Multinationals’ Sustainable Supply Chains and Influence Exertion upon Suppliers in the U.S. and Outside the U.S.: A Comparative Approach

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Abstract

This article shows the importance of multinational enterprises’ (MNEs’) sustainable supply chains, considered as a major contribution factor for sustainability / corporate social responsibility, both from a conceptual point of view and by observing MNEs’ current practices (e.g. relevant codes of conduct). We focus on MNEs’ means of influence exertion upon their suppliers, in order to guarantee “upstream repercussion” of sustainable requirements. In this context, research articles are analysed in order to reveal common points or differences between U.S. and non U.S. MNEs’ practices.

1. MNEs and sustainable supply chains
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A multinational enterprise (MNE) is defined as a company having at least one production unit abroad (Mucchielli, 1998: 18) or as a company that produces, on several national markets, goods and services adapted to these foreign markets (response to a specific local demand) (Meier et Schier, 2005 : 38). From a strategic point of view, MNEs possess or control companies or physical and financial assets in at least two world economy’s countries. A comparative study of MNEs with regards to their origin is possible, as they can be distinguished / analysed according to their nationality. On the other hand, distinction between a MNE’s national and international activities becomes more and more difficult because of the development of MNE localisations (branches etc.) abroad.

Increasing sustainable development (SD) or corporate social responsibility concerns (CSR) do not only affect MNEs considered as an isolated unit, but in fine their supply chains. This is true for both a market push (regulation or quasi-regulation) or market pull (sustainable consumerism) dynamics.

In fact, regulatory constraints (or quasi-regulatory constraints like ecological or social norms) aim not only MNEs, but also their supply chain links and suppliers. For example, there is repercussion of (quasi-compulsory) ISO14000 family certification towards MNEs’ outsourcing partners and suppliers, reflecting the norms’ incentive character.

In the same manner, social constraints do not only address « isolated » MNEs and its branches or subsidiaries. Compliance with the different social constraints, e.g. ILO principles or host countries’ regulations, is also required by the MNEs’ direct or indirect suppliers. In this context, MNEs adopt an important role of assessment : “This last point is one of the most essential ones, because it enables to guarantee that MNEs do not try to ‘outsource’ the social
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constraint.” (Meier and Schier, 2005: 287). Certification and qualifying as « SA 8000 (Social Accountability 8000) member » implies that each unit of the MNE as well as all its suppliers are certified. SA 8000, under UN patronage and “guaranteeing the ethical origin of goods’ and services’ production”, translates into “norms” the ILO principles “declaration of workers’ basic rights”. Sustainable reporting has become compulsory for French listed MNEs (regulation: 2001’s “new economic regulations” law, completed by a 2002 degree): compliance with ILO principles concerns (also) outsourcing partners, suppliers and subsidiaries in host countries.

The Global reporting Index (GRI), representing a Dutch independent association (originally under UN patronage) and proposing 11 principles (guidelines) for writing a sustainable report includes

- suppliers with regards to the economic, ecologic\(^1\) and social performance indicators.
- suppliers’ selection criteria with regards to governance structure, organisation structure, management systems.

“Sustainable consumerism”, a market push dynamics, can be considered as another constraint on MNEs’ supply chains. Indeed, we are aware of repercussions, of ecological and social issues, from big customers, shippers and retailers towards the whole industry - including suppliers (repercussion from downstream to upstream). Consequently, purchase departments, in addition to their traditional selection criteria “price, quality, delivery time” have to integrate also ecological and social norms into their buying decisions. Example: in order to protest against the then planned sea immersion of a Shell-operated oil platform “Brent Spar”, consumers boycotted the MNE’s gas stations (1995). Dutch Shell answers in

\(^1\) example concerning supply chain management: logistics’ environmental impacts (transport mode etc.).
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the same manner as U.S. Nike\textsuperscript{2}, whose questionable social practices (including child labour at the suppliers’) – also in the 1990ies - were revealed by various stakeholder groups, affecting seriously the company’s results, motivating its transition from resistant towards proactive sustainable basic strategies.

