Oiconomy Pricing - Real price of pepper from Indonesia

Company	Verstegen Spices & Sauces B.V.
Location	Rotterdam, The Netherlands
Product	1 jar of ground white pepper
Currency	Euro
Oiconomy Assessment	Oiconomy Sustainability Assessment Tool v1.08
Timeframe	Data from 2020
Included impact categories	Pollution & Climate, Depletion of scare resources, Land use, Biodiversity & land degradation, Waste, Labour, Various social responsibilities, Economic responsibility

Case description

Verstegen is a spices & herbs manufacturer from the Netherlands. Verstegen sells white pepper sourced from Indonesia, where the pepper is cultivated by smallholders and sold to the pepper exporter. Verstegen has been initiating various projects to improve the sustainability of the pepper supply chain but has not yet quantified the externalities associated with white pepper.

Scope of assessment

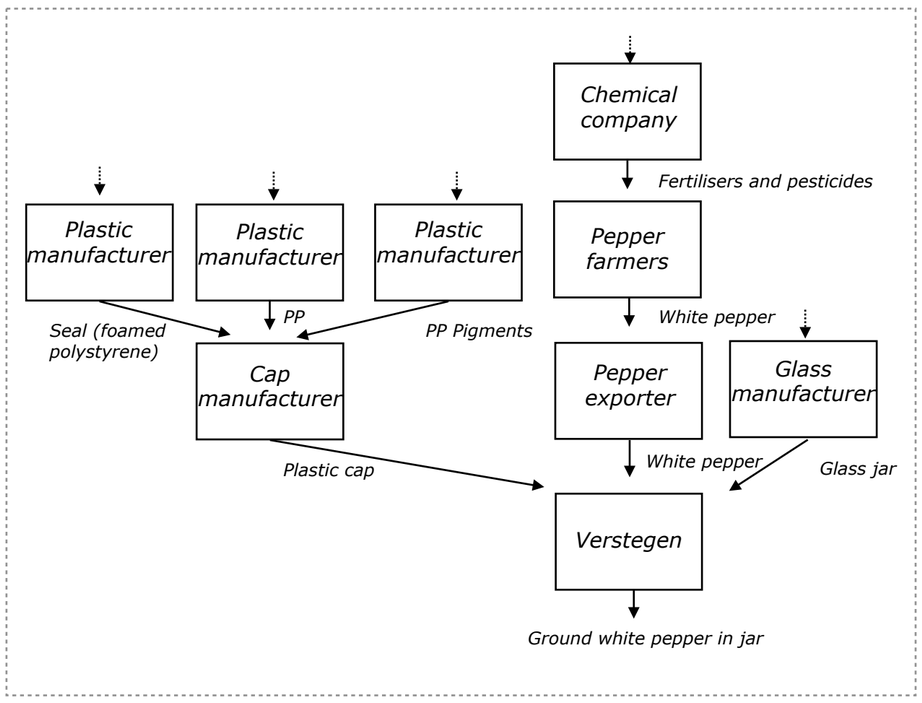

Figure 1: Scope of assessment: supply chain actors and outputs

The supply-chain of white pepper in a jar was traced back by including 80% of the purchased value. This identified the most relevant supply-chains: **the plastic cap**, **the white pepper** and **the glass jar** (Figure 1).

The **plastic cap** is manufactured in the Netherlands, and is supplied with the seal, PP granulate and PP pigments from China and Germany. The **white pepper** comes from Indonesia where it is handled by an exporter and cultivated by pepper farmers. Pepper farmers use chemical fertilisers and pesticides. These chemicals are included in the scope as they are a high impact material. The **glass jar** comes from a glass manufacturer in Germany. The retailer has been excluded from the assessment.

Total results

Hidden costs show what impact the product has on planet, people and prosperity, that are currently not reflected in the prices charged for the goods along the value chain. The impact can be negative or positive. The negative costs are based on costs of prevention, meaning the costs necessary to eliminate the negative impact. The total hidden costs of 1 jar of grinded white pepper are **€ 1,03** (Figure 2). The sales price of a jar is € 2,99, meaning the hidden costs are adding **34%** onto the sales price. Figure 3 displays the negative hidden costs per supply-chain partner.

