic, social, and psychological influences of training and skills development, translating these multidimensional effects into measurable and comparable indicators remains a major challenge. Despite the numerous social effects, evaluation practices focus primarily on indicators that are easily quantifiable, most notably economic outcomes. The following section describes typical outcome indicators and explanatory variables used in the academic literature for formulas aiming to quantify the impact of training and skills development.

2.3.1 Outcome indicators used to evaluate training in academic literature

While academic literature identifies various economic benefits of training and skills development, the scope of evaluation mainly focuses on productivity growth, wage increases, and return on investment.

Research links productivity closely to higher revenue generation (Sandvik et al. 2025). This effect chain continues and shows its positive influence on capital market reaction, where firms investing in employee development experience a higher stock-market valuation and investor confidence (Riley et al., 2016). These market responses reflect expectations of improved competitiveness, innovation capacity, and flexibility (Hatch & Dyer, 2004). At the same time, Hatch and Dyer (2004) highlight how training increases employee productivity through statistical process control skills. These skills allow employees to identify and resolve issues independently, which further reduces defect densities and improves yields. As employees learn to prevent and

correct errors more quickly, production costs decrease, and organizations become more effective.

For organizations, productivity is a central indicator used to evaluate the economic impact of an initiative. Productivity can be measured in various ways, such as output per employee, sales per worker, but also through efficiency improvements: reduced production cost, fewer defects, and short process times (Hatch & Dyer, 2004). It is used as a suitable measure because it reflects how improvements in employee skills show up in the firm's output. Since training-related gains often appear first in efficiency, productivity presents a measure that is closely aligned with the mechanism training intends to influence. In contrast, financial outcomes can be shaped by many other internal decisions and external market influences, making it harder to isolate the contribution of training (Martins, 2021).

A second indicator, which aims to capture the effects of training, is wage increase at the employee level. Training and skills development help to improve productivity but also employability, as employees gain experience and broader skillsets, allowing them to perform more complex tasks and contribute greater value. This is often reflected in higher wages. The increased earnings not only benefit the individual employee but also lead to a broader social return, including higher purchasing power, increased tax revenues, and potential spillover effects when trained employees transfer their skills to new firms. In evaluation practice, wage growth is therefore used as an outcome variable because it represents a direct and observable indicator of improved human capital (Topic-Specific Method Paper: Social and Economic, 2022).

Another indicator used to evaluate training is Return on Investment (ROI). Human capital literature highlights that training is considered an investment that should generate returns exceeding its costs when the improved skills, knowledge, and abilities contribute to organizational performance (Jiang et al., 2012). Research highlights that improvements in human capital can translate into financial performance outcomes, which are frequently measured through indicators such as return on investment. ROI is therefore used as an indicator because it reflects the financial contribution of training within the broader category of organizational financial performance outcomes (Jiang et al., 2012).

In contrast to the ROI, which focuses on financial performance, the Social Return on Investment (SROI) expands the concept of value by incorporating social outcomes (Walk et al., 2015). SROI assigns monetary values to non-financial outcomes by using financial proxies, meaning it identifies a realistic monetary equivalent to represent the outcome by either estimating what it would cost to achieve the same result elsewhere or what money is saved because of the investment. After giving the outcomes a monetary value, SROI compares that value to the money

invested and shows how much social value is created per dollar invested (Corvo et al., 2022). In order to ensure reliability, the method follows standardized principles from Social Value International, although the selection of financial proxies introduces subjectivity.

2.3.2 Explanatory variables used to analyse training outcomes in academic literature

Academic literature shows that numerous factors influence the outcome of training and skills development. In empirical research, such factors are often incorporated into analytical models as explanatory variables, representing the elements that predict or explain variations in outcome indicators such as productivity, wage growth, or return on investment.

One variable that most measurement standards have in common is the number of training hours. This variable is used as a measure of training investment and intensity, reflecting the extent of learning opportunities provided to employees. In the context of sustainability and responsibility reporting, both the Global Reporting Initiative (GRI) and the European Sustainability Reporting Standards (ESRS) include this variable (GRI Standards, 2016). Moreover, regulatory frameworks also require companies to report this measure, further embedding it into corporate disclosure practices. Under the EU's Corporate Sustainability Reporting Directive, companies must disclose several mandatory data points related to employee development through Disclosure Requirements ESRS S1-13, which specifies that:

“The disclosure required by paragraph 81 shall include:

- (a) the percentage of employees that participated in regular performance and career development reviews, broken down by gender;
- (b) the average number of training hours per employee, and by gender.” (European Commission, 2023).

Another variable used to measure the effects of training is the training participation rate, which reflects the proportion of employees who take part in learning activities within a given period (Jiang et al., 2012). This variable reflects the reach and accessibility of training programs across the workforce. Academic research uses the participation rate to capture how training and learning activities are implemented within an organisation and whether training opportunities are accessible to all employees. Higher participation rates indicate a more inclusive training system and are linked to stronger effects on skill development and internal mobility (Jiang et al., 2012). Internal mobility, as described by Jiang et al. (2012), represents an important dimension through which training translates into personal development. As employees acquire new skills and

competencies, they become more qualified for a broader range of roles and responsibilities. This mechanism enables individuals to apply their enhanced capabilities and thereby expand their contribution through training (Jiang et al., 2012). As a variable, internal mobility captures the extent to which training shows progression at an individual level, making it a valuable indicator of how effectively training enhances employees' opportunities and strengthens organisational outcomes.

Another variable that assesses the effects of training is an operational performance measure that captures improvements in production processes. Hatch and Dyer (2004) use defect density as a variable to measure learning performance and productivity, particularly in manufacturing environments. As employees develop expertise through training and experience, they become more capable of preventing errors, adjusting processes, and identifying deviations, which contributes to lower defect density and improves yields. Since these improvements stem from improved human capital, defect density provides a clear and objective indicator of how training translates into measurable productivity gains within the organisation (Hatch & Dyer, 2004).

3. Research design and methodology

Given the limited information and standardized approach in measuring non-financial training outcomes, this study adopts an exploratory qualitative research design to address the research questions. The exploratory qualitative approach, based on the review of academic literature, expert interviews, and the analysis of corporate reports, allows for the collection of a broad range of perspectives. This helps to identify strengths, limitations, and potential improvements of existing measurement approaches in the context of the VBA.

The study, therefore, builds on a review of relevant literature, which serves as the foundation of the study. The literature review is structured around existing theories on how training effects are measured, enabling a systematic assessment of how training activities translate into social value. The addition of expert interviews helps to place the literature foundation into the real-world context and additionally guides in translating how training turns into the social impact. With the exploratory and practice-oriented nature of the research, expert interviews are suitable for gaining insights into current practices, challenges, and the applicability of measuring training and skills development. Expert interviews are particularly valuable given the limited standardization and data availability in measuring and monetising non-financial impacts.

Experts have been selected based on their work-related expertise and their possible ability to address these challenges and support the identification of potential improvements in the value

factor. A semi-structured interview design tailored to each expert was used, to focus on each expert's individual background, allow for a flexible discussion and to explore different angles, while still ensuring the core research question was covered. The interview guide included questions on impact accounting approaches, the role of monetization and measuring non-financial effects, and the identification of relevant variables and data points for assessing the social impact of training and skills development. Further questions addressed methods for translating social outcomes into value metrics. The interviews were conducted online with the consent of the participants.

In addition, company reports were analyzed to provide an overview of current corporate disclosure practices related to training and skills development. First, sustainability reports were reviewed to examine how companies report training-related indicators. For this purpose, the sustainability reports of the five largest companies by market capitalization in the United States, Europe, and Asia at the time of selection were analyzed. Second, reports from companies that explicitly value the impact of training were reviewed. This group of companies represents a smaller sample, as only a limited number of companies publicly disclose such valuation approaches. The analysis, therefore, includes only those cases that could be identified through publicly available reports.

The information gained from the academic articles, the interviews and, the company reports are brought together to clarify relevant factors related to training and skills development and to assess how they can be linked within an improved value measurement approach.

4. The current value factor for training and skills development of the Value Balancing Alliance

This analysis builds on the value factor for training and skills development developed by the VBA. As the aim of this paper is to refine this existing approach and address its limitations, the analysis begins with an examination of the current value factor, its underlying assumptions, scope, and design.

The value factor developed by the VBA is based on an impact pathway that goes from input, output, outcomes to impacts. The input of the pathway reflects the investment of the company into education and skills training of its employees. The immediate result of these investments is shown in the output level, which is the number of training hours provided (per employee). These outputs are assumed to translate into outcomes over time, which is mostly shown through improved human capital. The pathway further distinguishes between increased knowledge and

skills, increased self-confidence, and increased productivity as outcomes. As for the impacts, the pathway categorizes between individual, societal, and organizational impacts. The individual and societal impacts include individual and family well-being, social and civic engagement, increased purchasing power, and increased employability. The organisational impact on the other side consists of increased profits and lower operating costs (Value Balancing Alliance, 2022). While the impact pathway shows various potential outcomes and impacts of training and skills development, the value factor developed by the VBA focuses on a selected set of outcomes and impacts. The focus is placed on outcomes related to increased knowledge and skills and on impacts related to increased purchasing power and increased employability.

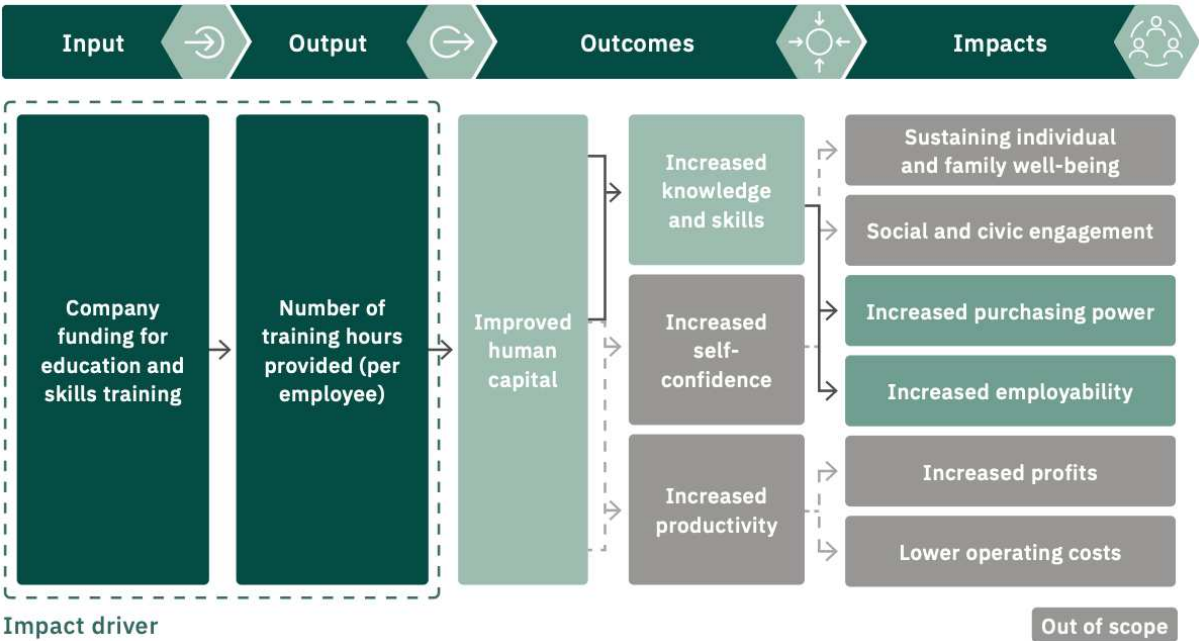


Figure 1: Impact pathway of training of the Value Balancing Alliance

More concretely, the VBA, similarly to the academic literature, breaks down the impact of training into three dimensions: employee-level benefits, employer-level productivity gains, and societal benefits. The productivity gains benefitting the employer through the training initiative (e.g., higher efficiency, increased output, etc.) are not included in the VBA value factor, as these effects are already captured in the company’s financial statement. Impacts on society are argued to be driven by the change in employees’ earnings, through purchasing power and higher tax revenues. Changes in employee earnings are also captured in the company’s financial performance until the employee leaves the firm. It is argued that only then do the effects go beyond the financial statement and can be captured in the value factor. This is because the improved human capital only becomes external to the firm once employees leave the firm (Value Balancing Alliance, 2022).

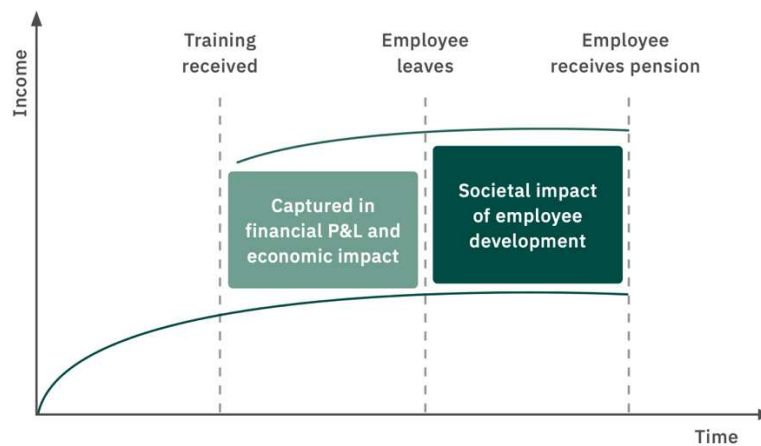


Figure 2: Spill-over effects of training

Within the approach of the VBA, the projected future additional earnings of trained employees after leaving the organization are estimated over time using country-specific wage growth rates and are discounted to their present value (Value Balancing Alliance, 2022).

To translate the impact pathway into a value factor, the VBA uses a three-step process including measuring impact drivers, measuring societal outcomes, and valuing impact. Within the VBA framework, measuring impact drivers consists of simply collecting company human resource data, which serves as input for the calculation of the social impact. The VBA framework requires company data at the country level, including the number of training hours in the focal year, average wage of employees, average age of employees, turnover rates calculated using total employees at the beginning and end of the year, and total employees leaving in the focal year. This data is collected from internal human resources and payroll systems and is the basis of the following valuation steps (Value Balancing Alliance, 2022).

Societal outcomes and impacts are estimated using returns on investments in education, which describe how much average earnings increase with additional education or training in a given country. These returns are derived from the economic literature of Psacharopoulos and Patrinos (2004) and used as a training coefficient for each country. “As these factors assume a return based on a further year of education”, the VBA adjusts the estimated outcomes by putting the actual hours spent on training in relation to country-specific training norm hours (Value Balancing Alliance, 2022, p. 14). The norm hours, on the other hand, are obtained from OECD data.