1.1 Terminology

Supply chain management (SCM), adopting a company-specific perspective (supply and trade relationships of a focal company), can be delimited from value chain management, adopting a company-independent perspective as well as from supply management, concentrating solely on purchase and sourcing.

The Council of Supply Chain Management Professionals (CSCMP)\textsuperscript{3} defines SCM as follows: “Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, SCM integrates supply and demand management within and across companies. SCM is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology.”

\textsuperscript{2} Cf. Gasmi et Grolleau, 2005.
\textsuperscript{3} Glossary available at: http://www.cscmp.org/
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According to Handfield and Nichols (1999), “the supply chain encompasses all activities associated with the flow and transformation of goods from raw materials stage (extraction), through to the end user, as well as the associated information flows. Material and information flow both up and down the supply chain. SCM is the integration of these activities through improved supply chain relationships, to achieve a sustainable competitive advantage”.

These definitions underline that SCM possesses pronounced modalities as opposed to other concepts like the logistics chain, the logistics channel or the logistics system with regards to: perspective; positioning; range; scope; systemic boundaries; relational register; “philosophy”; “ideology” (Philipp, 2006). Indeed, SCM, not far from the network concept, reflects an integrated vision of the extended logistics chain: a “solidarity”, a “common project” to be valorised. SCM also is close to the relationship-marketing paradigm, as trust and commitment appear often as constitutive variables (see e.g. Carter and Jennings’, 2002, article on sustainable supply chains / CSR and supply chains).

The two concepts “sustainable supply chains” and “socially responsible supply chains” have many overlaps. Stricto sensu, CSR and SD are not synonyms. CSR is the older concept, except for Carlowitz’ (1713) “pioneer” contribution in sustainable forestry. Indeed, the arrival, in business and management, of the larger SD concept (stemming from political and scientific spheres) is not equivalent with the birth of CSR. It is true that CSR represents the company’s vector of commitment to SD (Lauriol, 2004), but the former concept can look back upon a long standing tradition, especially in Anglo-Saxon literature and business practice, related to well-established concepts such as management ethics, business ethics and opportunistic behaviour.
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The table below tries to sum up the common points and main differences between CSR and SD.

<table>
<thead>
<tr>
<th></th>
<th>CSR</th>
<th>SD</th>
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<tbody>
<tr>
<td>type of initiatives</td>
<td>voluntary</td>
<td></td>
</tr>
<tr>
<td>level (scope, range) of measures</td>
<td>both operational and strategic</td>
<td></td>
</tr>
<tr>
<td>analysis level</td>
<td>micro-economic level (CSR’s addressee = companies)</td>
<td>macro-economic level</td>
</tr>
<tr>
<td>relationship between concepts</td>
<td>CSR = company’s contribution to SD or the company’s vector of commitment to SD</td>
<td></td>
</tr>
<tr>
<td>constitutive dimensions</td>
<td>ecological and social (economic dimension only as frame condition)</td>
<td>economic, ecological, social (explicit triple bottom line)</td>
</tr>
<tr>
<td>existence of an official unique definition?</td>
<td>only EU-wide; many different definitions worldwide.</td>
<td>yes, world-wide (Brundtland, 1987/ WCED 1987): “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”</td>
</tr>
</tbody>
</table>

\(^4\) but SD: Carlowitz (1713)
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<table>
<thead>
<tr>
<th>scientific definitions</th>
</tr>
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<tbody>
<tr>
<td>➢ U.S. Carroll’s (1979, 1991) 4 responsibility levels⁵:</td>
</tr>
<tr>
<td>① economic (<em>make profit</em>) - required</td>
</tr>
<tr>
<td>② legal (<em>comply</em>) - required</td>
</tr>
<tr>
<td>③ ethical (<em>be ethical</em>) - expected</td>
</tr>
<tr>
<td>④ charitable / philanthropic / discretionary (<em>be a good corporate citizen</em>) – desired.</td>
</tr>
<tr>
<td>➢ U.S. Carter et Jennings (2004): “meeting the discretionary responsibilities expected by society”, encompassing (1) diversity, (2) the environment, (3) human rights, (4) philanthropy and community, and (5) safety.</td>
</tr>
</tbody>
</table>

| Table 1: common points and differences between SD and CSR. Source: personal elaboration. Inspired by Loew, Ankele, Braun & Clausen (2004). |

| CSR’s - culture-specific - scientific maturity is not necessarily proportional to the respective government’s (authority’s) commitment. Indeed, we observe that United States has no |

