

Standardization of putative effect in external environmental accounting

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1. Background and purpose

It is important for company to figure out the quantitative dates relating to environmental burden and the cost for environmental protection to implement the concrete environmental measures. Environmental accounting plays a role as connecting these dates and provides inside and outside company with information for decision-making. Ministry of the Environment points out that external environmental accounting are needed to be improved and putative effect is described as effective. This research aims to reveal what putative effect is and how putative effect should be calculated in external environmental accounting and offer the unified approach based on existing research and case study.

2. Objectives and Methods

Case study has been done with 5 Japanese electrical and electronics companies. Putative effect which calculated is classified into 5 categories. Emission decrease of NO_x, SO_x, COD, BOD, T-N, T-P, Chemical substances (PRTR) are included as “*Management risk-averse effect*”, emission decrease of CO₂ emitted at the point of manufacturing, delivering and using are included as “*Global Warming countermeasure effect*”, decreasing final disposal of waste is included as “*Natural resources saving effect*” with the use of JEPIX, MAC, and LIME. “Contribution on benefit of the company” is calculated as sales of environmental-conscious products. The calculation is separated three stages; (1) included only substantial effect (reduction cost of energy and gain on sale of recycle), (2) putative effect as emission cut added in (1), (3) sale of environmental-conscious products as “contribution on benefit of the company” added in (2).

3. Conclusion

According to calculations, this research clears up the range and way of the calculation.

(1) Sales of environmental-conscious products regards as “Contribution on benefit of the company” has a big impact to return in the black. From the point of environmental management that must be integrated whole business activity, the range of Putative effect what should be assessed is *Management risk-averse effect*, *Global warming countermeasure effect*, and *Natural resources saving effect to integrate the environmental management into the company*.

(2) Calculation using JEPIX passes on the ratio of contribution to the environmental policy. MAC shows reduction of social cost for environmental problems and cost benefit relationship between the environmental protection and the effect of the environmental measurements. LIME shows the benefit of the emission cut to environmental protection cost as preventing a pay. As a result, it is considered reasonable and proper to be calculated using JEPIX, MAC and LIME, and judged in a comprehensive manner.