With this as the foundation, the VBA defines the following value factor for training and skills development, which estimates the present value of future wage increases attributed to employee training:

$$\sum_{j=1}^n \sum_{i=0}^m \frac{(\alpha \frac{Tc}{Tn})^{ij}}{(1 + \beta)^i} w_j \gamma_j$$

Figure 3: The current Value Factor of the VBA

α = training coefficient in country j

β = discount rate

γ = turnover rate

Tc = training hours

Tn = training norm

i = time period

j = countries in which training is conducted

m = pension age – average age of employees in country j

n = total number of countries

w = average wage

The formula uses a country-specific training coefficient (α), which indicates how much the wages typically increase when individuals receive additional training in a certain country. This increase in wage is then adjusted by the actual training intensity (Tc/Tn), which compares the training hours (Tc) with the country-specific training norm (Tn). The training norm represents the number of hours corresponding to one year of education or training in a given country. The resulting earnings increase effect is then multiplied by the average wage level (w) to get the monetary value of the impact. The earnings increase is then adjusted using the employee turnover rate (γ), as it is assumed that only employees who leave the company are to generate societal benefits beyond the firm. The last step is to discount (β) the estimated earnings effects that are projected over the employees' remaining working years until retirement and convert them into today's value. This formula is summed across all countries in which the company operates and across the average remaining working life of employees using the summation terms (Value Balancing Alliance, 2022).

The design of the VBA value factor is associated with several limitations. First, the approach does not take into account the success or the effectiveness of training initiatives, as it mostly relies on training inputs rather than on what the training initiative achieves. Second, the value factor does not differentiate between the type of training, but only looks at the training hours. And lastly, the value factor focuses solely on future earnings effects with the assumption of

spill-over effects generating social benefits. It does not capture other relevant dimensions of training impacts, such as employees' subjective well-being or other societal effects. To address these limitations, the following section explores current reporting practices of companies and expert insights with the aim of improving the VBA approach.

5. Empirical findings

5.1 Current reporting practices on training & skills development among selected companies

Understanding which data points companies collect and disclose in their sustainability reports provides an essential foundation for assessing the feasibility and methodical design of a value factor for training and skills development. While these indicators and data points mostly do not represent social impacts or outcomes, they help to identify where social impact may arise. Input-level data is particularly relevant, as it captures the resources invested in training and therefore provides the basis for linking corporate training activities to potential outcomes along the impact pathway. This information is needed to understand which outcome measures can be operationalised based on existing reporting practices and data availability, therefore minimizing adoption barriers. The findings of this analysis can be summarized in the following table:

Table 1

| Reporting company | Assessing training effectiveness | Reported training indicators | Reported training outcomes |
|--------------------------|---|--|--|
| Amazon | X | - Total investment in employee training - Participation rate by region | - Development opportunities and internal job mobility |
| Apple | X | - Number of employees participating in training | - To comply with regulation - Create a safe work environment - Improve employees' human right awareness and mitigate related risk |
| Microsoft | X | X | X |
| NVIDIA | X | - Total hours of employee training - Average training hours per employee | - Internal job mobility |
| Google/Alphabet | X | X | X |
| ASML | - Monitoring training effectiveness through employee feedback | - Number of training hours - Percentage of employees with a performance rating | X |
| Hermès | X | - Number of training hours provided - Average training hours per employee - Total investment on employee training - Percentage of total payroll expenses allocated to employee training | X |
| LVMH | X | - Number of employees trained - Percentage of employees receiving training - Average training hours per employee - Total investment in employee training - Percentage of total payroll expenses allocated to employee training | X |
| Prosus | X | X | - Career advancement through continuous professional development - Improved internal and external collaboration capabilities - Stronger talent attraction and competitiveness - Inclusive leadership and workplace culture - Increased employee engagement |
| SAP | X | - Average training hours per employee (further break down by gender) - Total training hours | - Employee career development and progression |

| | | | |
|----------------------------|---|---|--|
| | | - Percentage of employees completing upskilling initiatives (internal mobility) | |
| Samsung | X | - Number of employees trained - Number of internal changes in job functions through trainings | - Safe and healthy work environment - Diversity, equity, and inclusion - Career development and career progression |
| Saudi Aramco | - Employees receiving regular performance reviews as part of the training process | - Total hours of training - Average number of training hours per employee | X |
| TSMC | - Post training assessment measures - Certification of training | - Average training hours per employees (further break down by gender and by nationality) - Training participation rate - Total training attendances recorded - Percentage of internal promotions - Percentage of vacancies filled through internal transfer | - Diverse training approaches spark employees' learning motivation, boost their competitiveness, and foster mutual growth with the Company - Leadership training for cross-cultural and global integration and competitiveness |
| Tencent Holdings | - Assessment of training participants to help better communicate expectations and standards | X | - Introduced to enhance employees' emotional management skills, improve independent thinking abilities, and promote career happiness - Stimulating exchange of ideas and supporting collective growth - Enhancing team collaboration, promoting a positive and dynamic workplace |
| Agricultural Bank of China | X | - Training coverage rate - Average training hours by employees (further break down by gender) | - Ensure employees can fulfil their potential - Personal development and lower turnover |

X no relevant information identified in the corresponding report

Assessing training effectiveness

Only a limited number of companies report on how they internally assess the effectiveness of training initiatives. Among these firms, ASML reports assessing training participants through employee feedback mechanisms, and Saudi Aramco reports on the share of employees receiving regular performance reviews as part of the training process (ASML, 2024; Aramco, 2024). TSMC highlights in the sustainability report to implement post-training assessment measures and to certify the training programs (TSMC, 2024). Tencent Holdings, on the other hand reports assessing training participants to better communicate expectations and standards (Tencent, 2024). The described approaches are similar in their qualitative nature and focus on internal processes, though they differ across these companies. The approaches described in the reports don't convert the training outcomes into a standardized and comparable indicator.

Reported training indicators

Across the reviewed sustainability reports, companies disclose a similar set of training-related indicators. Most firms report quantitative measure relating to the training scale and participation, such as total training investment, total training hours, average training hours per employee, and participation or coverage rates (Amazon, 2024; Apple, 2025; NVIDIA, 2025; ASML, 2024; Hermès Finance, n.d.; LVMH, 2024; SAP, 2024; Samsung Electronics, 2025; Aramco, 2024; TSMC, 2024; Agricultural Bank of China, 2024). Within the report of SAP, TSMC, and the Agricultural Bank of China, these indicators are further broken down by region, gender, and nationality, reflecting a more detailed reporting practice. These indicators are among the most reported across firms and have a descriptive function by capturing the scale and reach of training activities. In contrast to the commonly reported indicators of training scale and participation, training-related effect indicators are reported less frequently across the sustainability reports. Only a few companies report training outcomes reflecting changes at the employee and organizational level following training activities. These indicators relate to internal mobility, such as the percentage of employees completing upskilling initiatives, internal job changes, promotions, or vacancies filled through internal transfer (SAP, 2024; Samsung Electronics, 2025; TSMC, 2024). Across firms, the reporting of training related outcome indicators is selective and differs in their approach and level of detail. Yet, these indicators largely reflect internal labour market developments rather than direct changes in employee skills or competencies, and therefore acting as indirect proxies for training effects.

An even smaller number of companies reports the percentage of total payroll allocated to employee training as an indicator of training investment intensity (Hermès Finance, n.d.; LVMH,

2024). Compared to absolute expenditure figures many companies report on, this indicator provides a relative measure, which accounts for differences in firm size and workforce scale.

Described training outcomes

Besides the indicators reported, several companies include narrative descriptions of their intended or perceived impacts of training initiatives. These descriptions include internal job mobility, career development, employability, and employee retention (Amazon, 2024; NVIDIA, 2025; Prosus, n.d.; Samsung, 2024; Agricultural Bank of China, 2024). These topics focus on employees' long-term career development. These are frequently referenced in sustainability reports, suggesting that companies associate training with both organizational and employee-related objectives. Other organisational objectives mentioned to be linked to training are leadership development, collaboration, diversity and inclusion, and workspace culture (Apple, 2025; Prosus, n.d.; Samsung Electronics, 2025; TSMC, 2024; Tencent, 2024; Agricultural Bank of China, 2024). In addition, some reports highlight training to be a means to ensure regulatory compliance, promote safe and healthy working environments, or strengthen human rights awareness among employees (Apple, 2025; Samsung Electronics, 2025). These reported impacts are not supported by any numbers and primarily reflect the strategic intentions and desired effects of training rather than empirically verifying these impacts.

5.2 Current reporting practices on monetized estimates of social impacts related to training

Building on the identification of training-related data points disclosed in sustainability reports, this section examines which companies disclose monetized estimates of social impacts related to training and skills development. The disclosed monetization practices provide insights into how companies translate social impact in monetary terms. At the same time, they highlight the underlying assumptions and methodology and show how non-financial information is connected to monetary impact measures in practice. To enable comparability, the following table follows the structure of the impact pathway, starting with impact drivers, followed by outcomes, impacts, and monetization approaches. This structure allows to trace back how companies apply the impact accounting logic in their own subjective way and translate social impacts into monetised values.

Table 2

| Reporting Company | Impact measured | Measurement Methodology | Inputs (Impact driver) | Outputs (Impact driver) | Outcomes | Impact Dimension | Monetization |
|-------------------|---|---|---|---------------------------------|---|--|---|
| BASF | Social impact through investments into human capital as education, training, and skills development | Estimates the present value of future income gains created by training and education | - Corporate funding for training and skills development | X | - Improvement of skills and employability - Increased productivity | - Increased earnings at a current or future employer | Estimating the increase in salary by using country specific wage growth rates. The estimated additional increase in wage due to training is discounted to its present value. |
| TSMC | Social impact of training reflected in future income | Estimates the increase in future earnings resulting from training, which is discounted to its present value | - TSMC providing training and development programs | X | - Enhanced job competitiveness and career development opportunities | - Increased future earnings | Monetizing assumed fixed share of future salary growth (10%) attributed to training and discounting them to the present value. |
| Holcim | Social impact through employee education | Estimates the increase in economic returns generated by employee education (VBA's Methodology) | - Employee training and education activities | X | X | - Increased future earnings | Estimating training related salary increase by valuing future enhanced earnings and discounting them to the present value. |
| Natura | Social impact through commercial and life-skill training | Estimates the future earnings premium generated by training | - Commercial and life-skill training | - Skills and knowledge acquired | - Potential future earnings premium | - Change in quality of life | For the impact valuation, the model first estimates the future earning premium expected as a result from training using international statistics from the World Bank. A weighting factor is used to account for training utility, as some programs have more impact than others. The salary premium was calculated over a time period of 20 |

| | | | | | | | |
|--|--|--|--|--|--|--|---|
| | | | | | | | years without a discount rate. The income is then converted to the change in quality of life using the HUI model. |
|--|--|--|--|--|--|--|---|

X no relevant information identified in the corresponding report

Impact drivers

Across all companies, impact drivers – especially inputs – are well defined. The most frequently reported training and education programmes and skills development initiatives are the main drivers of social impact. These drivers are usually represented through measurable inputs, such as spending on training initiatives and training hours (BASF, 2018; TSMC, 2024; Holcim, 2023; Natura, 2021).

Outcomes

As for the outcomes, BASF (2018), in line with the VBA impact pathway regarding training and skills development, defines the outcome as improvement of skills and employability and an increase in productivity. TSMC (2024), on the other hand, describes the outcome of training and skills development as enhanced employees' job competitiveness and better career development opportunities. In both cases, the outcome reflects the improvements in human capital arising from training initiatives. While BASF looks at employability and productivity, TSMC refers to market position and career development. Despite the difference in definition, both identify outcomes that are expected to strengthen individuals' economic potential. In contrast, Holcim (2023) does not mention outcomes related to training and skills development in the publication. Natura (2021) follows a different approach and defines the outcome directly as the potential future earnings premium associated with training and skills development. Unlike BASF and TSMC, which describe the outcome as improved human capital, Natura's outcome definition moves directly to an economic effect. This suggests that the intermediate step of human capital improvement, which leads to changes in earnings, is not considered in the reported impact pathway.

Impact Dimension

Across the analysed companies, the impact dimension used to capture the social impact of training and skills development is very consistent. BASF (2018), TSMC (2024), and Holcim (2023) all measure social impact through increased earnings as a result of training, either at the current or in future employment. The additional salary premium is the basis to capture the social impact in terms of higher purchasing power and higher tax contributions (BASF, 2018). In these cases, just like in the explanation of the VBA methodology, increased earnings are used as a proxy to represent broader social effects associated with improvements in earnings at an individual level. Natura (2021), on the other hand, adopts a broader social impact perspective by extending the assessment beyond income-based effects. Within this approach, the future earnings premium

resulting from training is treated as an outcome rather than as the social impact itself. The earnings effect is further translated into a change in quality of life, which reflects the chosen impact dimension. Rather than treating increased earnings as a sufficient representation of social impact, this model further interprets income as a means through which well-being may improve and to what extent. This approach goes beyond the assumption that higher income automatically represents social impact, which is reflected in the approach of the other companies.

Monetization Approach

The impact dimension applied by the analysed companies shows a high degree of consistency, yet the monetisation approaches differ in terms of how training effects are linked to earnings, the treatment of future earnings, and the monetization of impact itself. BASF (2018), TSMC (2024), and Holcim (2023) all monetize the training-related social impact by estimating the additional increase in earnings due to training and skills development and discounting the future benefits to the present value. However, the valuation of the estimated additional earnings differs across these companies.

BASF (2018) estimates training-related income effects by projecting future additional earnings using country-specific wage growth rates. The additional wage increases are then discounted to their present value. TSMC (2024) adopts a more simplified approach by assuming a fixed share of future salary growth of 10%, which is attributed to training. In the next step, this share is monetised and discounted to its present value, reducing methodological complexity and the reliance on various data points. Holcim (2023) monetises training-related impacts by following the VBA methodology to estimate future enhanced earnings of trained employees who leave the organisation.

Natura's (2021) differs in its monetisation approach as it first estimates a future earning premium using international statistics from the World Bank and applies weighting factors to reflect differences in the utility of training programs. This earning premium is calculated over a fixed 20-year period without discounting. The resulting income effects are then translated into changes in quality of life. The Health Utility of Income (HUI) model converts monetary gains into well-being impacts by estimating the effects on life quality over time, measured in DALYs and QALYs. These well-being changes are then converted into monetary values using the Statistical Value of Life.

5.3 Insights from expert interviews

To complement the literature review and support the analysis of valuing the impact of training and skills development, five expert interviews were conducted with stakeholders involved in non-financial reporting, impact measurement, and sustainability strategy. The interviews represented perspectives from sustainability assurance, public policy, impact methodology development, social impact valuation practice, and corporate sustainability management.

As a starting point, the interviews highlighted that current non-financial reporting practices are still primarily driven by regulatory compliance rather than the integration of non-financial data into core business decisions. Companies focus on meeting CSRD and ESRS requirements and collecting basic non-financial data, while more complex non-financial metrics and indicators are not the focus for companies. A main constraint, raised in the interviews, concerns data availability. Companies often face challenges related to the quality, consistency, and completeness of non-financial information, especially along the supply chain. In addition, reporting under CSRD and ESRS relies on estimates, which introduces subjectivity and makes the information less reliable and harder to compare between companies. At the same time, the monetization of impacts remains complex and context-dependent, varying across industries, geographies, and workforce characteristics. Ethical concerns about assigning monetary values to people, labour, or well-being add another layer of complexity to the adoption of standardized non-financial reporting frameworks (Interview 1, see Appendix). Beyond these data and reporting limitations, the interviews highlighted deeper methodological challenges in measuring social impact. A central difficulty arises even before monetisation takes place, namely the identification of causal relationships between inputs, intermediate effects, and final outcomes. Attributing specific inputs to environmental or social impacts is methodically complex, as effects often occur indirectly and cannot easily be traced back to a single source (Interview 2, see Appendix).