⁵ towards maximum wealth (①→③).
strategy with which to promote or even discuss global CSR. In Canada, CSR strategies are seen as important complements to trade policy. For the EU, CSR is considered as a strategic objective, revealed by its green book “promoting a European framework for CSR” (2001). In its new communication on CSR (22 March 2006), the European Commission has launched the European Alliance for CSR, as part of its strategy to give a new impulse to “make Europe a pole of excellence on CSR”. Within Europe, however, the image is not homogeneous. Indeed, big national differences exist for the following categories (BertelsmannStiftung 2006) : responsible authority; national strategies; visibility; transparency and reporting; finance; supply; foreign trade; coordinated national strategy (United Kingdom; the Netherlands); government's explicit role in encouraging CSR initiatives (United Kingdom). Also, the development of CSR-related regulations concerns “older” EU countries much more than Eastern Europe.

On the other hand, e.g. German and U.S. (Environmental Protection Agency) national (official) research strategies in the field of sustainability/ CSR seem to converge in a great

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6 But : the government's role in promoting CSR is no indication of the importance of CSR to the nation's citizens and businesses. The United States provides a good example to this dichotomy. According to the Social Investment Forum's 2001 Report on Socially Responsible Investing, $1 out of every $8 in professional investments such as pension funds, mutual funds, and foundations was invested in socially responsible investment vehicles. (In 1995, it was $1 out of $10.)

7 as well as by its goal (Lisbon objective) to become, by 2010, the “most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (Lisbon European Council March 2000).

8 In France, environmental and social reports have become compulsory for listed companies since 2001. In Sweden, “bigger companies” have to report upon their environmental impacts since 1999. In the U.S., social and ecological reporting is poorly developed.

9 Source : EPA’s international workshop on “meeting the future : a research agenda for sustainability” in Washington, D.C. in May 2005.
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number of points, particularly relevant to SCM (e.g. need for collaborative problem-solving and for more integrated and system-oriented strategies).

The relationship between SCM and SD/CSR reveals sustainable supply chains’ objective, which is located within a continuum\(^\text{10}\) of two ideal-type boundaries:

- **sustainability – CSR within supply chains**: SCM’s traditional operations respect (also) social and ecological requirements.
- **supply chains within sustainability - CSR**: SCM represents sustainability’s constitutive processes; it serves sustainability. Thanks to sustainable supply chains one can substitute non-renewables by secondary raw materials. Thanks to sustainable supply chains one can engage “small” producers and so on. Keeping in mind the geographical spreading of successive production and distribution chain links, characterizing today’s economics (“network logic”), SCM is becoming an essential vector/motor/initiator in order to realise sustainability/CSR.

2. Sustainable supply chains in MNEs’ practice: codes of conduct

The various stakeholders’ expectations aiming sustainable supply chains are often expressed through codes of conduct. Whereas company-specific codes of conduct belong to the focal MNE’s strategic core, macro- and microenvironment considerations concern industry and branch associations and solutions (business stakeholders and – networks), triggers stemming from NGO or (inter-)governmental organisations.

Codes of conduct explicitly tackling SSC include:

\(^\text{10}\) Inspired by Pfohl, Hoffmann,& Stölzle’s (1992) conceptual distinction between, on the one hand, “environmental protection within logistics” and “logistics within environmental protection”, on the other.
OECD guidelines for MNE (1976, modified 2000) as they treat responsibility for the supply chain and the relationships with suppliers\(^\text{11}\), (chapter 10 §2 of the OECD guidelines). Their application can be considered as country-specific, as we are aware of a large interpretation potential according to the different national contact points\(^\text{12}\) (national government authorities). In Germany e.g., the OECD guidelines are little applied (BertelsmannStiftung, 2006: 38). The addition “where practicable” (with regards to adequately designing relationships with suppliers, chapter 10 §2) means a restriction of the guidelines’ potential range and also leaves many degrees of freedom to country-specific interpretation. The OECD guidelines for MNE are commented and/or criticized by various (business / MNE) stakeholders, among them: BIAC (Business and Industry Advisory Committee to the OECD) with a discussion paper dedicated to SCM\(^\text{13}\).