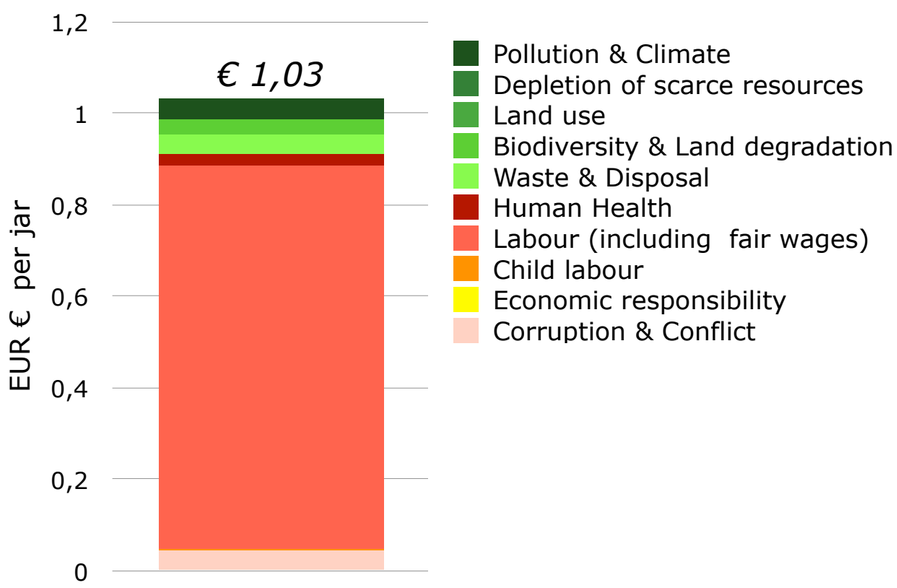

Figure 2: Negative hidden costs of 1 jar of ground white pepper

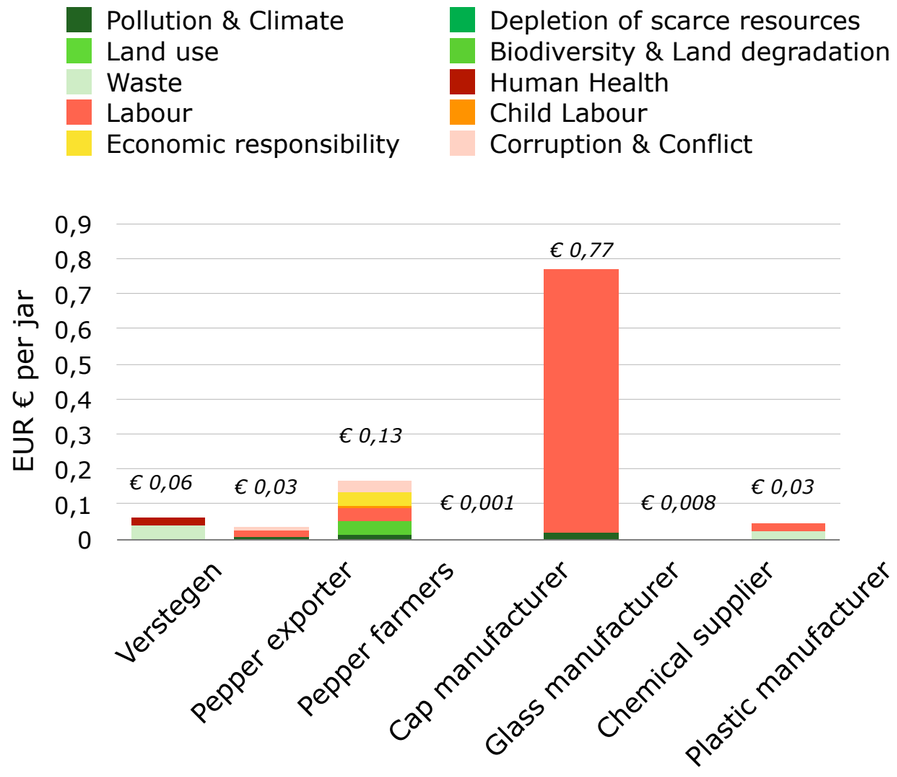

Figure 3: Negative hidden cost per supply-chain partner

The main negative hidden costs come from the category ***Labour.*** Labour measures fair wages, fair inequality and other labour conditions. The glass manufacturer has a salary inequality ratio of 98,7 between the lowest and highest paid salaries within the company. This is above the fair inequality ratio of **23,8**. This leads to costs of € 0,76. Additionally, the pepper farmers do not offer their employees health insurance or ensure occupational health & safety (€ 0,04).

The second and third biggest cost categories are ***Pollution & Climate*** and ***Corruption & Conflict*****.** Most costs to mitigate pollution are caused by the pepper farmers using fertilisers (€ 0,01) and through the production of glass (€ 0,19). Pepper farmers and pepper exporters are most susceptible to ***Corruption*** and have no active governance to mitigate that (€ 0,04).

Other negative hidden costs were found for ***Economic Responsibility*** and ***Waste***. The glass manufacturer pays insufficient taxes, which leads to € 0,0025. Concerning waste, Verstegen was allocated € 0,04 for the end-of-life disposal. Other hidden costs that were found, include costs to prevent ***biodiversity*** loss. Verstegen, together with the pepper exporter, invested in agroforestry solutions to increase biodiversity. Through this project, supply-chain specific mitigation costs were used to calculate prevention costs to preserving biodiversity.

