Social Impact Valuation
A social impact model of employment and Nestlé case study

Credits @ Dan Long 2008

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Background

Companies, through their activities, can have both positive and negative impacts upon society and the environment. While attempts have been made to measure such impacts (e.g. greenhouse gas and accident rates), they aren't currently available in financial units and can therefore not be captured in financial reporting standards nor management accounting. Some companies have however now started expressing their impacts in monetary values, and some investors and insurance companies are beginning to use similar approaches to evaluate risks.

The first work on impact valuation (the measurement and monetary valuation of impacts) began with the environment. 2016 saw the launch of the Natural Capital Protocol[1] that provides a framework to guide companies on the valuation and reporting of impacts upon the environment.

2016 also saw the launch of an initiative to create a "Social Capital Protocol"[2]. To date this area is less well developed, with only a few companies having attempted a social impact valuation, and having restricted their analyses largely to health and safety, skills and employment. It is clear that a more comprehensive approach to social capital valuation will be required for it to become relevant. Methodologies will need to be expanded to cover employment conditions and labour standards such as working time, accommodation & basic service needs, living wage, child labour and forced labour. There are ethical concerns related to assigning a monetary value to certain of these impacts – some are, after all, basic human rights. Nevertheless, the concept of assigning monetary values is applied in some of these topics by insurance companies, international organizations and government agencies, and we are convinced that such approaches will helping to drive engagement on the human rights agenda and add value to decision making within companies.

The Sustainable Development Goals set out a series of societal goals that companies can contribute to – in short we can summarise them as "to live a long life in good health"[3]. This is an important starting point as common metrics to measure human health exist: Disability Adjusted Life Years (DALYs) and Quality Adjusted Life Years (QALYs). One QALY equates to one year in perfect health, whilst DALY is a measure of years lost due to ill-health, disability or early death.

QALYs and DALYs are well understood units used by governments and UN organisations to guide policy decisions around health. The World Health Organization (WHO) has for example published an extensive study - "Global Burden of Diseases" - of all sources of DALY per country linked to causes. In corporate impact valuation there is an emerging consensus that DALYs are the most appropriate measure for health & safety, ie the impact of accidents and health related work issues. The use of such metrics is however, much less common for assessing other societal issues such as child labour or living wages, but we believe that DALYs or QALYs can provide meaningful insights to these issues.

Using human health (expressed in DALYs or QALYs) to evaluate social performance is an improvement compared to measuring employment and job creation in terms of added economic activity, valued in economic terms. Whilst the latter is easy and simple to do we believe that it is too simplistic, and potentially does not reflect either impacts or the basic premise of human rights. For example, a purely economic approach counts all employment as a positive. We believe that this is not the case - clearly workers who are working in slave-like conditions (or living off the minimum wage) are not able to enjoy a quality life.

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[1] http://naturalcapitalcoalition.org/protocol/
[2] WBCSD (2016) The Social Capital Protocol – Illustrated with examples on the subjects of skills, employment and safety (draft May 6th 2016)
[3] See the Sustainable Development Goals (and their indicators), especially SDGs 1,2,3,4&5

Our study objective and scope

Nestlé and Valuing Nature have investigated how human health (measured in DALY/QALYs) can be used to measure social issues, with the ambition of including all the relevant social issues and human rights in Nestlé's social capital impact assessment.

Figure 1 shows the list of the salient human rights issues identified by Nestlé and how they were matched to direct and indirect impact pathways in our pilot study. Not all of them were explored at this stage of the project, although as we explain later, there is the potential to cover the majority of them within this framework and method[4].