The (draft) UN norms that might provide a solution in this context: according to NGOs criticizing OECD guidelines, these (future) norms mention explicitly the suppliers’ (SCM) issue and do not carry out an “artificial” distinction between trade and investment relationships.

The UN Global Compact (2000, amended 2004) is a voluntary international corporate citizenship network initiated to support the participation of both the private sector and other social actors to advance responsible corporate citizenship and universal social and

\(^{11}\) Exertion of influence is possible more upstream than downstream (national regulations on markets); cf. the BIAC (Business and Industry Advisory Committee to the OECD) discussion paper (2002) on SCM.
\(^{12}\) The national contact points must co-operate with the CIME (committee for international investments and multinational enterprises).
\(^{13}\) BIAC’s position in this context:
• preference of suppliers’ self-monitoring in order to avoid competitive (cost) disadvantages, especially with regards to MNE activities in developing countries (→ BIAC can be considered as a MNE stakeholder).
• one major issue is the adequate sharing of responsibilities, distinguishing regulatory framework (i.e. political factors; implementation and enforcement of national laws and regulation) from the company’s (MNE’s) sphere of influence.
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environmental principles to meet the challenges of globalisation\textsuperscript{14}. The 10 principles concern human rights, labour, environment and anti-corruption. Although GC’s scope goes far beyond sustainable SCM, this latter concept has been identified as its “key issue” because “supply chains provide the nexus for global commerce and represent an important value framework for implementing the nine [ten] principles”. The June 2003 inaugural meeting of the GC Policy Dialogue on SCM in New York highlighted obstacles to effective implementation of the GC Principles in global SC. These obstacles include: an emphasis on SCM monitoring at the expense of remediation (and training\textsuperscript{15} cf. according to academic literature like Loew 2005); insufficient collective action, especially towards suppliers, in a given industry (→ “free rider problem”).\textsuperscript{16}

GC’s reference to MNEs appears relevant e.g. by the Multinational Enterprises Team who is responsible for ILO’s participation in the UN GC. Further missions include coordinating ILO’s work on CSR as well as the promotion and follow-up of the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy. The Tripartite Declaration

\textsuperscript{14} The GC understands itself not as a competitor as with regards to other CSR standards, but as a “spine” contributing to the coherence between the different CSR initiatives.

\textsuperscript{15} “Provision of capacity” in the terms of UN GC SCM.

\textsuperscript{16} Participants in the Policy Dialogue concluded that GC companies should strive to:

1. move from top-down enforcement management strategies to empowerment, capacity building and training (cf. also Loew, 2005).

2. actively support multi-stakeholder global initiatives for SCM problems beyond the reach of individual companies or sectors. GC participants also agreed to identify and explore ways to disseminate existing tools and databases related to SCM.

A working group is to explore the possibility of developing a simple, pragmatic guide to implementing the nine principles in SCM (source: NY GC SCM, 2003).

The GC needs to adapt its message, tools and “products” to regional and national circumstances. This adaptation need is particularly true for sustainable supply chain (management) issues, giving rise to dedicated regional meetings (UNESCAP, Asia and the Pacific, 2006) and workshops (Latin America 2003) in different sourcing regions (countries), important both for Europe and the U.S.A.
is the only development-oriented instrument in the area of CSR that is based on universal principles and standards and has the support of employers, workers and governments.

3. MNE’s influence exertion on supplier responsibility:

In management science, we find some general explanations with regards to influence exertion susceptible to be applied to our specific research issue, i.e. influence exertion upon suppliers concerning the ecological and the social issues. Loew (2005: 45) observes in this context that discussions are dominated by the “David – against – Goliath image”, with MNEs dominating “small” suppliers - especially if MNEs add little value. This metaphor or cliché, however, does not always correspond to the real **power constellation** in the supply chain. Indeed, MNEs with a high level of added value face often equally big or even bigger suppliers.