In addition to these methodological challenges, the interviews also discussed different approaches for capturing the social impact of training and skills development. One approach focuses on income-related effects. Training is expected to change employees' behaviour at work, depending on the training received. By acquiring new skills, employees are able to contribute in new ways, become more productive, and take on additional responsibilities. These changes are reflected in higher earnings over time, making income-related effects a more direct channel through which the impact of training materializes. To capture this income effect, the concept of education or training return on investment was referred to, which captures the relationship

between investments in training and subsequent income gains. Arguably, investments in training can translate into higher earnings for employees over time. This approach allows the impact to be reflected in observable economic outcomes, such as wage growth resulting from enhanced skills and capabilities.

In this context, salary effects function as a social indicator for measuring the impact of training and skills development. Salary was highlighted as one of the most important social outcomes of employment. It enables individuals to meet basic needs, maintain financial security, and participate in society. Higher income supports social participation through better access to essential services such as housing, healthcare, and strengthens financial independence while reducing the risk of social exclusion. From this perspective, an increase in salary resulting from training represents a direct measure of social impact. According to this argument, employment not only generates monetary benefits reflected in salary but also non-monetary benefits, such as a sense of purpose, social belonging, and the feeling of contributing to something valuable. Therefore, salary not only reflects financial compensation but also serves as an indicator of being embedded in meaningful and productive work. It was further noted that higher earnings are typically associated with more responsible and engaging roles, which contribute positively to well-being. On the other hand, lower-paying jobs are often less fulfilling and associated with lower perceived enjoyment. Arguably, training enables employees to move into higher-skilled and paying jobs and thus increases both income and well-being. An effect that contributes to this is the increase in job security through training, which reduces income uncertainty and employment-related stress. Beyond these direct effects, additional indirect social and economic spillover effects associated with the salary increase were mentioned. The salary premium can lead to increased tax payments and greater purchasing power, which in turn contributes to more economic activity and gross domestic product (GDP). Based on this reasoning, a salary-based value factor can be used as a central indicator to reflect the social impact of training within integrated reporting frameworks (Interview 3, see Appendix).

A further perspective discussed the focus on changes in well-being and the consideration of broader stakeholder outcomes. In this approach, training outcomes are understood to affect not only employees but also family members, managers, and the wider community, who therefore also need to be considered within the scope of impact measurement. Within this perspective, identifying changes experienced by these stakeholders, including both positive and negative outcomes is important. Especially as changes can differ across individuals, as stakeholders perceive and value outcomes differently. Regarding the measurement, assessing social outcomes

involves subjectivity, particularly when looking at aspects such as confidence, employability, or well-being (Interview 4, see Appendix).

One approach listed is the use of survey-based methods, which investigate how much an individual is willing to pay for a positive change or to avoid a negative one. In this context, one approach that aims to translate changes in self-reported well-being into monetary values is the hedonic pricing model. This model estimates how much additional income can be associated with an increase in self-reported life satisfaction. This allows monetary values to be assigned to changes in reported well-being (Interview 2, see Appendix).

An alternative approach to monetise well-being outcomes captured through survey-based measures is the use of quality-adjusted life years (QALYs), which assigns a value to changes in individuals' quality of life (Interview 3, see Appendix).

Beyond the measurement and monetisation of outcomes, several methodological conditions were emphasised that should be considered when assessing social impact. One condition is to assess whether identified outcomes are material, which evaluates the significance of certain outcomes for stakeholders. This involves applying predefined thresholds by the analyst, which requires professional judgment and subjectivity. In addition, outcomes should be defined precisely to avoid valuing the same effect more than once, essentially double-counting. Another consideration is to avoid overvaluing impacts. This requires accounting for deadweight, essentially, changes that would have occurred without the training initiative. Additionally, displacement should be assessed to determine whether an outcome is merely shifted from one group to another rather than being newly created. Another important point to examine is attribution, which refers to changes that are often influenced by multiple initiatives and should not be fully assigned to a single initiative. Finally, the persistence of outcomes over time also needs to be considered through drop-off, which describes how outcomes decrease over time (Interview 4, see Appendix).

Insights from practice also illustrated how impact valuation can be integrated into organisational decision-making. The introduction of impact measurement was initially driven by regulatory requirements, particularly the CSRD. In practice, this process serves as a starting point for identifying and prioritising impacts within corporate strategy and for integrating impact considerations into annual reporting. As part of this process, human capital impacts, including those of training and skills development, can form part of the broader organisational impact assessment (Interview 5, see Appendix).

6. Analytical framework and evaluation of training impact valuation

Building on the literature review and empirical findings, the following analysis examines and evaluates the current approach to valuing training and skills development. The analysis first defines the scope of measurement and identifies the relevant stakeholders benefiting from training and skills development for the proposed value factor. This establishes the foundation to ensure a consistent valuation logic for the following impact pathway evaluation and to avoid double-counting. The impact pathway is then refined using theoretical and empirical insights to clarify how training activities translate into measurable outcomes and impact. Following the refinement, different monetization approaches are assessed based on the selected impact dimension.

6.1 Defining the scope of social impact measurement

The starting point of the analysis is the definition of the scope of the measurement of the value factor, which aims to capture the social impact of training and skills development beyond financial metrics reflected in corporate accounts. In this context, the impact is defined by the VBA “as a change in one or more dimensions of people’s well-being directly or through a change in the condition of the natural environment” (VBA, n.d., p. 17). In line with this definition, the value factor for training and skills development should capture changes in employees’ well-being resulting from training activities.

6.2 Identification of relevant stakeholders

As emphasized by the interviews, a stakeholder-based perspective is essential when assessing social impact. Social impact does not exist on its own but is experienced by specific stakeholders. Therefore, identifying these stakeholders is an essential step in determining whose well-being is affected, how it is being affected by corporate training activities, and which outcomes fall within the defined measurement scope.

As for training and skills development, the primary stakeholders are employees, as they participate in and are affected by training initiatives. As highlighted in the literature review and the interview findings, employee well-being may be influenced through improved skills, employability, income prospects, internal mobility opportunities, and increased job security.

Beyond employees, secondary stakeholders may experience indirect effects. Especially when looking at training-related income changes, families and society at large may also be affected.

Increased salaries may contribute to improved household financial stability and higher tax contributions, but also more happiness and cohesion within families (Diener, 1984).

In addition to employees and secondary stakeholders, the employer itself also represents an important stakeholder, as the provider of training initiatives. These initiatives may lead to higher productivity and performance within the organization, essentially increasing the quality and quantity of its output. These outcomes are largely reflected in the company's financial statements. As defined in the scope of measurement, which focuses on social impact beyond financial metrics already captured in the financial statement, employer-level outcomes are not included in the valuation.

6.3 Refinement of the impact pathway

The VBA already has an established impact pathway for training and skills development. The following analysis builds on this existing structure by incorporating additional insights from the literature review, company disclosures, and expert interviews to examine further relevant aspects along the pathway. Additionally, the refinement aims to identify opportunities to address the limitations of the current value factor.

6.3.1 Input of training and skills development

The refined impact pathway begins with the inputs allocated to training and skills development. As explained by the logic model in the literature review, the input of the impact pathway refers to the resources allocated to training and skills development. Across the reviewed sustainability reports (see Table 2), training and education initiatives are described as the driver of social impact, operationalised through training expenditures and the number of training hours. This shows that companies define the intensity and financial commitment as the starting point of the impact pathway. This also aligns with the impact pathway defined by the VBA, which focuses on corporate funding of education and skill training.

Identifying inputs as the starting point of the pathway is methodologically important. As highlighted through the interviews, establishing causal links between activities and final impacts is complex and often difficult to trace. Having a consistently defined starting point of the pathway indicates a common understanding of where the impact pathway starts.

6.3.2 Output of training and skills development

The next step of the refined pathway looks at the output level. In the VBA methodology, the output of training and skills development is defined as the number of training hours provided (per employee). In this approach, training intensity serves as the link between corporate investment and the expected outcomes. The review of company disclosures reveals a different approach in the only company identified that explicitly defines the output of training. Namely Natura (Natura, 2021). Natura defines the output as the skills and knowledge acquired by employees. In comparison, training hours reflect the quantity of training delivered, whereas skills and knowledge represent the immediate result of the training process.

The difference highlights a conceptual distinction with the VBA impact pathway. Defining the output as training hours assumes that simple exposure to training corresponds with learning outcomes. Yet, the literature on training effectiveness indicates that skills development strongly depends on the quality of training design, individual engagement, and reinforcement mechanisms. As a result, training hours alone may not appropriately represent the effectiveness of training initiatives (Salas et al., 2012).

6.3.3 Outcome of training and skills development

Following the output stage, the pathway proceeds to outcomes, which in the VBA methodology include increased knowledge and skills, increased self-confidence, and increased productivity. These dimensions centre around improvements in human capital at the employee level.

The reports of companies show a similar pattern (see Table 2). In general, outcomes are defined as improvements in skills, employability, job competitiveness, and improved career development opportunities. While differing in wording, these outcomes describe improvements in employees' human capital and economic potential. These outcome definitions consistently position human capital enhancement as the central lever through which training is expected to create social value.

6.3.4 Operationalising the social impact of training

Across all company reports, the translation of these improvements into social impact is most commonly shown through economic terms, more specifically through employees' increased earnings associated with training and skills development (see Table 2).

Although the VBA defines additional social impact dimensions, it also operationalizes the social impact through wage increase, showing that income serves as a measurable and comparable indicator through which improvements in human capital are translated into social value.

The suitability of income as an impact dimension is also highlighted in the interview findings. Salary serves as a relevant indicator of social impact, since it enables individuals to meet basic needs, maintain financial stability, and participate in society. In addition, increased earnings benefit secondary stakeholders, such as the employees' families, through greater financial security and contribution to society through higher tax payments and economic participation. From this perspective, increased earnings from training can be regarded as a direct form of social impact, not only reflecting the outcomes for employees but also indirect outcomes for other stakeholders.

At the same time, an alternative approach to capture the social impact of training described in the interviews is well-being-based survey assessments of perceived life satisfaction changes resulting from training. This approach captures social impact through changes in individuals' subjective experience directly. Rather than using income as a proxy for social impact, it attempts to assess how training affects perceived quality of life, confidence, or job satisfaction.

An additional way of reflecting the social impact of training, as identified in the interviews and related literature, is the use of financial proxies such as the Social Return on Investments (SROI) frameworks. Rather than focusing on income effects or translating survey-based well-being measures, this approach links specific outcomes to comparable economic values. Rather than measuring income effects or subjective well-being directly, impact is reflected through comparison with an economic equivalent.

Comparison of valuation approaches for training impacts

While the income-based approach benefits from measurability, comparability, and aligns with existing economic data, it solely focuses on estimating the earnings premium attributed to training. In doing so, the impact is already expressed in monetary terms, it does not require an additional conversion step. However, this approach builds on the assumption that income serves as a sufficient proxy for social well-being.

In contrast, the survey-based well-being approach introduces additional methodological layers. It requires collecting self-reported data on perceived well-being, which may be influenced by individual subjectivity or response biases. Besides, this approach involves multiple valuation steps, starting with translating survey results into standardized well-being measures, such as

quality-adjusted life years (QALYs), as mentioned in the interviews. Then, in the following step, these measures would need to be converted into monetary values. Each additional step introduces new assumptions and potential sources of estimation error. This process may also be more time-intensive and data-demanding, which can affect feasibility in practice.

Compared to the earnings-based and survey-based approaches, the proxy-based valuation method, such as the SROI, introduces different assumptions. While it does not rely on income as a proxy for well-being, it depends on the selection of appropriate financial equivalents, which may vary across contexts, organisations, industries, and geography, and requires professional judgement. Unlike the earnings approach, the monetary value is not directly observable but inferred through comparison. At the same time, it may require fewer conversion steps than the survey approach, as it does not rely on translating subjective well-being scores into an impact value.

6.4 Critical assessment of the current VBA value factor

The VBA's value factor for training and skills development presents an approach to quantify social impact by linking training intensity to projected future wage increases. Its strength lies in its reliance on measurable company data, such as training hours and wage levels. By using the earning premium as the impact variable, the model builds on an outcome that is inherently monetary, thereby avoiding additional valuation or conversion steps. However, the model builds on the assumptions that with training hours as the central driver, exposure to training sufficiently reflects learning and skills development. This overlooks training design, effectiveness, and variation in program quality.

6.5 Feasibility assessment of alternative valuation approaches

From a practical perspective, the feasibility of a value factor or other impact valuation approaches depends on data availability, implementation complexity, and the associated trade-off with impact valuation accuracy. The current VBA model benefits from relying on already available information in corporate human resource systems, such as training hours, wage levels, and turnover rates. Additionally, the analysis of company reporting practices shows that the impact related to training is predominantly measured through income effects (see Table 2). This aligns with existing corporate measurement practices and supports the practical applicability of the VBA approach.

Approaches that incorporate survey-based well-being indicators require additional data collection per employee and potentially new reporting processes. Such extensions may increase methodological complexity, increase implementation cost, and reduce comparability. This, however, can be challenged with a universal or standardized well-being survey for training initiatives, although the development of a standardized survey is practically challenging, as training programs vary across industries, occupations, and geographic contexts.

The proxy-based approach is simpler and more straightforward, as it depends on choosing the right context-specific financial equivalent, which, varies across countries and industries and therefore also requires subjective judgment.

7. Discussion and methodological implications

The analysis compared three impact valuation approaches for capturing the social impact of training and skills development: the earnings-based approach, the well-being survey valuation approach, and the proxy-based valuation methods. Each approach has its own conceptual strength, yet they differ in comparability, feasibility, integration into corporate reporting, and exposure to subjectivity. Especially, when it comes to the degree to which each approach relies on assumptions, survey-based self-assessments, or the selection of financial proxies influences the reliability and accuracy of the resulting estimates.

Based on the findings of the literature review, the interviews, and the company reports, the study supports maintaining an earnings-based valuation approach for valuing the social impact of training and skills development. However, further improvements to the VBA's current methodology can be made – namely by accounting for not only training quantity (e.g., hours of training provided), but also for training effectiveness through the inclusion of the following indicators:

- Training completion rate
- Training certification rate
- Promotion rate followed by training activities

7.1 The case for an earnings-based valuation approach

From a human capital perspective, training and skills development initiatives aim to improve employees' skills, productivity, and employability, which in turn influence their earning potential. Earnings, therefore, represent an observable way in which improvements in human capital

resulting from training become visible (Riley et al., 2016). Although wages are influenced by broader labour market dynamics and organisational factors, they generally reflect differences in skills, experience, and qualifications.

Unlike for survey-based and proxy-based methods, income effects arise directly within the economic pathway through which training influences employees' skills and labour market outcomes. This strengthens auditability, reduces methodological complexity, and enhances comparability across different firms and jurisdictions.

In contrast, approaches based on survey data or proxies involve more subjectivity about measurement design. Survey-based models raise questions about which dimensions of social well-being should be assessed, which additionally may differ across industries, organisations, and training contexts. Proxy-based methods also depend on value judgments regarding appropriate financial equivalents, which could also vary across different contexts.