Direct pathways imply that the specific human rights topic has a direct impact on the health of people (e.g., safety and health, access to water and sanitation, etc.). The indirect pathways do not allow us to draw a direct link with the health of people, only to indirectly link through a more complex cause effect chain (e.g., forced labour, child labour, working time, living wage, etc.). Some human rights issues might influence the health of people through both pathways.
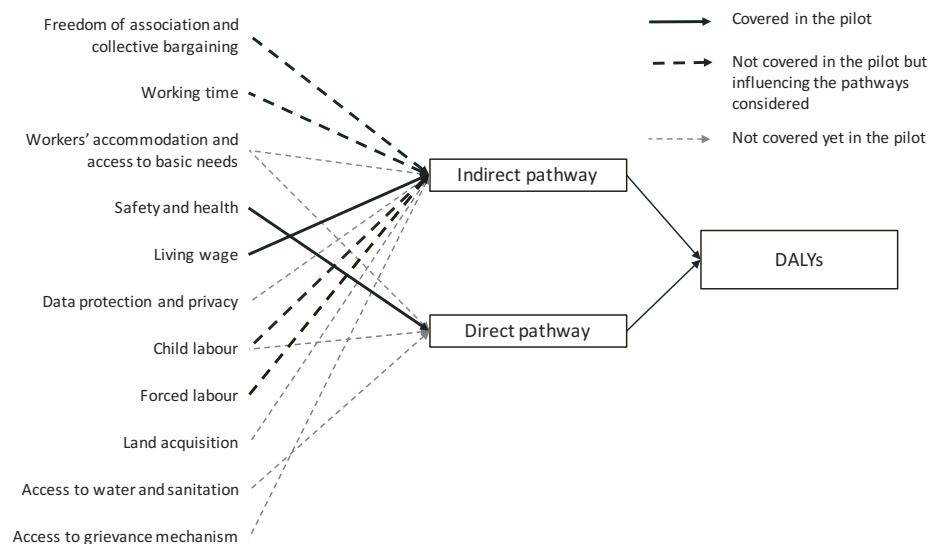

Figure 1 - Salient human rights identified by Nestlé matched with pathway type (direct or indirect) and their coverage in our pilot.

This paper details the approach taken for the **living wages**[5] and more broadly for the theme of **employment**, which is one of the key impact of businesses. We detail in this paper the process, and provide some findings and observations for discussion.

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[4] Note that in addition to the human rights listed a full assessment would also include skills. We did not look at skills in this study.
[5] Note that in this paper we use the terms living wage and living income interchangeably

Approach to value employment and wages impact

We assessed the relationship between the health (life quality and expectancy) of groups of employees and their work environment and conditions (in particular, their income), which is part of the social determinants of health. The latter field has been widely studied (WHO 2008 & 2014)[6] and used in public policy. This work has demonstrated a correlation between a population's health status and social inequalities, including working conditions and income. It showed among others, that for most developed and developing countries, social impact is more correlated to inequalities in incomes within a country[7], rather than to their absolute national income level.

Based on existing statistics linking inequalities of income to inequities of health (Eurostat 2010[8] and 2013), we developed a set of characterization factors[9] to value social impact related to employment. The working conditions include income, benefits and working environment which are linked to psychological and material conditions. The working environment (management styles, non-financial rewards & working conditions) are important determinants, sometimes even more than income, in determining social impact. The use of income inequalities as a general proxy to employment conditions, should not hide the fact that any responses to the findings might also focus on the working environment as well as income.

Note on terminology:
Inequalities: uneven distribution
Inequities: lack of fairness

The characterization factors are defined for deciles[10] of income inequality (see figure 2). These are expressed in DALY per year or per income unit (e.g., USD). These factors are then used with the total volume of incomes per income levels (arrived at by multiplying the number of employees by their respective incomes).
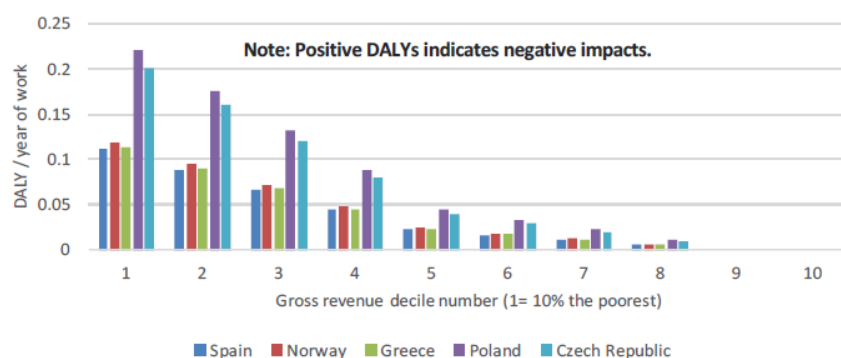