In management science, **responsibilities** are determined by **economic dependencies**\(^\text{17}\) *(scope / range)*. It is possible to distinguish 2 postures in this context (Stephan, 2003):

1. **investment relationships** or **investment nexus**. This logic presents some disadvantages : the adequate threshold (percentage) of the capital contribution is difficult to determine and may be questioned; the distinction between investment and trade relationships may be considered as artificial. This attitude is mainly adopted by “reactive firms\(^\text{18}\)” (with regards e.g. to OECD principles for multinationals).

2. **investment like relationships** that can be explained by market power : there is either domination by the customer or by the supplier. Transaction cost theory would examine co-

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\(^{17}\) questioning the MNE’s boundaries.  
\(^{18}\) “Reactive” and “proactive” may be interpreted as 2 opposite modalities of ecological (or sustainable) basis strategies (cf. Meffert and Kirchgeorg, 1993).
specific investments, [more long-term relationships (source: Heydenreich, 2003)]. This attitude is mainly adopted by “proactive” firms (with regards e.g. to OECD principles for multinationals).

Hybrid organisation forms - located somewhere between market (responsibility impossible) and hierarchy (responsibility via instruction - directives) – dominate the marketplace (value chain or network vision). Influence exertion is fostered,

① if the number of actors is limited : a focal company in immediate contact to its main value-adding partners.

② the closer the relationship (the better quality of relationship), and “the more long-term”.

③ if the coordination forms structure is hierarchical (→ focal firm) rather than polycentric; [complexity of the supply chain (source: Heydenreich, 2003).]

Literature identifies several means (modes) of influence exertion relevant to our research issue: audits, codes of conduct, staff training,...

3.1 Conceptualisation of sustainable supply chains

Based upon an extensive literature review (130 contributions) understood as systematic content analysis from a methodological point of view, Müller and Seuring’s (2006) paper is one of the pioneer contributions aiming conceptualisation of the field “sustainable SCM”, which can be seen as a first step towards theory building.

Seuring and Müller (2006) combined keywords from the SCM side and from the sustainability side for the search. Clear boundaries were drawn, excluding publications
Multinationals’ sustainable supply chains and influence exertion in the U.S. and outside the U.S. : a comparative approach focusing on: public purchasing; ethical demands placed on purchasing staff (e.g. acceptance of goods); downstream supply chain issues like reverse logistics.

Potential critics that might be addressed with regards to these boundaries are:

- even though the research included keywords like “social”, “ethics/ethical”, there was no explicit inclusion of the CSR concept. One might regret this restriction, as CSR and SD are not synonyms (see above). Limiting oneself to the only sustainability concept might be considered as typical of a non Anglo-Saxon perspective.

- The exclusion of reverse logistics is questionable (cf. Philipp, 2006). Indeed, a supply issue is not independent from a delivery issue, not only within the same “linear” supply chain, but also between two different supply chains linked with each other by the “multi-cyclic” nature of products (objects) they carry, “waste” valorisation having several modalities like material recycling or reuse. The interdependence’s impact is visible through both service quality (bottleneck repercussion from one supply chain to another; supply of new materials combined with take-back of technically or economically obsolete equipments) and costs (realised monetary savings by substituting raw materials by so called secondary raw materials). Within reverse logistics, logistics service quality can be addressed from an input perspective (supply issue) or from an output perspective (disposal issue); and (only) in the light of SD / RSE, SCM reveals its full potential as “conceptual bridge between upstream and downstream logistics” (Paché & Colin, 2000: 38).

Only scientific publications in English language were taken into account, the publication period lasted from 1994 to 2004. Major publisher databases as well as Internet library services were also used in order to identify relevant articles. Cited references were used as a secondary

19 what (where) is upstream? what (where) is downstream?
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source, but without yielding in many additional papers. 130 publications were identified, differentiated in 5 categories: theoretical (29 publications), case study (51), survey (33), modelling (13) and literature review (4).