Costs were allocated to prevent ***Child Labour*** among pepper farmers, as the absence of it could not be demonstrated. This was calculated as the costs to replace child workers with adult workers, earning a fair minimum wage. This resulted in costs of € 0,004 per jar of pepper.

This assessment demonstrated the absence of negative impacts on various aspects. It showed that all suppliers get paid fairly for their products and that the depletion of scarce materials is very low. Additionally, there is no impact on the category ***Land use,*** as the yields are higher than elsewhere in Indonesia.

Figure 4: Photo of a pepper farmer

Positive costs

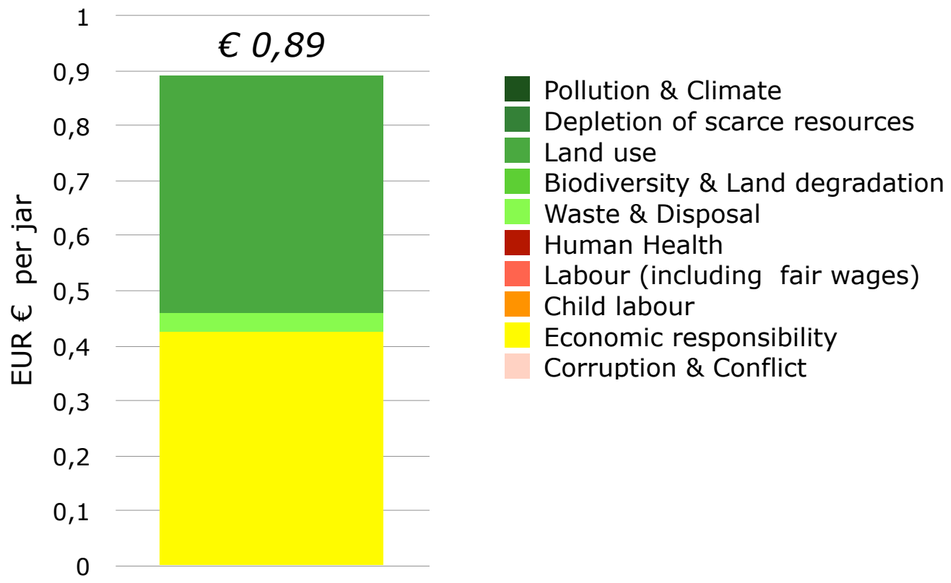

Figure 5: Positive costs of 1 jar of ground white pepper

Besides negative hidden costs, positive costs were calculated (Figure 5). Positive costs are based on actual company spending, benefitting others than the ones involved in the transaction. Positive costs of € 0,89 were found, 98% of this was spent by Verstegen. Verstegen invested to increase yields, contributing to food security (expressed in the category ***Land use***). The project also led to increased livelihoods of pepper farmers (***Economic Responsibility***).