On the other hand, the earnings-based approach builds on an outcome that is already embedded in human resource data, which enhances its scalability and integration into accounting systems. Although the VBA strictly separates the income-based impact dimensions from other impact dimensions related to well-being, the interview findings support the use of income as a representative indicator for social impact (see Figure 1). Insights from the interviews suggest that salary does not just reflect a financial outcome. Income is the foundation for meeting basic needs, on which broader dimensions of social well-being are built. Additionally, salary reflects participation in employment, financial security, and access to societal opportunities and engagement (Sen, 1999). While training does not generate employment itself nor determine an individual's salary level, it can contribute to salary progression over time. Therefore, incremental increases in income reflect social outcomes and indirectly touch on other social impact dimensions. However, while the earnings-based approach is defensible, academic literature and expert perspectives show that income does not fully capture the social impact of training. Training may also influence other components of subjective well-being, confidence, and broader societal dynamics that are not fully captured by salary progression alone. The earnings-based approach, therefore, does not fully represent all social dimensions.

At the same time, income itself and income progression capture a substantial share of the social outcomes associated with training. The limitation formulated by the VBA is that the current value factor only measures the return as increased future earnings and leaves out other relevant social dimensions, therefore, it risks overstating the weakness of the approach. While earnings are not a direct representation of social impact, they function as a direct and observable proxy that captures several core social dimensions.

Therefore, this study argues for retaining the earnings-based valuation as the foundational mechanism, while introducing methodical refinements to address its main limitations. Moreover, the income-based impact valuation is already reflected in existing corporate valuation practices, as identified in the analysis of company disclosures. Building on an approach that is familiar and operational within corporate systems increases the likelihood of adoption. Refining and strengthening an established methodology is, therefore, more practical and feasible than replacing it with a new valuation logic.

7.2 Proposed methodological refinements to the VBA value factor

Against this background, the most immediate refinement concerns the role of training effectiveness within the impact pathway. The current VBA methodology primarily relies on training hours as the central driver of impact. However, as highlighted in the literature, training effectiveness not only depends on quantity but also on completion, engagement, training design, and actual transfer of skills (Salas et al., 2012). Training hours in itself does not necessarily reflect whether meaningful skill development has occurred.

If the value factor aims to measure the social impact of training, it should reflect not only the intensity of training provided, but also whether training successfully enhanced employees' capabilities. The current translation of training hours into earnings effects relies on a country-specific coefficient based on average returns to education (see Figure 3; Psacharopoulos & Patrinos, 2004). While the coefficient reflects the general relationship between education and wages at a macroeconomic level, it does not capture whether a specific training initiative was successful.

A refined value factor could incorporate indicators that reflect realised training outcomes. Such indicators should approximate whether training has translated into verified skills acquisition and labour market relevance. This would also address one limitation of the current value factor, which is that it does not account for the success of training. Based on the literature and analysis, three types of indicators appear suitable.

First, completion rates reflect the proportion of employees who successfully complete a training initiative relative to those who started it. As completion is a prerequisite for learning, this measure provides a basic indicator of programme effectiveness beyond just participation. In contrast to training hours, which only capture exposure, completion rates signal that employees have finalised the training process.

The completion rate can be defined as:

$$\text{Completion Rate} = \frac{\text{Employees who completed training}}{\text{Employees who started training}}$$

This indicator builds on standard human resource metrics, which support feasibility and scalability. As a ratio between 0 and 1, the completion rate can be directly applied as a proportional adjustment factor, ensuring that the estimated impact is scaled according to the share of training that is effectively completed. It can be directly integrated as a multiplier within the existing value factor:

$$\sum_{j=1}^n \sum_{i=0}^m \frac{(\alpha \frac{Tc}{Tn} \text{Completion Rate})_{i,j}}{(1 + \beta)^i} w_j \gamma_j$$

By adding this indicator to the value factor, the estimated earning premium would no longer be solely on the quantity of training, but also on the proportion of employees who successfully completed it.

Second, certification rates can serve as a stronger signal of verified skill acquisition where formal assessments or qualifications are part of the training process. In this case, the proportion of participants who obtain certification through training provides evidence that skills were not only delivered but validated. Compared to completion rates, certification introduces an additional quality threshold, as participants must fulfil requirements beyond just attending.

The certification rate can be defined as:

$$\text{Certification Rate} = \frac{\text{Employees who obtained certification}}{\text{Employees who completed training}}$$

Similar to the completion rate, the certification rate can be integrated into the current value factor as a multiplier:

$$\sum_{j=1}^n \sum_{i=0}^m \frac{(\alpha \frac{Tc}{Tn} \text{Certification Rate})_{i,j}}{(1 + \beta)^i} w_j \gamma_j$$

Incorporating certification rates would allow the earnings premium to reflect not only participation and completion, but also verified skill acquisition. However, certification is not applicable to all training types; its use may be limited to training initiatives where formal assessment mechanisms exist.

Third, internal mobility or promotion rates following training, capture whether newly acquired skills are recognised within the organisation. Indicators such as the share of employees completing upskilling initiatives or the percentage of vacancies filled through internal transfer, as reported by TSMC (see Table 1), reflect the extent to which training translates into career progression and applied competencies.

A promotion rate can be defined as:

$$\text{Promotion Rate} = \frac{\text{Employees who were promoted after completing trainings}}{\text{Employees who completed training}}$$

Within the value factor, the promotion rate could also be integrated as a multiplier:

$$\sum_{j=1}^n \sum_{i=0}^m \frac{(\alpha \frac{Tc}{Tn} \text{Promotion Rate})_{i,j}}{(1 + \beta)^i} w_j \gamma_j$$

Compared to completion and certification rates, promotion-based indicators provide a stronger signal of economically relevant skill recognition, as they reflect realised outcomes within the firm. However, the relation between training participation and promotion is complex, as promotions are influenced by several factors, including performance and organisational needs. Besides, current corporate reporting rarely provides public quantified data linking training participation directly to promotion outcomes. In the case of TSMC, promotions are presented as outcome indicators of training effectiveness at a conceptual level, rather than as causally attributed effects.

For this reason, promotion-based indicators should be interpreted as a potential future refinement rather than a fully established component of a standardized value factor. The integration of promotion-based indicators would require more consistent data collection and clearer

evidence linking training participation to career progression. As reporting practices evolve, such indicators may become more feasible in the future.

A third limitation of the current value factor concerns the lack of differentiation between types of training. Additional heterogeneity of training impacts can also come from different employee groups. Different forms of training, such as mandatory compliance courses versus voluntary upskilling initiatives, likely generate different outcomes and magnitudes of impacts. Although the current value factor does not differentiate between training types or employee groups, the inclusion of training success indicators can partially reduce distortions that arise when diverse programmes are treated uniformly. By adjusting the value factor with a training success indicator, the model bases the estimated impact on realised performance rather than on differences between training types. In this way, some variation across training types is indirectly incorporated through observed results.

7.3 Alternative well-being-based valuation approach

An alternative approach is illustrated by Natura, which does not treat income gains as social impact in themselves but translates projected earnings premium into changes in quality of life using a well-being valuation framework. In this logic, income only functions as an outcome, while social impact is defined as the resulting change in well-being rather than the earning premium itself. Natura translates income effects into changes in quality of life, which are yet again monetized using parameters such as the Value of a Statistical Life (VSL). In this framework, income is understood as an outcome that influences well-being, while social impact is defined as the resulting change in life quality rather than the income increase itself. The final estimate is again expressed in monetary terms by monetising the change in life quality through an additional conversion step.

While this approach provides a stronger interpretation of social impact, it introduces additional assumptions and valuation layers. These additional modelling steps may reduce transparency, auditability, and comparability. While conversion of income into well-being provides a better reflection of social impact, it may be better positioned as an additional analytical layer, rather than a replacement of the earnings-based approach.

8. Implications for the Value Balancing Alliance

The findings of this thesis indicate that the current VBA value factor for training and skills development is conceptually robust and that its income-based valuation logic provides a strong foundation. It enables comparability, scalability, and integration into existing reporting systems, while being less reliant on subjective assumptions than alternative valuation approaches. The focus of refinement should therefore lie in improving the methodological design of the earnings-based estimate.

The most important refinement concerns the introduction of a training effectiveness multiplier. Training hours alone do not capture whether learning has occurred. Three potential approaches have been identified: completion rates, certification rates, and mobility- or promotion-based indicators. As a next step, it's important to evaluate which of these measures can be applied most consistently across companies. This would allow the selection of a standardized effectiveness component while maintaining the practicality of the value factor.

9. Research Limitations

With these implications for the VBA in mind, several limitations of this thesis need to be considered. The findings are based on a qualitative research approach and a limited number of expert interviews, which provide detailed insights into current practices and methodological approaches but limit the range of considerations that could be incorporated into the refinement of the value factor. Besides, the analysis relies primarily on self-reported and publicly disclosed information, particularly sustainability reports. Such information may reflect strategic reporting choices rather than capturing realities of a company, which affects the data quality to serve as a foundation for the value factor.

In addition, the interviews revealed important conditions for social impact valuation, which were not systematically assessed within this thesis (Interview 4, see Appendix). These include assessment of impact materiality, double counting, overvaluation, deadweight, displacement, attribution, and drop-off effects. As these factors are important to consider for the credibility of monetized social impact estimates, their integration into the value factor refinement remains a key area for further refinement.

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Appendix

Due to space limitations, the full interview transcripts are not included in this appendix. Instead, the appendix presents extracts that capture the key insights relevant to the research objectives.

1. Expert Interview with a Sustainability Assurance Manager at EY Climate Change and Sustainability Services on Challenges in Non-Financial Reporting and Impact Monetisation

(...)

02:30 – Armin Baghaie Heravie:

None.

And since you're like in the compliance part and in in in, let's say the reporting part of CCAS, in your opinion, what is the fundamental purpose of measuring and accounting for non financial factors and aspects, why is it so important?

02:56 – Interviewee 1:

OK.

I I think it is important because it's a way of taking accountability for your impacts and companies do that's largely already by reporting on their financials, but then you leave out a very big part of their impact, which is non financials. So I think it's very important that that also gets integrated in order to provide also more value for reporting purposes for the stakeholders, not only the shareholders because in the end they are also impacted heavily by a lot of companies. So yeah, it's a way of taking accountability and once you start measuring and also once you start implementing targets, then you also start working towards more sustainable operations because you have to report on your targets and you have to monitor you, you have to implement processes around it. So yeah, I think then a whole new challenge starts like, apart from the compliance that you also change your operations towards more long term value.

04:18 – Armin Baghaie Heravie:

And I mean, reporting is one part and there is obviously in sustainability or in non financial reporting a lot of ways of reporting, there are a lot of standards when it comes to impact accounting, what impact accounting is trying to do is to monetize these impacts. How do you see the role of monetization in impact measures rather than just having, let's say, a company admits this amount of CO2 in the report? Are there any benefits in your opinion in monetizing the impact rather than just having a value.

04:59 – Interviewee 1:

Yeah, I think that's definitely the future where we are heading at because what we see mostly now is that it's so the reporting is not integrated at all. So some report like an annual report with the financial statements and then the sustainability statements.

But some even report like two separate reports, so there is almost no integration between those two. And yeah, what you see happening is that like, of course there there are parties, stakeholders that do read the sustainability statements. Otherwise, we would love to report on it, but I think the the value of the information is still not similar as to the financial statements. So I think just the way of thinking is mostly still in monetary values and that's why. Yeah, apparently we need to change the way of thinking as well, and the way of looking at it. And then I think it's good to go towards like an actual value. Because in the end, that's what the stakeholders want and the shareholders mostly, and they are the ones that can vote on it and have real impact on the company, so.

06:30 – Armin Baghaie Heravie:

And in the I mean, since you work with a lot of companies within this topic, do you see any challenges that companies face within sustainability reporting or non financial reporting? I mean there are a lot of frameworks I can imagine that that's a challenge, but is there? Are there other topics that might be a barrier to going towards, like an integration of non financial reporting with financial reporting?

07:13 – Interviewee 1:

I think indeed companies are facing now already a lot of challenges to to get to the sustainable information to the non financial information. So they really need of course their own operations and their own departments for it within their company. But they are also very dependent on their failure chain and that's I think now the biggest challenge that's going on because like the failure chain consists of multiple other companies, and yeah, the companies we're talking about, what I'm working with are most of the time listed, but you have like multiple other companies. They are dependent on and they don't have the information. They are not able to provide it. So within the ESRS, we're also working towards working with a lot of more estimates so they can not just omit the data, but they have to estimate it and that's where we come in, because then assurance is very important because it's it's very subjective of course. So I think that's already like the the amount of information that there is there, that there's limits to that. And then it's also the way of measuring. I think we also discussed that. But there that's also like there are now ways of measuring because we have the definitions within the SRS. Then there is like not a set way to monetize it, I would say so. Indeed there also should be a framework for that, but then the whole there also comes in like a whole ethical discussion, mostly in the S topic. Because how do you monetize certain things and mostly also the value of work? How do you monetize your workers, your employees? That's. Yeah. I think a very difficult discussion and I think also some discussion that a lot of companies are not even having yet. Because they are still trying to get to the information in the first part and they are not really working on the translating of it towards monetary values.

09:28 – Armin Baghaie Heravie:

This is exactly like I think the part where my master thesis is having a touchpoint with monetizing or measuring in general the the social side, which is.

09:35 – Interviewee 1:

Yeah.

09:44 – Armin Baghaie Heravie:

It's you cannot just put a value on something that there are no values for.

09:51 – Interviewee 1:

Yeah. And it's also very context driven because you need you want the framework. But yeah, like the yeah, I don't know. Yeah, the the value of of someone is already hard to measure. And it's also a difference for industry, different country probably even.

So yeah. That is very hard, I think like the ESRS is also they are planning also to implement industry specific topics. So of course it makes a lot of sense. We also do it in financial statements audits and that you have like industry specific guidance. So it definitely I don't think like the future IS11 value or one standard that's that's not it's way too complex for one standard, but yeah.

10:48 – Armin Baghaie Heravie:

But I would still, I mean it is very difficult, but maybe you have an idea of or in your opinion how would you quantify the impact of training in your opinion, is there, is there something you can think of? What I'm trying to find out is like. The output variable that in your opinion makes sense for training, be it I'm not gonna give any suggestions. Maybe that's gonna.

11:32 – Interviewee 1:

Yeah. So it starts, of course from measuring probably the hours of training someone has then I think. Well, like I said, it is important to. Look at the industry, I would say. And then. Yeah, you probably need research on. None. The value like in terms of. Maybe someone like like one hour of training how someone progresses in the in the economy or what someone contributes in the economy by gaining more knowledge. Probably there would be some research on that. Umm. Because yeah, I think it's mostly in that growth factor that someone learns, learns something and then adds more to a company. And by that adding more to the economy in general. None.

12:39 – Armin Baghaie Heravie:

A part of the economy, what could the training also contribute to? I mean, of course it's gonna have a financial improvement. Hopefully, at least that's what training is supposed to do. But apart from economy, what it can be like on an individual basis, like what does the training do for the person itself or society? Or even as other aspects, feed social for a company as well. Is there something?