Müller and Seuring (2006) do not conduct a comparative analysis with regards to the various authors’ (or the treated MNEs’) origins, but focuses on the publications’ allocation with regards to: ① The dimension(s) addressed or, in the authors’ words, “the coverage of SD” (ecological; social; sustainable). ② The goal relation between business objectives and SD (win-win situation; trade-off situation; minimum performance for ecology and social welfare = order qualifier\(^\text{20}\)). ③ Barriers and supporting factors for sustainable SCM (i.e. inside the supply chain = task environment). ④ Pressures and incentives (i.e. outside the supply chain = global environment).

The authors’ general conclusions are as follows: ① Case studies are dominating whereas theoretical basis is often missing. ② Environmental aspects clearly dominate whereas social and integrative\(^\text{21}\) sustainable aspects are neglected. ③ The supply chain focus is evident, so not only purchasing issues are addressed.

Issues relevant to influence exertion on suppliers, our specific research issue, appear with regards to internal barriers (higher costs; co-ordination effort; insufficient communication in the SC) as well as supporting factors for sustainable SCM (company overlapping communication; monitoring, evaluation, reporting and sanctions; training and permanent education of purchasing employees and suppliers). With regards to influence exertion on suppliers, we observe that compliance-oriented approaches (“monitoring, evaluation, reporting and sanctions “: 61 papers out of 130 mention this supporting factor) dominate the

\(^{20}\) or : “goal function under restrictions“

\(^{21}\) → triple bottom line
more partnering approaches (“training education of [...] suppliers”: only 41 papers out of 130). However, Müller and Seuring (2006) do not distinguish with regards to cultural origins of the various authors or mentioned companies.

Müller and Seuring’s (2006) findings suggest that the extent of partnering depends on the nature of (reactive) strategy adopted by the company. These strategies are based upon external triggers placed upon focal companies by governance agencies, customers and stakeholders. The first strategy is labelled as “avoiding risks from global supply chains”. One major fear of companies following such a strategy is a loss of reputation if related problems are raised. Hence, additional environmental and social criteria are taken up to complement economically based supplier evaluation (including evaluation schemes as well as self-evaluation schemes), reflecting a more compliance-oriented approach. Environmental and social standards play a central role in enabling this. The second strategy is called “SCM for sustainable products”. This usually demands the definition of life cycle based standards for the environmental and social performance of products, which then are implemented throughout the supply chain. Aiming an overall competitive advantage, this latter strategy has a more partnering approach, visible through: cooperation with suppliers, fostering supplier development by considerable investments, training and education, improving and deepening information flows with suppliers.

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22 as well as on internal incentives and barriers.

23 cf. also Loew (2005: 19); “provision of capacity” in the terms of UN GC SCM.
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| methodology                                                                 | • no comparative approach (with regards to authors’ or MNE’s origins) |
|                                                                             | • extensive literature review (130 contributions in English language) : sustainable supply chains |

| relevance for our research issue                                           | by derivation: |
|                                                                             | • in academic literature, compliance-oriented approaches ("monitoring, evaluation, reporting and sanctions" as SSCM-supporting factors) dominate more partnering approaches ("training and education of [...] suppliers"). |
|                                                                             | • partnering approaches (cooperation with suppliers, supplier development, training and education) are more likely if the company adopts a proactive, competition-oriented strategy (labelled “SCM for sustainable products”) rather than if adopting an alternative strategy labelled “avoiding risks from global supply chains”. |

Table 2: Müller and Seuring’s (2006) literature review findings relevant to our research issue.
3.2 Sustainable supply chains and influence exertion on suppliers in academic literature: a comparative approach:

Zsidisin & Hendrick’s (1998) U.S. article is restricted to environmental performance. Environmental performance is modelled as dependent (output) variable, managerial involvement in ecological SCM as the independent one, however without testing the model (yet).