Data specificity

Hidden costs are calculated as the sum of the quantity of an issue (performance data), and the costs to prevent the issue (prevention costs). Both performance data and prevention costs can be company-specific or generic database-sourced.

Performance data are measuring the sustainability performance of companies (e.g. kWh used). The data specificity of performance data of this analysis is displayed in Figure 6. Verstegen, the pepper exporter, the pepper farmers and the cap manufacturer were able to complete the assessment using mainly company-specific data. The data of the glass manufacturer was mainly obtained through generic databases.

Prevention costs are data on the costs of sustainability mitigation measures (e.g. investing in solar panels). The data specificity of prevention data are displayed in Figure 7. None of the value-chain partners were able to provide much company-specific prevention costs, as it takes time to make investment proposals to mitigate impact. This should be a focus when the assessment is repeated.

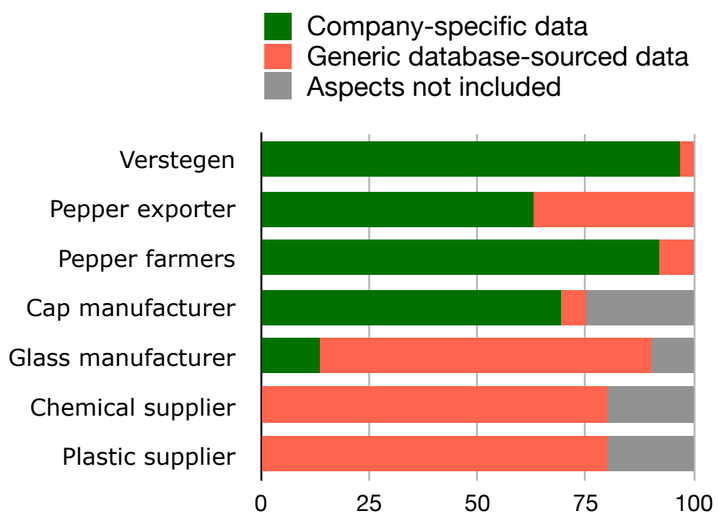

Figure 6: Data specificity: performance data

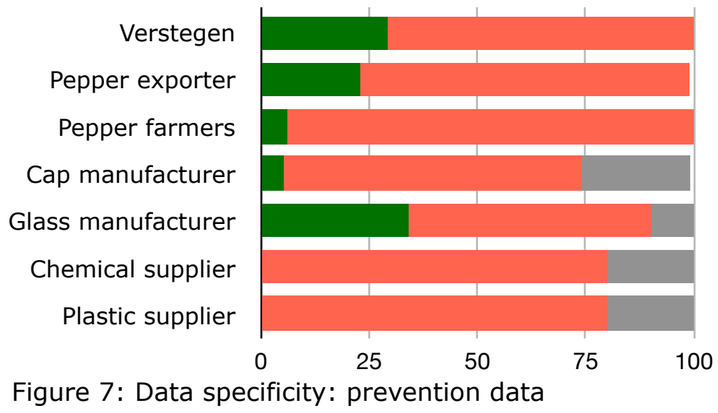

Figure 7: Data specificity: prevention data

Company reflection

"We liked the process. The collaboration and transparency has given us a better perspective of the complexity. The Oiconomy Tool has definitely helped us. The weight and the impact of the topics is still hard to determine, however by working with the tool more often this will become more clear".

"Within Verstegen the results get shared with the management and will be presented during a seminar on the end of the month. We will also share it on social media and on the website. The responsible teams will determine interventions based on the results. On the short term we can use the tool for our project in India, Indonesia and Costa Rica".

Utrecht University thanks Verstegen for their transparency and cooperation. More information is available online on the explanation of oiconomy pricing method and its principles, the oiconomy pricing tool, and examples of companies applying the method. For contact please reach out to oiconomy@uu.nl

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