13:17 – Interviewee 1:

Yeah, I think indeed I was moving towards the economy because that's the first thing you think of when you think of monetizing and like, indeed the whole soft part of it. That's I think maybe even bigger, but that's maybe also the hardest part to monetize, but things that would come up is. I think you create like. If you like learn more, at some point you also become maybe a role model within your company. So I think it's also adds value for your colleagues because you share knowledge with it. And yeah, of course, depending on the industry, it can also help you in society because yeah, if you share the knowledge you have, then that could also help other people. I think you are like a more with more knowledge you also. I have more often view of like the the impacts that you have. You become maybe more aware of your position within society. Yeah. And maybe that also helps you to make better decisions in the future.

14:55 – Armin Baghaie Heravie:

Umm.

We've already have. Or in general, there are in sustainability and and and non financial reporting. There are a lot of things as I mean you've mentioned as well that are very hard to measure if. We have something that is non financial we have. The social well-being of a person through whatever has been improved by 10 times through an action big training be something else. How? What ways of monetizing? This factor. Are there is it can also be like if a company admits CO2 it has 10,000 tonnes of CO2. Are what approaches are there to say OK this 10 thousand CO2 has this financial impact or whatever? Like turning the. What I'm trying to ask, turning a a a factor that is not monetized into a monetized value, are there any ways of doing this conversion?

16:07 – Interviewee 1:

Mm-hmm.

I know there is because I know that that's what my the company of my brother is also working on. So I know that there is ways and I know they have like big databases with also research and with that like providing factors to monetize it. But that's also how far my knowledge reaches because I don't know what type of research they use and how they exactly do it. But yeah, there are like very complex models behind that I would say, so it's not. Like I don't have. I don't think there is like one answer to this question because it's not like yeah, based on this research we saw that social impact is worth €1.00 per one hour or something. No. Yeah. Yeah. But I don't know how to do that. Sorry.

17:35 – Armin Baghaie Heravie:

What we've also touched on is the data that companies.

That data is a issue for companies, especially when it comes to figuring out non finance. Their non financial impact.

17:35 – Interviewee 1:

Mm-hmm.

Yeah.

17:45 – Armin Baghaie Heravie:

Is it and especially in the value chain as you've also mentioned, when it goes down to other companies that have that supply to this company, what they're probably not listed and then they don't have to collect certain data points. What? What development can you see within this field that companies are trying or what ways are companies trying to broaden their like database let's say? Especially also down the value chain, how they're trying to integrate the others. Their suppliers.

18:23 – Interviewee 1:

Yeah.

I think the trend we're seeing now is like the other way around because of the omnibus. So that's the law. That's again going to change the CSRD bringing back a lot of like the obligations that they initially started with. And big part of that is also the obligation of getting information from your value chain partners stating that they're the obligation I think is even taken away. And then they have to make more estimates. So I think the trend we're seeing now is that they are moving away from that bit more. There is also other regulation coming up. That is the CS triple DI. Don't know if you heard about that. That's about due diligence. So when you start as like a large company to pick your suppliers and you have you need to do more due diligence, and that's also mostly within the social impacts or related to human rights. So it's maybe probable to look into that because I think it needs to come from like a regulation perspective anyways.

19:34 – Armin Baghaie Heravie:

Hmm.

19:42 – Interviewee 1:

Because otherwise it's just not on top of the agenda of the most most of the board rooms. So yeah, I think I what I know is that my brother is also working worth more alliances. So with companies from one industry specifically and they tried to share knowledge on how to measure certain things, so then it's not really in the failure chain, but more with industry partners. None. Yeah, but I yeah, I see, like, more of a negative trends coming up actually in this regards.

20:33 – Armin Baghaie Heravie:

And I mean in the end, the goal is to integrate in some way non financial with financial statement. You've touched on that most companies have like a separate report for sustainability or non financial aspects, in your opinion is there. Is there also a trends that you can see that there is a way of integrating both. Is there a way in your opinion what's what might be the best way to integrate non financial with financial reporting.

21:16 – Interviewee 1:

I think the way to do that is exactly the the topic you were working on, so monetizing the the actual value. So in the ends I think like. The one thing everyone scrolls down to when an annual report is reported is the financial statements. That's the balance sheet and the profit and loss. So I think that's exactly the part where we should integrate it in and not like in the text because. They are reporting like reports of two or three 100 pages. Yeah. I don't believe that everyone is reading this. And I also know because companies can see where the click rates of obviously and people always go to the remunerations and what the boards earns. Which is in the text of the annual reports, and then they move on to the profit and loss in the balance sheet. So yeah, it's definitely integrating, it's into and monetizing as well. Umm. Yeah. And what I still wanted to say about the failure chain partners, because I don't really know if that's a hot and like a big topic. I don't know if it was just a general question, but like with training, I don't know if it's like a big topic with that because. If you. By training from just a partner, then I think you also know you have like the information of. Yeah, what your employees used. So I don't know if that's really a topic.

22:59 – Armin Baghaie Heravie:

None.

23:03 – Interviewee 1:

I think there is not a high dependency in this topic specifically on 30 chain partners.

23:09 – Armin Baghaie Heravie:

OK.

And once?

I mean there are different approaches of. Including non financial factors into the financial statement or? What? OK, what your brother does. As of my understanding with his organisation is they have like the positive impact, the negative impact deducted from the net result.

23:45 – Interviewee 1:

Yeah.

23:46 – Armin Baghaie Heravie:

Is there is that in your opinion a good way, the best way or is there also another way that you that you would think that it makes sense to have a non financial monetized value impact something else rather than just profit?

24:04 – Interviewee 1:

Yeah, I think like I said, it's not only PNL, but it's also the the balance sheet, because I think like that's also how accounting works. It's all about balancing, right. So you can not just increase or lower your profit without also touching your balance sheet, so.

24:08 – Armin Baghaie Heravie:

Yeah.

24:21 – Interviewee 1:

I think we just need 1/2 values like for each to see the actual impact. So yeah, just like with the true profit company, that's also a company in the Netherlands, they implemented also the true price for coffee like I think we talked about it as well. So they also present the price that you can pay, which is just the normal price in the market. And then the true price. And then you really make people aware of what actually is the impact of a company?

25:01 – Armin Baghaie Heravie:

But that would again touch on the like revenue side of.

25:09 – Interviewee 1:

No, not not only because yeah, like if you sell, if you sell things, you also have to increase your stock, for example, or. Well, that's what I mean. But like it's it always needs to be in balance so.

25:34 – Armin Baghaie Heravie:

I think I have all my questions answered. Thank you so much.

25:41 – Interviewee 1:

Yeah. OK.

Yeah, no worries. I was also just thinking, I know like one company, what my brother worked with a lot or the company worked with a lot. It's a bank in the Netherlands and I think they even presented such, they implemented their model. So I want to look into their annual report of like couple of years ago because they don't do it anymore and then maybe send it over to you because maybe you can use that to see what it looked like for them.

(...)

2. Expert Interview with a Representative of the German Environment Agency (Umweltbundesamt) on Methodological Challenges in Measuring and Monetising Social Impact

Interviewee 2 0:03

The big challenge here is that we need reasonable, really well-constructed impact chains. That means establishing the connection between, in our case, the emission of one kilogram of nitrogen for example, that gets released, then something happens to it in the soil, perhaps in the air, and in the end we have some kind of damage somewhere. And that is the big challenge for us: in many places already establishing this connection, how much of an occurring damage, for example the acidification of a body of water, how much of it can ultimately be attributed to the emission of this pollutant at a specific location? And that is the really big challenge in many cases. The monetization, assigning a monetary value to it afterward, is exciting as well, but often actually almost trivial. Exactly. And what you should probably think about very carefully is, on the one hand, as I said, what is the input variable you are working with? In the end do you have employee training? What data do you have, what data do you believe you can ultimately rely on that can then flow into this formula? So I think it is very important to have

an idea of that. Is it about the training budget of a company, would that roughly be the level of granularity you are assuming? Or have you already explored what might be possible there?

Armin Baghaie Heravie 1:50

I have thought about it, and I have actually looked at financial reports from companies simply to see what is reported, in order to see, OK, if this is reported, then that could be an input variable for the formula. First, one advantage of that is that it is already measured, companies do not have to search for additional data. And one thing is that I am doing this within the framework of impact accounting. And what matters there is how the effect is monetized in the end. And one problem is, I hope I am correct, that the problem is that these inputs cannot be used completely in the monetization, because it is ultimately the effect that is monetized. If I say, for example, OK, €1000 were invested in training, then in the end I can say OK, €1000 were invested. But that is already recorded somewhere else in the financial statement. That means I cannot take it as the effect, because then it would essentially be recorded twice. If in the end I measure the effect of training with the investment, then on the one hand it is company expenditure that is recorded anyway, and then I say, but it also has an effect of €1000 here. That means there would be duplication, which I believe would be problematic. That is where I am currently a bit stuck. I will try to explain. On the one hand, the effect variable that has been used so far is the increased salary. It is a monetary value and it can be measured well, but it is not social enough. My thought was to instead take employee well-being as the variable. In my opinion it is much more social and it relates to the S of ESG. And how I would like to monetize this effect, I do not fully know yet. I also do not know which—

Interviewee 2 5:04

No, no. Well, if we really take that step, then it actually becomes clearer. Because what you need now is to decide how you want to operationalize well-being. That is a crucial question. What is definitely worth looking at, in my view, is the German Socio-Economic Panel, for example. What they do there: they measure life satisfaction or happiness. There are several approaches, I once worked in happiness research, so you are opening open doors for me here. But all of this has methodological problems, yet it is at least an attempt to approach this very difficult and complex phenomenon of well-being. One research approach is what is called self-reported happiness or self-reported life satisfaction. People are asked and they place themselves on a scale from 1 to 7 or 1 to 10. That is the original scale. And yes, there are pitfalls, but it is at least a way to approach these complex phenomena. If people think about it a little, they often give answers that make sense. And if this is then embedded in a panel, like the Socio-Economic Panel, where effects can be controlled for over time because of the panel structure. So you could move in that direction: trying to capture the relationship between professional training and well-being. Then you could look in happiness economics or social psychology to see whether there are studies examining the connection between professional training or education and well-being. And how one ultimately monetizes this life satisfaction value into monetary units, that is essentially a hedonic pricing approach. Have you heard about that before?

Armin Baghaie Heravie 8:10

No, that is why I am taking notes right now, but if you could explain it to me that would be great.

Interviewee 2 8:15

Yes, OK. So hedonic pricing is the attempt to estimate that relationship. Where it is often used in practice is either in wages and labor markets. For example: how much must people be paid to take particularly dangerous jobs? Or in housing markets, explaining rent prices through aspects such as beautiful green surroundings or other characteristics. And the idea is to estimate a monetary value for an increase of one unit on the happiness scale. So if you look at that relationship, then I think you have something you can work with. Because professional training is a very heterogeneous field. Whether it makes someone happier depends on why they do it. Do they do it because otherwise they might lose their job, or because they enjoy developing themselves? Even that makes a difference. The Value Balancing Alliance also works internationally. That adds another problem: labor markets and job security differ greatly between countries. So you might consider first focusing on one specific country. And then you could try to generalize it afterwards. But if possible for your thesis, I would recommend first trying to show it for one country. Because the relationship will likely differ depending on labor market structure and social security systems.

Armin Baghaie Heravie 11:30

In my research I also noticed that it depends on many factors, industry as well. There are many different factors influencing it, and that is one of my problems.

Interviewee 2 11:55

Then you might try grouping things, for example distinguishing between blue-collar and white-collar jobs, or between services and manufacturing. At least creating large categories. Because there are professions like doctors who must complete mandatory continuing education. In other professions people might never formally train again. But they still develop within the company, even without formal certifications. Yes. But I would also be careful with the wording. Originally I thought you also wanted to capture broader societal effects beyond individual well-being. For example whether employee training strengthens social cohesion. But that would become very diffuse and difficult to establish. Focusing on employee well-being seems more plausible. For example employees may feel valued if their employer invests in their training. It may signal appreciation. Or future income opportunities. If you measure well-being like that, you would also have to control for income afterwards to separate those effects. But at least there is a research literature on that.

Armin Baghaie Heravie 15:23

No, that is not easy. Is there perhaps a variable or final effect that captures both individual and societal impact?

Interviewee 2 16:20

The problem is that such indicators usually exist at the macroeconomic level. For example GDP and its criticism, or broader welfare indicators. But those operate at the level of entire national economies. For your case, employee training in a single company, the effect would be far too small. Maybe you could look at the National Welfare Index as inspiration. But again that is for entire economies. Similarly, sustainability indicators in national strategies. But those are too aggregated for your research question.

Armin Baghaie Heravie 21:02

One effect that comes to mind is employee promotion resulting from training. That might be measurable.

Interviewee 2 21:24

You mean promotion in terms of career advancement?

Armin Baghaie Heravie 21:27

Exactly.

Interviewee 2 21:40

Yes, that is possible. You could examine not only salary increases but also whether training leads to promotions. But again it will depend heavily on the industry. In sales, for example, compensation often depends more on results than on training. Another interesting question is how many leadership positions are filled internally. That could indicate the quality of internal training systems.

Armin Baghaie Heravie 24:52

Maybe one more short question. OK. Which advantages does society gain from measuring and reporting non-financial aspects of companies?

Interviewee 2 25:40

One aspect is standardization, making sustainability reports more comparable. Another is political climate targets. Companies need to show they contribute to achieving these goals. Historically this was often about reputation and marketing. Today it is also about financing: sustainable finance and green finance. Companies may obtain better financing conditions if they can demonstrate long-term sustainability. Transparency also plays a role. Those are probably the most important points.

Armin Baghaie Heravie 28:59

And what obstacles still exist?

Interviewee 2 29:22

Standardization again. If there were established methods, companies could apply them more easily. Environmental management systems also help. Companies already collect data on energy use, waste, etc. The question is whether they use the data internally or also publish it externally. Publishing may create competitive concerns. For example competitors might infer information about production processes. Another issue is the effort required to collect the data.

Armin Baghaie Heravie 31:52

Good. I think we covered all topics I wanted to discuss.

(...)

3. Expert Interview with a representative of the Impact Institute on measuring and monetising the social impact of training and skills development

(...)

Interviewee 3 0:28

Most on the job, and I think regarding your question, so we yeah, we help organisations assess the positive and negative impacts they have on society. Umm. We don't have a particular focus on things like training and developments or human resources or or human capital, but it comes along every now and then, so I can't claim I'm really a specialist in that particular fields. But it, yeah, we we do see it. So we're dead. Maybe you can. Yeah. You can go over your questions. I can. I can. I can reflect on what we've done.

Armin Baghaie Heravie 1:12

OK. I mean it's it's mostly about, I mean companies do have social impacts as well as environmental impacts. And I'm trying to focus more on the social impact as of my work.

Interviewee 3 1:23

Absolutely. Yeah, yeah.

Armin Baghaie Heravie 1:30

Within training and skills development and the current formula or the value factor that's being used by the value balancing alliance, which I'm kind of helping to develop, a new one is focusing on the.

Interviewee 3 1:32

Yeah. Yeah. So you're so you're you're working together with the value mailing sing alliance.

Armin Baghaie Heravie 1:44

OK. Not pretty working together, but they work with my university pretty much and my university said OK, they want to improve this value factor in the future. It would be good if some some student would do some prior research on the topic and that's pretty much what I'm doing.