Figure 2 - *Characterization factors per income decile in DALY/year of work per income decile for a selection of countries.*

The baseline definition is important and leads to the translation of the same results into either positive or negative societal impacts. The characterization factors represented in figure 2 use a baseline assuming that humans should live to their **full potential** (equivalent to having incomes related to the 9th and 10th deciles). This however leads to only negative impacts as we do not live to our full potential on average ie we experience income inequalities. We believe that this is an unrealistic baseline - there is no societal expectation that all employees earn a salary that is at the current 9th and 10th decile level.

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[6] WHO (2008) Closing the gap in a generation – Health equity through action on the social determinants of health. Commission on Social Determinants of Health. Final Report.
WHO (2014) Review of social determinants and the health divide in the WHO European Region: final report. UCL Institute of Health Equity
[7] In the US for instance, the life expectancy gap is nearly 15 years between the lowest and highest education levels (correlated to income levels too). While the life expectancy gap between countries having a GNI/capita of 5'800 (e.g., Cuba) vs 55'000 (e.g., USA) can be inexistent.
[8] Corsini (2010) Highly educated men and women likely to live longer – Life expectancy by educational attainment. Eurostat. Statistics in focus
[9] A characterization factor is, in this context, a factor that is used to translate an information (e.g., income data) into a social impact.
[10] A decile is any of the nine values that divide the sorted data (e.g., population) into ten equal parts, so that each part represents 1/10 of the sample or population

In considering wages we also see an issue with assuming that any wage is positive, which would be the case if we use of a minimum income baseline. States mandate a minimum wage[11], though for companies to employ people at this rate still places a burden upon society in terms of income support or increased health care costs, which should be valued as a negative impact at the company level[12]. This has led to the emergence of living wages[13] which may set a more realistic baseline from which to measure impact. To summarize, the two alternative baselines that can be defined are:

- **Living wage baseline**: this baseline assumes that there is a threshold (the living wage) below which a negative impact occurs and above which a positive one occurs. This baseline seems the most aligned with current trends in public and businesses social policies. In the absence of actual data on living wage we used median wage (ie roughly equivalent to the 5th income decile) assuming that in the country for the study that these were likely to be similar.
- **Minimum income baseline**: this baseline assumes that all income provided above the minimum income in a country brings a positive impact. It is close to the current vision of economic impact assessment studies. However we are not in favor of this baseline, for the reasons mentioned above.

In the case study presented here, the living wage baseline was selected to present the social impact results.

The Nestlé case study
Using the concept outlined above we constructed a **social impact model** (the "model") to investigate a Nestlé business and looked at the value chain from vegetable growing (farmers), intermediate processing (supplier 1) and finally the Nestlé factory (Nestlé). The study timeframe is one year of production.

Figure 3 shows the number of full time equivalent (FTE) employees per income decile (left graph), the economic impact (middle graph), and the social impact as calculated by the model (right graph). The social impact results have been translated into Euros using the DALY concept. A positive value indicates a negative social impact.

There are various points of note: high incomes contribute relatively more to the economic impact than lower income deciles, aligning well with the number of jobs in each decile; in contrast, the social impact model using DALYs demonstrates that the highest incomes don't show any positive impact.

Wages lower than the living/median threshold have a relatively higher negative impact. Low income workers at the farms have typically a higher negative social impact, while Nestlé factory's employees' income are high enough above the median income to show a positive social impact.

The social impact results contrast clearly with the economic impact results, even when different baselines are selected. Figure 4 presents the social impact results according to the three baselines, knowing that the median income was used as a proxy for the living wage/income in our case study (middle graph).

The baseline closest to the one implicit in the economic impact assessment is the minimum income baseline. In this case the highest positive impact is achieved for the intermediate income and not the highest ones.