An exploratory factor analysis reveals 4 elements of managerial involvement in SCM related to environment issues: involvement in hazardous materials, investment recovery, product design and supply chain relationships. The latter one is relevant to our research issues focusing on means of influence exertion within (MNEs’) purchaser – supplier relationships. It has five items: provide design specifications to suppliers that include environmental requirements for purchased items; ISO 14000 environmental certification; collaboration with suppliers to provide materials, equipment, parts, services that support environmental goals; company-wide environmental audits; environmental audits of suppliers. By the means of a one-way ANOVA, the authors try to derive statistical differences between three countries: Germany (responses of 57 companies received), the U.K. (50 companies) and the U.S.A. (93 companies). The questionnaires’ respondents are purchasing managers.

The sample is not explicitly limited to MNEs, but results seem highly relevant at least to bigger MNEs. In fact, only larger companies (superior to 1.7 million U.S. dollars annual sales; superior to 700 million U.S. dollars annual purchases) are represented in the sample; all interviewed U.S. companies represent Fortune 500 corporations, i.e. U.S.’ largest

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25 overall response rate: 14.3%.
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corporations. The authors’ conclusion (Zsidisin and Hendrick, 1998, p. 319), placing environmental harm within an international perspective, also corroborates the assumption that MNEs formed the major sample part.

The authors conduct a gap analysis, by comparing actual activity, importance and change of purchasing managers’ (perceived) involvement in the 4 environmental issues with their corresponding levels of desired activity, importance and change.

According to the results, German purchasing managers’ desired involvement in environmental supply chain participation issues is much higher than the current (actual) one. Indeed, German purchasers’ desired involvement level with regards to the second item “ISO 14000 environmental certification” exceeds that of their U.S. counterparts.

Actual involvement of U.K. purchasing managers with regards to (environmental) supply chain relationships is relatively low, even though their desired level is (slightly) higher\(^{26}\). One explanation might be the over-representation of service companies within the U.K. sample.

Current U.S. involvement levels are high with regards to two supply chain relationship items: provision of design specifications (current involvement levels in the U.S. higher than those in the U.K.) and collaboration with suppliers (current involvement levels in the U.S. and Germany superior to those in the U.K.) – items that involve measures more associated to trust, relevant especially to (U.S.) purchasers with a more strategic than tactical or operational focus.

\(^{26}\) especially concerning the fourth item, “company-wide environmental audits”, where the desired level is higher than that of their U.S. counterparts.
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<table>
<thead>
<tr>
<th>level of involvement</th>
<th>relatively high (desired or actual)</th>
<th>relatively low (desired or actual)</th>
</tr>
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<tbody>
<tr>
<td>/ supply relationship item (as managerial involvement element)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• ISO 14000 environmental certification</td>
<td>Germany (desired level).</td>
<td>U.S. (desired level).</td>
</tr>
<tr>
<td>• design specifications (supply chain relationship element)</td>
<td>U.S.; Germany (actual level).</td>
<td>U.K. (actual level).</td>
</tr>
<tr>
<td>• collaboration with suppliers (supply chain relationship element)</td>
<td>U.S.; Germany (actual level).</td>
<td>U.K. (actual level).</td>
</tr>
</tbody>
</table>

Table 3: country-specific ecological involvement levels with regards to 3 supply chain relationship items (purchasing managers as survey respondents). Adapted from Zsidisin & Hendrick’s (1998).

Dobilas & MacPherson (1997), lecturers in geography in Canada and in the U.S., examine contract allocation with suppliers from the purchaser’s perspective. The buying companies are explicitly MNEs (methodology: telephone interviews with 12 MNEs). This article represents an exploratory research (i.e. no testing of hypotheses) examining in how far environmental considerations enter into a MNE’s planning and decision-making process (or corporate planning). Social aspects, the third dimension of SD, are not considered. More precisely, the impact (or “change potential”) of corporate strategy’s greening (i.e. [emerging] MNE’s...
environmental policies) upon MNE’s sourcing strategy is explored. The authors expect that - in addition to traditional criteria like costs, quality, delivery time and relationship quality (supply chain stability, longevity contracts, trust) – new, ecological, parameters also influence sourcing policy, i.e. domestic and international sourcing patterns (i.e. change in the institutional regulation of supply chain formation\(^{27}\); “organisational change”, e.g. : potential for geographical substitution of supply sources; change the geography of transborder production linkages). Thus, the environmental dimension appears as a potentially new policy variable in corporate planning. Influence exertion observed is either forced compliance (the extreme case) or cooperative partnerships (formal or informal). Thus, the question is : “to encourage or to force suppliers to integrate environmental standards ?” The possibility and extent of influence exertion is determined by the market power and dependence (cf. also Stephan, 2003) : availability of alternative suppliers and the degree of monopsony or oligopsony enjoyed by the contractor. “In this regard, it is possible to hypothesize that firms with clearly defined environmental policies (but no enforcement mechanisms to govern suppliers) enjoy only weak\(^{28}\) bargaining power when it comes to initiating changes outside the corporation.” (Dobilas & MacPherson, 1997: 19.)