Interviewee 3 1:55

Yeah. Yeah, yeah. Yeah. Excellent. Yeah.

Armin Baghaie Heravie 2:07

And the current formula that the value balancing alliance has developed is focusing on the increase in salary resulting from training and that arguably. Has some social spillover effects, as in purchasing power and tax payments, and from the research I've done, it's when it comes to training and skills development, most of the value factors or formulas, they have the same approach. They show the social impact. Through increase in salary as well as the document that you shared, I believe it's again also the increase in salary.

Interviewee 3 2:45

Yeah. Yeah. That's that's a. That's a. That's mostly the logical argument behind it, yeah.

Armin Baghaie Heravie 2:57

Which yes, what I'm trying to do now is either find a new way of or using a new dimension and not increase in salary, or if it makes sense to stick with increase of salary. If there is a way to adjust it. So that it also incorporates more of a social effect, like a direct social effect, rather than having arguably just the spillover effects of increased salary.

Interviewee 3 3:20

Yeah. Yeah. Yeah, yeah, yeah. OK. Interesting. So my first question would be how you define social effect. So what when is something a social effect and when is it not? And there, and there's there's no right or wrong to this question. It's it's a very deep question. But just just curious what's what your what your take on it is?

Armin Baghaie Heravie 3:49

My take would be that's what I've kind of tried to say or meant behind, saying the direct effect it now again, what would be a direct effect if. If, for instance, if we can say the social or or well-being of a human being is directly impacted by training rather than taking a step between and saying. The salary increases, which has like an effect on social well-being, but if there is a direct way of saying OK, social well-being has increased.

Interviewee 3 4:25

Yeah. Yeah, yeah, yeah, yeah. Yeah. Yeah. Yeah, yeah, yeah. It's it's it's. It's a very interesting take. Let me say a couple of things in a not very structured way, if that's OK with you. First of all. I enjoy the training themselves, so those hours are like the better hours in my week. If I receive training. So what you can do is you can just reflect the direct well-being that people have during the hours that are being trained. You can call that like hedonic well-being because it's just about your your feeling of well-being and most trainings are are basically fun. So it is a inspiring, inspiring moment and you enjoy that. It's not easy to to quantify, but what people do, it's imperfect. They can say your quality of life on a scale of one to 10. Well, I mean, on a normal, boring office day. I don't know. It might be a 7. And during a very interesting training for a couple of hours, it might be an 8 or a nine, right? So we know that my self expressed. Quality of life is higher for a couple of hours. Maybe it even last longer. Maybe you can even find arguments why the day after you'd still feel better. I wouldn't go as far to say this would go weeks in the future. Even a holiday, people reports. Higher well-being often around holidays, interestingly enough, often more, even just before the holiday. Then during it, the anticipation often is a even higher effect and also directly after a holiday people report higher well-being, but that quite quickly fades away. So this is a temporal effect. You can say, well, it lasts for number of hours or a number of days. I would not argue that it goes beyond a number of days. Hey, you can quantify that you can relate that if you like to things like quality, quality adjusted life years that you might have heard of. Or you might have heard of disability adjusted life years. Those are more from the medical literature and those you can you can monetize. It's not easy, but it's possible. So basically here in the argument is trainings are fun. People around those hours reports greater quality of life. It's almost similar to a holiday, and you can value that it won't be a very large effect. I think, Arvind.

Because it because it only lasts for a couple of hours or maybe days, so that that's your first possible approach, but it's quite limited because it's only like very very direct.

Armin Baghaie Heravie 7:40

Just from my understanding. So you're saying that training has an effect, maybe a short effect since during the day they feel during the training they feel better rather than doing hard work. And this effect should be asked through a questionnaire on a scale of one to 10. And this we

can be the result of the questionnaire, we can adjust or. Kind of convert by using quality adjusted life years, which would be somewhat of a conversion rate or that already exists and OK.

Interviewee 3 8:13

Yeah. Yeah. Yeah, yeah, no, this is a very good summary of what you're what you're saying. So this is this is the first approach. My guess would be that this would lead to a rather limited effect.

None. 2nd is of course trade. It's its trading is not just entertainment. It is things that people enjoy, but they also enjoy entertainment. It is expected that people change their behaviour at work after searched ratings. Right.

And then it depends a lot what sort of trading it is. If it's like, I don't know if I get a crash course in accountancy I can do accountancy like project in my work.

Which means it opens up new ways to contribute at work, which again has two elements to it, one that's fun. 2nd, it's makes you more productive and it makes you earn more money.

Armin Baghaie Heravie 9:52

No.

Interviewee 3 9:55

A very direct way to express that, as you might have heard of the education return on investment, there's claims that like I mean trading isn't free. Of course it takes time plus budget.

There's claims that like every hour of training you receive.

There is similar things on your own salary. Every euro your employer puts in trading you get back. I don't know, maybe five times in more salaries. I mean that that's facialized I think quite well in the in the document I sent you this morning. And so you, you can find literature estimates on those return on the investment.

Armin Baghaie Heravie 10:37

Yes.

Interviewee 3 10:37

And and they're they're quite positive. So the the claim is trading earns itself back. So that's that's the that's the second approach.

And within the indirect effects of the training, you can be narrower or larger. You can say, well, we're only looking at the profitability of the firm if even if we only take that benefit into accounts, training is profitable. You can say also say well, we also look at more indirect effects, your salary. We also look at more indirect effects. You paying taxes. We can, yeah, I don't know. You can you can go as far as you like like you more salary means you spend that in your neighbourhood shops. Is more GDP for your, for your neighbourhoods? There's there's all sorts of, yeah, indirect effects, but I I agree with you. Those are all quite indirect.

And the church approach is the one that we started with. So we take the. Like the observation that people throughout their career start earning more, they earn a bit more every year, often through formal promotions or just like, yeah, smaller steps in in their pay. And then the argument you make is if, like this would be the is my earnings curve. So I start earning like relatively little that every year I start earning a bit bit more. For me personally it had a little dip when I left Roland Berger.

But that's quite uncommon. So, but yeah, that's quite like on average you you earn a little bit more every year and then the argument we made for AB MRO is if a person working at AB MRO has this curve, if they would not work at AB and MRO. They would sort of. We would shift the curve curve one year to the right. So if in year one I would earn, I don't know, X year

two, I would earn $X + Y$ if I wouldn't work at AB and MRO. I would start earning X only after one year and $X + Y$ only after two years, and there you've seen this. I think it was lighter blue or lighter green in the graph. This this whole wave of money that you don't earn because you missed that initial year at ABN Amro, that's quite a lot. If you look at over all of your career that we expressed, not really as the value of trading because we didn't know how much of that could be attributed to the training their goals or just the on the job expertise. But there, we claims would be related to how much people. Yeah. Would benefit from that from that year of valuable working experience.

And then we would sort of reverse the logic that we discussed earlier. If you earn more, I mean your employee is not a charity, so they don't, they won't give that for you.

Just because it's typically because you also contribute more to the profitability of the firm. And there is also all sorts of of ratios. I would call it informally. I would call it sort of a salary return on investments every year of salary that the company pays to me, they get. I don't know, one or two or three euros in profitability in return. So we would use that to make it towards a profit metric and again a bit more indirect our text metrics. Interestingly, I might get the training at job A, then start working at a different employer, then that new employer gets a well trained person, so they also benefit from the training I got at my old employer. If you get what I mean, I'm sorry. There's all sorts of those effects and I think we describe them reasonably well in the document I shared with you, although there's always more detail behind it.

None. Yeah. So those are a couple of the things that you can say quite generically on training and developments. Of course, if you work for a specific organisation that offers a specific training, you can do like really scientific things like a difference in difference study like if I don't know if your employer offers a certain training to some employees and not to other employees, but you can, you can track what difference that makes. And I know when I was at Roland Barker.

They would probably do such things because we had this training programme, we all fall out a set of basic trainings and then a set of optional trainings. And I can well imagine that HR department had the information people that attend one of the trainings would be later on more successful.

Armin Baghaie Heravie 16:32

Yes. But this wouldn't be like also applicable for companies from different industries, right? This would be then it wouldn't be accurate because you don't know what training one does and what training the other does. And the effects would be harder to trace back just.

Interviewee 3 16:50

I I think so. I like is statistical language. Is that the difference between those industries from the start are probably larger than the differences induced by those trainings.

Armin Baghaie Heravie 17:01

Good.

Interviewee 3 17:04

Umm. Yeah. I think you could investigate this a bit, but my good feeling would be that this. As a relatively large margin of error, it would would be hard to interpret. Yeah, but you you, you, you you can check on on on whether that would statistically make sense. Yeah. It's it's an interesting thought.

Armin Baghaie Heravie 17:50

I mean, it kind of feels to me that it all all approaches. There are a lot of approaches to kind of measure this impact.

From what I see, other companies report when it comes to the impact of training. I think I have not seen yet a company that does not use the increase in salary for as as the dimension to measure the training effect and it I think it also. Makes sense because it's easily not. I mean it is monetized already in, in its nature there need isn't a need for a conversion which.

Interviewee 3 18:14

Yeah, exactly. Yeah. It's easier, yeah.

Armin Baghaie Heravie 18:21

Might reduce the accuracy as well.

Interviewee 3 18:25

Sure. Yeah.

Armin Baghaie Heravie 18:27

Is there a way if we stick to, if I mean, who's we? If if, if one sticks to the to the increase in salary as as the dimension. Is there a way to include variables to make it focus a bit more on the social side? Or is that?

Interviewee 3 18:51

It's it's an interesting question, Armin. My answer would be that one of the most important social indicators is salary. I mean it's it's very yeah, I say a bit blunt.

But I enjoy getting a salary and one of the large benefits of employments is that I get a salary and that I can afford to yeah, to pay my mortgage and raise my children.

So I I hear what you say. What I would I would actually include salary payments as an important social indicator. I would not disregard that. Payments of salaries are important to to employees. What you can do in addition to that. Um, there has been research and it's partly based on lottery winners that say. If you get the same amount of money with having a job or without having a job, most people report much higher well-being having a job. So if you would offer me, you keep your salary for for X years but you. You don't need to show up. You don't even. You cannot even show up at your work anymore. That typically drastically reduces your well-being, so people in addition to getting money out of a job, they also get. Sense of belonging, purpose, social contacts might be many of my colleagues are my friends, so in addition to earning money here, I also earn well-being because I feel I'm doing, yeah, valuable things while being at the office.

So what you can can do is in addition to. Earning a salary, you earn well-being at the office. Now the question is.

Armin Baghaie Heravie 20:59

How to include it?

Interviewee 3 20:59

It how to include it? The question is if I earn more money, probably because I have like a more responsible job. Would I also earn more well-being? And I don't think I can. I would strongly argue in favour of that.

Armin Baghaie Heravie 21:02

Hmm.

Interviewee 3 21:17

I would say the well-being cops with having a job, yes or no, it doesn't necessarily scale with the salary. Maybe a bit. I mean like the lowest paying jobs are typically not fun, but when you reach a certain level, I mean, I enjoy my job. I think my manager enjoys his job.

Interviewee 3 21:37

I don't think he enjoys his job much more than I do, and neither the people in my team. I mean, we all have a job at our intellectual capabilities and we enjoy debts. There is, I think, an effect from training and development, not necessarily to earning more salary but having a higher likelihood of keeping your job, not losing it. That effect you can, I think, translates to well-being. So if without trading, I don't know, I have a 90% likelihood to keep my job next year with trading it becomes 95%. Because I'm less likely to lose my job, I'm less likely to get fired, etcetera. I have a like a 5% of points like larger likelihoods to be in a job next year that that comes with well-being. And I mean you need to read a bit between the line, but in the sources I shared with you, you can find information on that. It's the the well-being of employment. But then the argument is proper training decreases your likelihood of losing a job.

Armin Baghaie Heravie 22:49

Yeah. And if we would look at it mathematically we, let's say we have the variable in the formula saying, OK, this and this training leads to this more salary.

Armin Baghaie Heravie 23:14

If we say we already have it now, we want to add, for instance, the the percentage of keeping the job.

Armin Baghaie Heravie 23:24

You. I mean technically sorry.

Interviewee 3 23:29

Doesn't that the book out? Your your question is doesn't that double count?

Armin Baghaie Heravie 23:35

No, it mathematically would. I just add the percentage to the variable of increase in salary. So it's like the two effects together that highlight the input.

Interviewee 3 23:48

I I would I would. Mathematically I was to impact of the training is financial impacts plus well-being impacts plus I don't know health impacts those are all impacts to the employee plus I don't know tax impacts plus, community impacts. Those are all impacts to the community, so it would be a sum, but I would give them like different names if you get what I mean.

Armin Baghaie Heravie 24:12

OK. OK. One thing that I it it goes into the direction of job security.

That would be 1 variable as well, another one that I've noticed reading literature and also looking at data points companies already disclosed is the. Training leading to promotions that would also in some way could be an indicator of.

Armin Baghaie Heravie 24:54

Social well-being in a way, right?

Interviewee 3 24:56

Well, I think. I think you you. I think the promotions and the the higher salaries are are very closely related.

Interviewee 3 25:07

Yeah, but if you have this as a separate indicator, the promotions and you would find that well, I mean quite obviously people with promotions have higher salaries. That's that's sort of the earlier effect. If you can show that people with promotions have higher well-being reported well-being, you can also include that. Possibly. Hey, Armin, I do need to leave in a bit. Is there a? If I, I find a question you would like to ask.

Armin Baghaie Heravie 25:31

OK, no problem. None. Maybe the way of if we have a value for the impact, how to best include it into the accounts of a financial statement?

Interviewee 3 25:49

Yeah, that's that's a very tricky 1 just. In principle, you would add it to the other benefits. There's one. Kind of a trick and that's this is so if I train you, you earn more skills supposedly. So on your like personal balance sheets, I would add something. And you would, right, so you have your personal hypothetical balance sheets. I train you, you get skills and next year you use those skills to, I don't know, get a promotion maybe so you would add something on the balance sheet by these trainings. The point is if you add something on the balance sheet. You should technically also depreciate those over time, because basically next year if you spent that year, you'd appreciate that stock.

But it's a whole different discussion I've I've had that discussion with my colleagues. That's technically if you increase the stock, you should also at some point in time discuss depreciation of this stock. I've never seen this in practise.

But but the the the shortest answer is yeah, you can add it to a a integrated profit loss statement or a integrated balance sheet.

Armin Baghaie Heravie 27:13

OK. OK, what I've seen is like literally just adjusted like calculating all the impacts together, having a value in the end, and then just either subtracting if it's and positive, just adding it to the profit I think.

Interviewee 3 27:30

Yeah, yeah. Negative. Yeah, yeah. Yeah, yeah, no. And then and then you get something like the things that we call the integrated profit or the true profit. Yeah, that's correct. Then you can you can just include this similar to, I don't know, carbon emissions or. Or I don't know product value. Whatever. Yeah, you can just just add this one.

Armin Baghaie Heravie 27:58

OK. OK. But I think that's my last question. I don't know how much in a hurry you are. I really want to say thank you again for taking your time. It was really helpful. And just one quick question for privacy reasons, is it OK if I mention your name.

Interviewee 3 28:14

Yeah.

(...)

