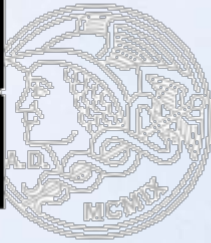


**HANKEN**

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# Risk Mitigation in Sustainable Supply Chain Management

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# Raison d' être

- Risk mitigation is the main reason for companies to adopt environmental and social standards in the supply chain (Beske *et al.*, 2007)
  - Operational vulnerability: breakdowns, product call-backs, production stand-stills
  - Reputational glitches: scandals affecting sales volume, brand equity and shareholder value
- Rise in social and environmental standards
  - > 25 are used as a basis for voluntary industry agreements and codes of conduct
  - Stakeholder pressure to adopt “commonly accepted” standards
  - Use of standards to manage suppliers
- Aim: to analyse how environmental management accounting related concepts are used in supply chains



# Audits and standards

- Supplier audits
  - Own audits vs. third parties
  - Questions of credibility and legitimacy of certificates and certifying organisations
- Standards
  - Product-related: focus on product design, material flows and the life cycle of the product
  - Process-related: focus on manufacturing-related issues (machinery, energy efficiency, by-products etc. – e.g. ISO 14001, AccountAbility 1000)
  - Performance-related: instructions and prohibitions (of e.g. child labour – see SA 8000, FLA, FLP), strong risk focus



# Standards and risk mitigation

- Avoidance
  - Switching suppliers, restriction of operations in particular regions
  - Use of performance-related standards
- Control
  - Contractual measures
  - Supplier monitoring
  - Vertical integration of suppliers
- Co-operation
  - Supply chain integration - design of the supplier network
  - Increase visibility of risks in the supply chain
  - Joint business continuity plans
  - Spreading standards upstream through integrating them in supplier selection and evaluation
- Flexibility
  - Multiple sourcing – design of the supplier network
  - Postponement strategies



# Studies

- Own case studies and content analysis of case studies in literature
- Study 1: case studies
  - 16 supply chains of Finnish industrial MNCs
  - Interrelated in each others' supply chain
  - Interviews with environmental managers and supply chain managers (in 2004)
  - Thematic analysis of interviews and company-related documents
  - Focus on supplier selection and evaluation
- Study 2: content analysis of case studies in literature
  - 51 cases found in 130 peer-reviewed articles on sustainable supply chain management (1994-2005)



# Findings of study 1

- Main standards used in supplier selection and evaluation: ISO 14001, EMAS, industry-based agreements
- Little focus on social aspects
- Low exposure of certified suppliers to supplier audits
  - High level of trust in environmental certificates
- Focus of standards
  - For raw material suppliers focus on the materials only (upstream focus, focus on supplier selection)
  - For technology suppliers focus on the performance of the technology/equipment throughout its life cycle (downstream focus, focus on supplier evaluation)
  - Use of performance criteria to mitigate risks related to potential scandals - supplier switching



# Findings of study 2

- Distribution of focus
  - 16 articles focusing on environmental standards
  - 9 articles on social standards
  - Single most mentioned standard: ISO 14001
- Emphasis
  - Need for co-operation in the supply chain
  - Supplier training and development
- Avoidance and control as risk mitigation strategies
  - Supplier selection
  - Reporting and sanctions in supplier evaluation
  - Yet arguing for more flexibility as a risk mitigation strategy
- Criticism: focus on “success stories”
  - Little critical analysis
  - No discussion of limitations of the study



# Conclusions

- Need to combine different risk mitigation strategies
  - Avoidance and control for day-to-day operations (operational vulnerabilities)
  - Flexibility for problem-solving
  - Co-operation and supplier training before supplier switching and avoidance
- Standards limit efforts in supplier evaluation
- Standards in the supply chain improve the accountability of the company
- BUT: motives to adopt a standard need to be questioned
- Further research is needed on the effect of standards on supply chain performance