

# Evaluation of sustainable supply chains: objectives, limits and alternatives. An exploratory research



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# Abbreviations

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- SCM : supply chain management
- CSR : corporate social responsibility

# problems and limits of contemporary sustainable SCM evaluation tools

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- **measuring** perceived as a **major obstacle** to effective implementation of the **Global Compact principles** in global supply chains (United Nations Global Compact, 2000, amended 2004).
- **lack of customer acceptance** of sustainable (ecological!) performance (Loew, 2005).
- **non compliance** with **sustainability audits' requirements** is widespread (Loew, 2005).
- **integration** of the different performance dimensions (economic, ecological, social): **feasible?** (ambiguous and contradicting goals) (Capron and Quairel, 2005)
- all existing **evaluation models** reveal important limits and are **not really integrated** (life cycle approach; sustainability balanced scorecard)

# goals of sustainable SCM evaluation measures and adopted logic

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## economic logic:

Sustainability of supply chains has a positive impact on traditional business performance. Within a theoretical model, sustainability or its performance appears as independent (or input) variable (e.g. Carter and Jennings, 2002)

## normative logic:

Sustainability is designed as a dedicated goal in the supply chain. In this case, sustainability or its performance appears as dependent (or output) variable. Further distinction (Philipp, 2006):

- “sustainability – CSR within supply chains” → **passive** strategy “avoiding risks from global supply chains” (Müller and Seuring, 2006; Pfohl et al., 1992)
- “supply chains – CSR within sustainability – CSR” → **pro-active** strategy “SCM for sustainable products” (Müller and Seuring, 2006; Pfohl et al., 1992)

# research objectives

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- ☑ remind **weaknesses and limits** of **traditional SCM performance measures**, especially with regards to **relationship quality**
- ☑ start to propose, for the context of **sustainability/ CSR**, characterized by an even higher level of **complexity** and a bigger number of **conflicting goals**, **adequate theoretical framework** to mobilize in order to **overcome** the above mentioned **weaknesses and limits**

## *adopted perspective*

- focal company's (sustainable) influence exertion upon the other supply chain members, especially suppliers

## *methodology*

- trilingual academic literature review
- status = exploratory research paper preceding empirical studies

# “generations” of SCM (logistics) performance measurements

## problems of traditional logistics metrics (“first generation”):

- they failed to develop and implement measures for **monitoring alliances**
- they did not foster **supply chain orientation** (of employees / supply chain members)

Brewer and Speh (2000)

not overcome yet

## problems of contemporary supply chain performance measurements, e.g. SCOR model (“second generation”):

- general problems: **assignment** problems (strategic – tactical – operational/ financial – non financial measures)
- **trade-offs** between various “perspectives” within the SCOR model (e.g. SCM improvement ↔ financial benefits) related to partnership management
- neglecting relationship quality means slowing down the **integration** process (“maturity” level)
- measures are not **strategically-focussed** (cf. relationship quality’s strategic dimension). Beamon (1999); Maskell (1991).
- **“flexibility”** as performance element is neglected (cf. the need to accommodate volume and schedule fluctuations from suppliers). Beamon (1999).

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# Towards a third generation of - sustainable - SCM performance measures (1)

<i><b>pursued objective</b></i>	“sustainability – CSR within supply chains” (Philipp, 2006; Pfohl et al., 1992)	“supply chains within sustainability – CSR” (Philipp, 2006; Pfohl et al., 1992)
<i><b>motivation for sustainable policies</b></i>	tactical – reactive (Murphy and Poist, 2003)	strategic, pro-active and long-term (Murphy and Poist, 2003)
<i><b>type of approach</b></i>	coercive (compliance – oriented). Min and Galle (2001).	partnership (→ mutual dependence). Müller and Seuring (2006).
<i><b>perception by supply chain members</b></i>	threatened sanctions (Loew, 2005)	constructive support (Loew, 2005)

# Towards a third generation of - sustainable - SCM performance measures (2)

<i>applied strategy</i>	passive sustainable strategies “avoiding risks from global supply chains” (Müller and Seuring, 2006)	pro-active sustainable strategies “SCM for sustainable products” (Müller and Seuring, 2006)
<i>focal company’s (sustainable) influence exertion</i>	measuring, monitoring or evaluation	codes of conduct, training and education of suppliers, cooperation, supplier development, remediation (Philipp, 2006)
<i>type of sustainable performance evaluation</i>	holistic measuring seems unrealistic: “conflicting integration” (Capron and Quairel, 2005)	<ul style="list-style-type: none"> <li>• de-coupled pro-active performance evaluation: “mobilizing utopia”</li> <li>• need for organizational learning (Capron and Quairel, 2005)</li> </ul>



# Towards a third generation of - sustainable - SCM performance measures (3)

*related  
theoretical  
framework*

SCM controlling literature's  
instrumental and normative  
approaches:

- balanced integration of the  
different dimensions
- maximisation of effectiveness

neo-institutional literature  
measuring of global  
performance is more symbolic  
("myth"): Brignall and Modell  
(2000); Di Maggio and Powell  
(1983); Meyer and Rowan  
(1977); Oliver (1991).

# Conclusion

## *sustainable supply chain performance measurements (“third generation”):*

- develop “**de-coupled**”, pro-active performance evaluation, based upon **neo-institutional** literature
- develop performance measures that are **consistent** with the organization’s (the supply chain’s) **strategic** goals
- focus on **relationship quality** and its strategic dimension, especially with regards to **organizational learning**

## **RESEARCH**

- need for **empirical** studies: “still very little empirical research exists to examine the effect of organizational learning within the supply chain” (Carter, 2005).