4. Expert Interview with a Practitioner from Social Value International on the Application of Social Return on Investment (SROI) in Impact Measurement

(...)

Interviewee 4 4:46

OK, OK. That that sounds that sounds great and it it does sound quite relevant to the work that I do in my current position. I'm not too familiar with the organisation that you were working with and I must admit that my role. It's quite focused on one specific methodology, which is social return on investment. So unfortunately I can't give much of an opinion on the methodologies which other organisations have produced just because it doesn't really fit into my my current role.

Yeah.

Armin Baghaie Heravie 5:21

May I ask what exactly the the the methodology that you're using is or yeah.

Interviewee 4 5:27

So, well, just to introduce myself, my name's (...) and I work for social Value international as social value, technical manager and what we mean by social value. It's. It's quite in the context of the methodology called social return on investment now social return on investment is stakeholder informed, not stakeholder LED. It's stakeholder informed methodology to understand. Non financial impacts. So to understand changes in people's lives which don't usually have a market value, it's all about the changes in well-being, different aspects of well-being that people. Experience and the relative importance that people place on those outcomes, those different changes. So we have lots of different networks all over the world, but social value international is the. International body, which kind of brings them all together and tries to play a bit of a facilitator role as well as producing different standards and guidance. Ah OK, I don't know how familiar you are with social return on investment, but I can I can send some materials after this call which may be of interest.

Armin Baghaie Heravie 7:02

That would be perfect. And regarding the, I would just jump right into the questions now if that's OK with you. When I mean you, it's pretty similar, I would say looking at the.

Non financial outcomes and for training and skills development, what would you say is a good way to measure these non financial? Yeah, indicators or changes is it would you? Because what the VBA is doing, they're taking the again. The increase in salary which is financial. But there are also a lot of non financial effects also. Looking at social well-being, is there an approach that you can see that you're applying to your work that you can? That would make sense in this context as well for training and skills development.

Interviewee 4 8:15

Yes, O what I'll do is I'll copy paste a little diagram. Well, a list of stages into the the chat. You don't need to look through it now. Well, you mentioned there that one way to measure the impact of finding employment is just to look at the wages. It's very simplistic, very simplistic way. It's probably quite easy to do or it does have lots of limitations. Now an individual who finds a new job, they may have an increased wage, but it doesn't really tell us anything about

the changes in well-being. That that person may be experiencing, they may have increased stress, it may make it difficult for them to do the caring, caring responsibilities that they may have. It might be a job with unsociable hours, they might be on night shifts and it might have, let's say, health implications. All these kind of different changes that people experience, which aren't really reflected. In the wage. So the approach that we will take if we were to do an analysis of a training or employment programme is to 1st identify who the key stakeholders are. It will be a mistake just to just to assume that the employee themselves is the only person. That experienced a change. It might be friends, it might be family. People might have dependents, they might have children, for example, and also other stakeholders to consider. Might be, let's say. The local community or the managers in the job, now the only way to find this out is to talk to people again. It would be a mistake to just assume just to make assumptions. Ideally you'd you'd speak to the stakeholders and you try and find out who else should be considered within the scope of the analysis. And the second thing that you do is to map the different outcomes. So this involves a qualitative stage of research, essentially interviews. It might be one-on-one interviews. It might be broader focus groups, but this stage is to talk to stakeholders and rarely ask them. What is changing? What changes have you experienced if to train a programme people might experience increased confidence they might experience increased skills about certain things? They might also experience negative outcomes. They might become frustrated. Maybe the course is a very inconvenient time and it causes some stress in different ways. And again, it's it's really important that you speak to the stakeholders and not just. Assume on their behalf. Because with a lot of projects that might be unintended negatives, but that might also be unintended positives and these are great opportunities to change activities to make them more efficient.

So for example, if your stakeholders tell you that they're experiencing stress because maybe the course is an inconvenient time, then you can respond to that. You can respond to that. Maybe change the the length of the course, maybe. Give an option for to be online. I won't give too many more examples, but really it's just an opportunity to to change things to use resources more effectively. The next stage will be to evidence the outcomes and give them a value and what this means is. It's it's a valuation exercise. People will experience lots of different changes, but they won't necessarily value them all to the same extent. O if it's an example of a training and employability course.

Some of my experience, a change in confidence, but they might also meet loads of new friends, and I'll let you speak to people about how much they value those changes. You don't really know which of those are valued most highly. So if it turns out that stakeholders really find a lot of value in making those new friends, making those new connections, you might want to change the the course to make it more social. You might want to set up a a WhatsApp group so that people can. Make friends after after the end. Well, to maintain the friendships after the end of the course, and so on.

Armin Baghaie Heravie 13:27

And when, sorry to interrupt, you mentioned for instance confidence increasing or employability as well, I mean these are very subjective aspects. Is there a way to measure it? By not or also by asking just through a survey, but also a different approach to measuring it rather than using a survey.

Interviewee 4 14:00

So so there are a lot of different approaches to to understand things, evaluating these different subjective changes. Now there's always going to be an element of subjectivity.

As soon as you start talking to people about things like confidence, yeah, there's always going to be subjectivity involved. That's not necessarily a bad thing. It's just very important that the

analysis is transparent. So the analysis should say this is subjective. You shouldn't take this as a ultimate truth, and that if you use this data in your decisions, you should bear that in mind. But there are a lot of different ways to value these changes. You can just ask it in a survey, for example, how much would you be willing to pay for this particular change? Or if it's a negative change, you can ask people how much would you be willing to pay to avoid. This change there are also some quite interactive methods. For example there's one called the value game, so this will probably take more than half an hour to explain. But what it really does is it gets people in a room talking about different changes that they can experience and also about market prices for different products. And what you do essentially is you get the stakeholders to place all these different things.

So outcomes without financial value and products with a financial value, you can infer how much different outcomes can be valued at now. I understand that's really complicated. So what I'll do is I will. I'm just going to make a note now to send you some information on that.

Armin Baghaie Heravie 15:57

Thank you so much.

Interviewee 4 16:00

Actually, I might be able to very quickly show you. Some resources on this. Actually, no, no, sorry. I've not. I've not really got enough time. I'll try and follow up with with with some visual stuff. Just give me one second.

I've lost track of my train of force. Not what I'm talking about. Oh, right. Another method is well-being valuation, which is it's considered a bit more objective, but how it works is.

It uses large statistical data sets to try and calculate the changes that people experience, both the value of those changes and it works on self reported well-being. So for example, if somebody if somebody's well-being increases by one point on a scale, if their income increases by 1000 lbs, then if another change that they. Experience, for example, change in confidence results in the same change in self report and well-being. Then you can assume that the financial value will be similar or equivalent. OK. And I'll send some information on this.

Armin Baghaie Heravie 17:33

Is there you mention it being based on a large statistical data set. Is there one universal statistical data set to be that people are using for the well-being valuation or is it multiples and multiple? Data set.

Interviewee 4 17:50

It's multiple, it's multiple data sets, but in the UK generally it's based on the British Household Panel survey. I think it's called. You know, the British Panel household survey. I might have got those words in the wrong order, but if you Google it, it should come up. But it's used in different. Well, the method the methodology is used in different countries and they will have their own data sets. There's another data set in Australia. But yes, I think that document I sent, I'll just post a link in the chat, but I think this had a description of it and the description of a couple of the other. Methods that are out there. Yeah.

And there's an important part I'm going to read out. So there is no single best option in terms of evaluation technique, deciding which approach to you should be informed by factors including the audience and purpose of your analysis. And the likely consequences of the decision being taken now, what level of rigour to use this? This underpins the approach as a whole, not just evaluation side of things, but. You can do an analysis to a really, really high level of rigour. You can do statistically significant samples of stakeholders. You can interview thousands of people. You can use quite rigorous valuation. Techniques, but it's not. It's not always advisable.

It's not always possible to do this in every circumstance. Every analysis is used for a different intended audience, different intended purpose, and it's not always necessary to use that huge level of rigour, which can be quite expensive. If it's going to be used to inform a decision which is quite easily reversible, and it's not really that important, then you can get away with quite low levels of rigour. Just the important thing to do is make sure that you speak to stakeholders. And you don't overclaim that you're transparent and so on and so forth.

OK, so I understand that I've spoke quite a lot just on the one question. So have you got any follow up questions or things you'd like to clarify?

Armin Baghaie Heravie 20:37

You mentioned, I mean, I mean that one approach would be to ask the people, the stakeholders in case there was a positive impact. How much are you willing to pay for it and if there is a negative impact, how much are you willing to pay for it? To avoid it, I mean this is somewhat already of evaluation in monetary terms, is in in case there are, let's say training and skills development of employees leads to increased confidence. Increase or even decrease confidence if if that's the case, employability. What else was there? And and in the survey, one would ask how much would you pay for this? How much would you pay for this do do you just then add everything together to have the overall impact? Because I mean, technically you can list so many effects. That training and skills development can have and then if you ask the people about each and every effect and add them all together, it could be a very large number which might not be accurate to like represent the actual. Impact. Does that make sense or whatever this is? I mean is that would I? I can imagine that that's not a good approach or if it is a good approach, how would one? Like design it so it's still accurate, so it's not like a. Overvalued impact, let's say.

Interviewee 4 22:39

OK, So what you would do is you would check to see if all the outcomes identified are material. So by material we mean the outcomes which would influence a decision if they were included in an analysis. So the way you would check for materiality is you would first check to see if the outcome is relevant. So does it have anything to do with your activities and also you check to see. Whether it is significant. So there are lots of outcomes that people experience, but when you really get down into the data, they don't really have much of an impact at all. So we encourage people using our approach to set their own thresholds. And any outcome which is not significant which falls beneath that threshold, then you will discount it. You just wouldn't include it. The other thing is you need to check for double counting. If you were to include, let's say, well-being as an outcome and then confidence as an outcome, then that will be an example of double counting because confidence is an aspect of well-being. So at the qualitative stage where you were talking to stakeholders about what outcomes experience you need to put a lot of effort into making sure that those outcomes are well defined. So that is an outcome which is. Relevant. So it's relevant to your stakeholders and what they find important and relevant to the activity that you are conducting. You need to make sure that the outcome is significant. So is it important enough to be worth including and? Reaches those thresholds that you've set for yourself, and also is the outcome manageable. O what we mean by manageable is. Making sure that it relates to one asect of well-being and not multiple.

So well-being that's not that's not a very manageable outcome. And the reason it's not a manageable outcome is because your stakeholders, if they say we really value this highly, we experience a big change in well-being. It doesn't really tell you about which aspect.

What aspects are the most important for the most significant? Is it confidence? Is it knowing that you are now good? The interviews? Is it the fact that you're going to be more financially resilient? The word well-being encompasses all these things and many others, so you just need

to be really careful about which outcomes you include in the analysis and that'll be based on those things that I've just mentioned, led by what stakeholders are telling us. Now the other thing to mention is the principle of not over claiming. So there are four different things that we would need to calculate for each outcome. So the first is deadweight the deadweight percentage. So how much of this change would have happened anyway, even if the stakeholders had not been involved in this activity? The second is displacement, so some outcomes. They've just been moved elsewhere. So an example of this that this can be a tricky thing to get your head around, but let's say you've got a drug and alcohol rehabilitation programme. The staff on this project, they they experience a lot of stress. The stakeholders are really difficult because dealing with all these complex needs, so they say we're quite stressed, the outcome is increased stress. Now one thing to consider is that if stakeholders haven't been on this programme. They would very likely have went to another programme. They might have ended up involved in the criminal Justice Service, which means that other people, maybe the police or maybe healthcare workers, they would experience the same outcome they would experience. The same increase in stress, so rarely our projects, it's just moving the outcome from one group of people to another. So the stress which is experienced by the people on our programme running the drug rehabilitation programme. It would instead just be experienced by healthcare workers or lease. And I can I can send more information on all these afterwards as well. We'd also need to consider the attribution percentage, so this is who else can contributed to the change? So let's say it's a training course. At the end of it, our stakeholders say we experienced a huge increase in our confidence to to apply for jobs and you think that's great. That's really good. But maybe it's down to another project. Maybe those stakeholders are on two projects, maybe they're on free projects, maybe some of them have engaged with, I don't know, a mentor. Maybe they've contacted the mentor. So a lot of that change, it's actually not down to our activities. It's down to other people's activities. The other thing to consider is drop off the drop off percentage, so if that person gets really good interview skills two years down the line three years down the line, those skills are probably drop off. Yeah. So it will be a mistake for us to assume that any, any changes that they experience will last indefinitely. O yeah, so there's deadweight displacement attribution and dropoff, and all of these things need to be considered in order to not overclaim. I think one of the other questions that you had in the interview guide was about how long outcomes last.

Armin Baghaie Heravie 29:15

Yes.

Interviewee 4 29:15

But was that one of them? Oh yeah.

Armin Baghaie Heravie 29:17

Um. Exactly like I wrote, visible changes might happen at different stages as in like a timeline, and I mean training can have an impact right after it has been like conducted, but it can also have an impact. 10 years from now, this is an exaggeration, but how would you? I mean account for that as well. When when do you say OK we this is the line everything after. We don't count now. Into the impact calculation or?

Interviewee 4 30:00

OK, I think there's two aspects of this question. The 1st is the duration of the outcome. So how long does it last? And the 2nd is when does it start. So with some changes they can start as soon as the activity starts. So to use the the training course example, again making new friends, that'll probably happen on day one. Or becoming more more employable that robably only happens

at the very end. For example, if they receive a qualification. So the way that you would account for that is. Don't really know how to explain this, but we have a spreadsheet. We encourage people to use the spreadsheet called an impact map, and I can. Oh no, I can't share. Could you make me a cohost? And I can. I can share.

Armin Baghaie Heravie 30:56

Yeah. Uh, why doesn't it give me the option? Yeah. Is it now possible?

Interviewee 4 31:26

Yes it is. So I don't know whether I've sent you this spreadsheet before, or whether you've seen this now.

Armin Baghaie Heravie 31:35

I have not seen it now.

Interviewee 4 31:37

It's blank at the moment, but we encourage all people who use social return on investment to do an analysis to use this spreadsheet because it guides you through each of the steps. So who are the stakeholders? O we can say. Learners, learners on our course, we can say that. Just 10 people. We can probably skip these for the time being, so the outcomes 2 outcomes, increased friendship group and achieving a qualification. Maybe not the best outcomes, but just for illustrative purposes. Yeah. Let's say that everybody on the course experiences both outcomes. Now there's two things to consider in terms of the duration of outcomes. So the first is how long does the outcome last for. So the default is set to one. We can go all the way up to six years. So I'm just putting random numbers in here, so the first outcome was increased friendship group. O for this person. The outcome would start during the period of activity and the second one, which is achieving a qualification with only a care afterwards, because only after they graduate with the receiver in this this example. So what that does is actually changes the calculation. So all these numbers are blank at the moment because we haven't put anything in there. So let's say 100 lbs. And you'll see that depending on. Let's make both these outcomes the same length O. Each outcome lasts for three years. One start in the period activity one start afterwards. And you'll see that all it's done is it shifted the same amount of value along the years.

Armin Baghaie Heravie 33:53

Interesting.

Interviewee 4 33:55

OK, so I don't really know about ways to explain that so I do apologise.