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[11] https://www.theguardian.com/uk-news/2016/apr/01/the-national-living-wage-and-what-it-means
12 https://www.theguardian.com/sustainable-business/2015/apr/20/taxpayers-spend-11bn-to-top-up-low-wages-paid-by-uk-companies
[13] A living wage is the minimum income necessary for a worker to meet their basic needs (Wikipedia).
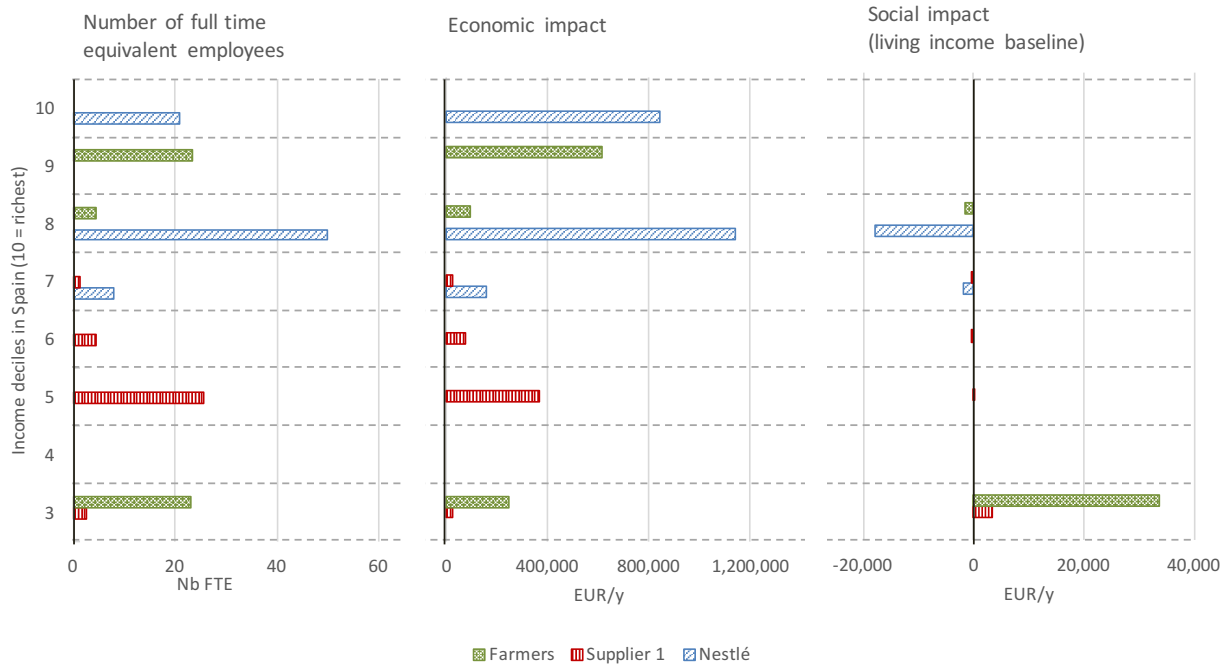
Figure 3 - Illustration of full time equivalent employees, economic impact and social impact per income deciles. Results are limited to the deciles 3rd to 10th. Note that social impact positive values represent a negative impact.
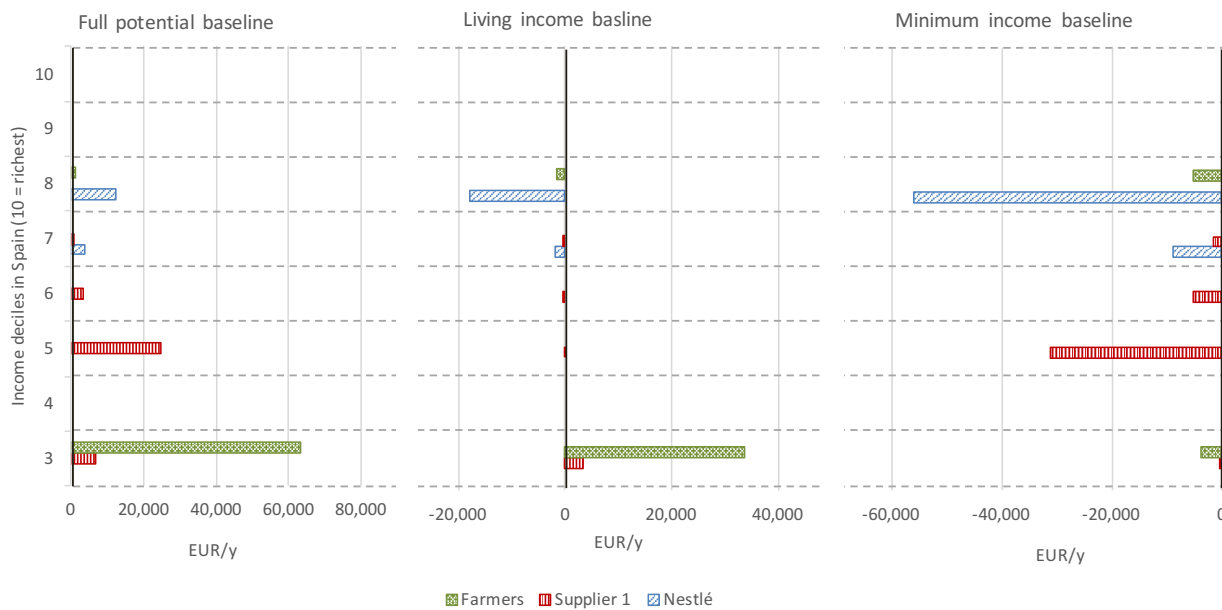