Armin Baghaie Heravie 34:00

But no, no, I I do get the at least the big picture of it. Umm, but is this is this umm publicly available at on your website? OK.

Interviewee 4 34:05

OK. Yeah, it's, yeah. The freely available spreadsheet. And again, if you if you put all these percentages in. You'll see that here. Changes the. Changes the values.

Interviewee 4 34:25

Umm. Right, OK. I'll stop showing me screen now. Maybe that answered the question, maybe not.

Armin Baghaie Heravie 34:36

No, it did, but I I I don't know how much time you still have. You mentioned that you also have to do something afterwards, I believe.

Interviewee 4 34:50

I'm sorry I can stay on for a bit longer.

Armin Baghaie Heravie 34:53

OK, maybe because you mentioned the fact that social well-being incorporates a lot of aspects and it's it's totally understandable. So if one would take social well-being as the.

Impact dimension to measure the impact. So let's say training is done, we choose to measure the impact of the training through social well-being and then. One would ask.

The the people who have done it, this is kind of me being if I understood it correctly or not, we would ask the people, OK, confidence, how much did it increase and decrease and employability etcetera. And the thresholds you mentioned, these are. The thresholds the people themselves will say, OK, this did have an impact above the threshold. So it's material for myself. So this is for every person. Is that correct? The every person judges it by themselves.

Interviewee 4 36:20

So there's two parts to this, maybe more than two parts. The 1st is to understand what outcomes to measure. You first have to talk to people and say what changed for you. So that's how you'd identify the outcomes. The second thing that you do is you choose the outcomes you've identified and you put them in a quantitative survey. And you'd send that survey out to as many stakeholders as possible. It might not be possible to do it for the whole stakeholder group, but you need to collect enough information for you to know that you can extrapolate that data for the whole stakeholder group. O each stakeholder who fills out that questionnaire, they would answer questions on how much do you value the outcome. How much of this do you think would have happened anyway? How much is down to other projects or other influences in your life, and how long do you think this outcome will last into the future? So those thresholds that I mentioned that is not the stakeholders themselves, that is the that's the analyst, that's the person writing the report. And we don't give a set threshold for people to use because every, every, every analysis is different because it's quite it's quite flexible. We don't tell people which outcomes to use. We don't tell people which valuations to use. It's very much stakeholder lead and that means that we can't really impose any thresholds upon the author upon the the analyst that we insist that they use. So we encourage them to do 2 things. The 1st is to use their professional judgement and the 2nd is to make sure that in their report they're very clear. They're very clear about which thresholds they've set. And why they've set them? And this may also include pointing towards secondary research which which backs us up to essentially say this is a reasonable threshold to set. So it's quite a flexible approach. There's a lot of different ways to go about it, which can make things a little bit confusing for people unfortunately, but it doesn't mean that it's it can be used in lots of different contexts. One of the links that I sent you was a link to a report database and that's got I'll OST it in the chat now actually as well. Yeah. As you go through these examples, you'll see that the reports look very very different. That's partly a reflection of the fact that they're on very different rojects, but it's also Causeway. Each author, each analyst. They'll approach things in a slightly different way, different different authors quite often that they'll have their own favourite valuation methodologies that they'll use. Another thing that happens is when people do their first report, they'll tend to adapt. The materials that they produced, for example interview guides, questionnaires, valuation tools, they'll

tend to use those in their future analysis. O it's supposedly ointy. If it's that things end up looking very different because it's a flexible approach.
OK.

(...)

5. Expert Interview with a Sustainability Practitioner on the Practical Application of Impact Measurement in Corporate Strategy and Reporting

Armin Baghaie Heravie

Okay. I think it's best if I quickly introduce myself and say what I'm actually doing with my thesis, and then I would ask you to introduce yourself, if that's okay with you. Yeah, that's good. Perfect. So I am pretty much doing my Master Thesis in the field of impact accounting, specifically Kind of working with the VBA or trying to help them improve a value factor that they have already developed, and they are arguing that this value factor is... too much focused on the economic side of impact and social impact, because it captures the impact through increased salary, which is caused by training in a way. And they're arguing that the increased salary has spillover effect. as in higher purchasing power, tax payments, which will benefit society in a way and the individual as well. So this is pretty much what I'm doing, trying to improve it or try to do research on it. And yeah, that's why I'm asking also experts in the field to help me with it, to give me new perspectives on the topic. And you were kind enough to respond. And that's why we are on this phone call, I guess. Um, yeah, but yeah, definitely, um, but yeah, if you, if you don't mind um introducing yourself, that would be great as well.

Interviewee 5

Yeah, so my name is here. I think most relevant for this interview has been my work at ADM role. I've worked between 2021 and now 2020 and 2025, yes. So for five years or a bit more, six years, I think. And I've worked on several topics that are related to impact accounting. My former manager in one of those jobs, he was really a specialist in impact accounting. I have to say, I think the knowledge of that was mostly outside of the bank first, because we hired another company to help us with that. But throughout the years, we did most of the work or we transferred it to internally. So I did see that shift happen. I worked in sustainability roles, so I started in finance, group finance, and moved to group sustainability. So from more reporting the data side of sustainability, so non-financial data, I moved to strategy and impact driven steering, but also the double materiality assessments, all group level. And in the end, I was head of a department focused on maternal affairs and stakeholder management. So I was thinking that role, the link to impact was most, yeah, was most abstract. So in previous roles, I really had experience with is how did we as a bank measure impacts? But I have to say it's all on a very high level. So we use it for company steering. So not even like how do we steer our clients, but more how do we steer our portfolios, but really the overarching part of that. But so I can share about that, of course, but I hope you can maybe translate that to the more individual I think approach. Yeah, I think that's about it. Yeah, so and maybe so we did have help from the outside. So for you, it might also be useful to contact institutions, companies, organisations that really work with this kind of thing.

Armin Baghaie

That sounds awesome. When it when you said that you worked for ABN. And they, you did kind of like the sustainability assessment, if I understood it correctly, more as a strategic way for the company to align the company in a more sustainable way?

Interviewee 5

Yeah, yeah, so one of the programmes or the projects was, yeah, so if it's it stems from reporting, so it's about CSRD and CSRD requires you as a listed company to yeah to to take into account if they call it double materiality and it's actually about. Well, about impact, because it's not about what effect does the outside world have on us as a bank, but also the other way around. So what effect do we as a bank have on the outside world? And I think it's from a risk angle, but also opportunity angle. And that assessment, so it's called the double materiality assessment, DMA. that was also start or like one of the starting points for the whole strategy process for the entire bank. And that was how our impact assessment was really translated into, well, the long-term strategy, but also into much more concrete KPIs, but also target setting and more operational side of it.

Armin Baghaie

So not just making plans, but also measuring it and really steering on it. Was it also, did it also include in a way social aspects? I mean, every company pretty much has employees and the company has impacts on the employees and also the other way around. But how did you guys... As a starting point, maybe try to assess the impact on the human capital of the company.

Interviewee 5

Yeah, so it certainly was taken into account. So I think, yeah, maybe it was in 1/3 of it. So there were two sides of this. I think the internal side, so employee side of the bank. So what do we do for our employees? How can they develop themselves? What you already said, like training programs, measuring like equal pay, these kind of indicators. And then the other side was more the external side. So our clients, our customers, but also in supply chain of our clients. So how are human rights treated in those supply chains? And does that align with the policy of the bank?

Armin Baghaie

how? Okay, this might be a very general question, but maybe what dimension did you guys use to measure the impact of that training?

Interviewee 5

Yeah, that's interesting. I think by far the most easiest way is just how many people did attend the training. So for some trainings, it was mandatory. So then you would really have to, yeah, you could really stay on that quite easily. And it was more like chasing people to do the training. Other trainings were voluntary. So then I think the level of attendance was really insightful. or more insightful, I think. And also within those trainings, they were quite fancy, I think. So there was, it was quite interactive. There were a lot of, yeah, ways to give input in those trainings. So I think that was also quite interesting to get, yeah, to get insights from that. So for example, how do people rate the training, but also what kind of answer did they fill in in the training in the end? So what did they learn? Did they use it in network? And I think there was also a survey like sent out after the training was done. I think this was all within HR. Maybe that's all for you also interesting to speak to people within those. I areas. I'm not sure like how to break down what those KPIs was. I just know the KPIs on like word level and those were more like how many people did follow the training and what else. And yeah, so for your training, I think how many people followed it at word level. And when we did HR much, I think what there was much more details for us.

Armin Baghaie

And when it, I mean, you mentioned the participation rate. I would assume that the more people participate, the bigger the overall impact would be. Yes. And what outcomes would it have, like, for a person to attend training in your opinion? Would it be, I don't want to suggest anything, maybe it's better. I mean, there are so many types of trainings out there. And I think it's also very industry specific, job specific, country specific. I don't want to specify. It maybe not for this interview as well, but like training in general, what outcome, what, how would it impact or help a person, the society in a social way?

Interviewee 5

I think it depends on the type of training. So we have a lot of compliance trainings. I had those at Deloitte as well. And I, I, to be honest, I think I don't think people take them very seriously. So I think the more mandatory compliance-based trainings, yeah, they have, of course, they have a possible outcome because people, they, they, they learn like the bare minimum. But I think there's very little engagement and it's really seen as something people have to do. Whereas if you can choose your own training and it's more centred around personal development, that has much more impact, of course.

Armin Baghaie

And when it comes to a methodology of measuring this impact, what I've seen in my research is that there are obviously specific formulas that try to be a regression type of formula to kind of represent or reflect the impact. But there are also approaches of comparing it. For instance, the social return on investment, which looks at, okay, what did we avoid? And by avoiding, how much money did we save? Or if something is good, for instance, an impact, how much are we willing to pay for it? In your opinion, what approach, it doesn't have to be these two, maybe you know of a third one, or who is best to reflect like a social outcome?

Interviewee 5

So is it about development of the employee? Like what is the social progress that you want to track?

Armin Baghaie

Yes, exactly. The social progress outcome impact caused by employee training and skills development, which Companies would finance and provide to their employees.

Interviewee 5

Okay, because that, yeah, I still think there are so many angles because people can be really happy about scrolling and training that might not be that beneficial to them, you know what I mean? Yes. Yeah, I mean, if you're just looking at employee happiness and like are they, do they feel they are rewarded and do they feel the training helped them in their career? Yeah, I would always look at just do a survey and see how positive they are with your results. I think measuring the impact it has on the efficiency or the knowledge level or like. From more a company perspective, that's much more difficult.

Armin Baghaie

Okay, and if they... If. if employees would, after a training and skills development program, would fill out such a survey, which is, I think, the case in a lot of companies as well. Is there a way if to? kind of convert the scale or the, let's say it's a scale from 1 to 10, is there a way to convert it into a hard figure for a group of people, for a whole company? Is there an approach you would, you know of?

Interviewee 5

To be honest, I don't know. I do know that when I follow trainings myself, I had to fill in a lot of the survey results and also everything that we did was really, you also had to subscribe via this platform internally. So even if you did like an outside training at like a well-known institute, you would still have to fill in this the whole, yeah, to apply for the training in like this AVNMRO platform. And I think they did it because they could, yeah, get a lot of information out of that, like what kind of training it was, but also how you felt about it, of course. So not sure how they translated all that input to more quantifiable numbers, but I do know that they collected A lot. So I think, actually, I think HR departments know more. I mean, at our in our bank, HR was really the department responsible, so OK.

Armin Baghaie

And do you remember when filling out the surveys, what dimensions were asked? Was it more on the well-being side? Was it, did it boost your confidence? Or was it more kind of for the company to see whether It increased, it is going to increase the productivity for the company.

Interviewee 5

Yeah, I think so. So it starts this way that in order to follow training, you would always have to. Yeah, like confidence or someone at least or fill in that how it relates to your work, your daily work. So I think that was one of the most relevant questions afterwards, like how did this training help you in your daily work? Describe how or to what extent? So I think there was always more like a quantitative component in explaining, but also more quantitative in giving. giving us a number. So I think that is really an important one. I think there was also a question about, does it like, was it worth the cost of following the training? So some are really expensive because they are like, well, very well-known institutes providing them, but it could also be that. There were, yeah, qualitative services that were not maybe that distinguishing or that good, so then you could be honest about, well, was it really necessary to follow it there, or did you also do you also have experience with other trainings that were similar that were actually also really good, so I think the pricing was also in there. Yeah, and I think so, and yeah, of course, like next to daily work, there's also the component of your career, like development, personal development. I think that was also another way to account for following a training. So it would have to, yeah, it would have to contribute to either your personal growth and then there would always have to be like a good reason for that, like why is that personal growth relevant at this time? And and otherwise your daily work. And I think in terms of budgets for daily work, there was always budgets available, but for personal growth, you had a personal budget and if it really exceeded that by a lot, then you would have to bring motivation.

Armin Baghaie

Interesting. Andréa. When it, let's say, let's skip one or two steps. When someone or a company has valued an impact or assess their sustainability, maybe even, again, AB and AMRO, I believe. Maybe there, there was also an approach you guys used. I don't know, but to incorporate this. this these metrics because a company is not going to just do it for its own. It's probably also interested in showing the public what they have achieved. Is there did you guys use a method or an approach to integrate it more into like the actual financial statement rather than having it as a separate, just a sustainability report.

Interviewee 5

Yeah, it really is. I think we were one of the first banks to do so even. Yeah, so you can just, I think, message just to Google it. So AVNMRO, I think it's called the impact report, but I think in later years it's just the annual integrated report, and then within the annual integrated report

of the bank, you can look for. impact reporting or yeah, I don't know the exact wording. And those are like financial statements, but then ties to impacts factors. So that's, yeah, I think that will really give you a lot of insight.

Armin Baghaie

Interesting. I think I even found it quickly. Pretty nice, yeah. But... Yeah. Would you say that they are... I mean, it's sustainability and especially measuring it is somewhat of a new topic to companies and it's not a lot of companies that are I mean, they are struggling with it, I believe. What challenges are in the way for companies to adopt more like non-financial reporting? Are there any challenges that they face? with this topic.

Interviewee 5

You mean from a financial services perspective or just general?

Armin Baghaie

Just general as well. I mean, it can do both.

Interviewee 5

Yeah, generally, I think it costs a lot of time and money, to be honest, so... The biggest factor for us, and I think a lot of other banks, insist that it is mandatory. I think not the way we did it. I mean, that was way more than mandatory, but it started with regulation demanding that. So yeah, the biggest obstacles is not having any regulatory pressure, I think, or debt decreasing. OK, and also that it costs time and money, because, yeah, it's really it's very complex to. to measure these kind of, well, non-financial things, to measure, yeah, to measure more abstract stuff. And when I started in group finance, I think that it was quite new, it was in 2020. So we were doing the CSRD for the first time. And then I also noticed that a lot of people within the finance organisation didn't know anything about. non-financial data. So because it wasn't their job, it had always been their job to just collect data and make architecture in terms of the IT systems for financial data, but non-financial data. So it really takes a lot of time and effort to kind of re-educate your your workforce, and you have to hire things from new people for that, you have to have people learn new skills. So yeah, that is a big obstacle, I think, especially for smaller companies. That's also what you see, I think, a lot of companies outsourcing it, because they just, it's very costly to do it all yourself. Okay, so it's more of like a capacity thing.