Figure 4 - Social impact results expressed using the three different baselines. Results are limited to the 3rd to 10th deciles

In terms of using the insights provided to determine interventions, the model has highlighted that relatively modest investments in the wages of workers can have the biggest positive social impact.

Discussion

This model highlights a question around what is the correct baseline to choose against which impacts should be measured and valued. Not all employment is entirely positive for the individual and society. We propose that the concept of living wage could be the baseline against which to judge whether a company is generating a positive or negative impact upon society. This impact will vary depending on the country and the respective social context. The social impact model we have created leads to higher negative impacts for countries with higher social inequalities, in particular linked to working conditions. The statistics used account partly for contributing factors such as social security and the education system.

As we have argued in an earlier report on impact valuation[14], we believe that a full picture on the impact of a company can be presented through not just an "absolute" baseline, but in comparison to business as usual (e.g. using current sectors averages) and over time. If data is available on company remuneration policy versus that from alternative employment in a region, the model can be used to compare the impact of the company versus others within the same region[15]. Comparisons over time are straightforward.

The model has proven to be able to value the impact of remuneration, related to health and life potential, beyond simple economic impact metrics. We believe that it can also be used to value other employment conditions and labour standards such as working time, accommodation & basic service needs, child labour and forced labour. To do this, the direct and indirect pathways presented earlier can be used, ie:

- Direct pathways: worker's accommodation and access to basic needs, safety and health, child labour, access to water and sanitation.
- Indirect pathways: all human rights apart from safety and health which is focused on the direct pathway. The indirect pathway can be assessed through studies of the social determinant of health, as presented in this white paper, combined with other impact pathways.

How would this work? Failure to respect the following human rights affects people capacity to enjoy good working conditions, to obtain a living wage and to get full access to life opportunities: Freedom of association and collective bargaining; working time; living wage; forced labour; and land tenure. Those factors can be measured in equivalent income gap which can be linked to the social impact model.

As an example, in the case of child labour, health and development issues (the direct pathway) are relevant, as is the indirect pathway: child labour reduces the future capacity of the child to obtain a living income by reducing his or her education level. Again, the income gap can be linked to the income inequalities model (presented in this white paper).

To conclude, we believe that the model presented in this white paper can comprehensively measure social outcomes and impacts. It goes beyond simple economic measures that can be misleading or lack the capacity to inform about the real underlying issues. It also therefore provides a better alignment of social impact measurement with the Sustainable Development Goals than a pure economic modelling approach.

Much more work is needed in this area and this white paper is only one step in this direction. By sharing this white paper, we hope to support the community of companies, academics, NGOs and consultants aiming to progress in this field, and the future development of the Social Capital Protocol.

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[14] http://www.valuingnature.ch/resources/galeries/20/MeasuringValue_Public_March2015c.pdf
[15] This aspect has been developed in our case study but not shown here