Motivations for adopting environmental policies are:

- urgency of LCA posture because of the firm’s products, processes and industry.

- green consumerism.

- economic factors (first mover advantages; universal standards avoid confusion).

- competitive advantages.

\(^{27}\) “qualitatively and geographically redesigned supply chain”

\(^{28}\) This concerns e.g. Xerox as opposed to companies that have elevated environmental matters to executive positions within the corporate hierarchy like Northern Telecom and British Telecom.
The table below sums up the means of influence exertion for each MNE observed and provides an explanation for the companies’ choice.

<table>
<thead>
<tr>
<th>MNE (and origin)</th>
<th>means of ecological influence exertion upon suppliers</th>
<th>explanation (for the means of influence exertion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BT (U.K.)</td>
<td>ENFORCE (especially for suppliers with relative importance)</td>
<td>high bargaining power (technological and commercial leadership); elevation of environmental matters to executive positions within corporate hierarchy</td>
</tr>
<tr>
<td>NT (Canada)</td>
<td>ENCOURAGE (suppliers environmental policies; training; partnerships) and ENFORCE (government regulations and standards)</td>
<td>high bargaining power (technological and commercial leadership); elevation of environmental matters to executive positions within corporate hierarchy</td>
</tr>
<tr>
<td>“many European and U.S. MNEs”, like Xerox (U.S.)</td>
<td>ENCOURAGE</td>
<td>no enforcement mechanisms; weak bargaining power</td>
</tr>
<tr>
<td>DuPont (U.S.)</td>
<td>ENFORCE</td>
<td>particularities of the MNE’s products, processes and industry (urgency; high environmental risks)</td>
</tr>
<tr>
<td>Varity (U.S.)</td>
<td>ENFORCE</td>
<td></td>
</tr>
<tr>
<td>AT&amp;T, Fisher Price (U.S.)</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

Min & Galle’s (2001) article focuses only on U.S. firms, i.e. there is no comparative approach with regards to other countries or continents. Only the ecological dimension is considered. The perspective adopted is that of the buying company, the survey’s respondents are purchasing professionals. The sample is composed of companies - not only MNEs - being “heavy producers of scrap and waste materials.” 527 responses were received, producing a response rate of 17.6 percent. Fewer than half of the respondents said (i.e. sample description) that their firms have an environmental mission statement; this is confirmed by Murphy & Poist’s (2003: 125) results.

According to the results, ecological issues (products and packages) are an integral part of supplier selection criteria, though not as important as traditional ones (quality, delivery performance, price). Results also show that firm size (reflected in greater volume purchasing capability of large as opposed to small firms) has no significant impact upon its influence exertion upon suppliers (“push environmental initiatives on their trading partners such as suppliers”); the possibility of influence exertion (or “ability to motivate”) is theorized by the supplier’s dependence on the buyer.

Purchasers do not adopt an explicit partnership approach towards suppliers as, according to the results, “environmental partnership with suppliers” figures as the least important environmental variable of supplier selection. Suppliers’ advances in providing ecological packages and products also figure among the less important ecological selection criteria. In

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29 According to the latter results, most U.S. companies have an “informal environmental policy” as opposed to non-U.S. firms having mainly a formal one.

30 i.e. respective hypothesis not supported.
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the same manner, respondents consider the “lack of supplier awareness” as one of the less important obstacles to effective green purchasing, revealing a relative absence of empathy or an absence of considering the supply chain as a whole. These results, however, might also be influenced by the authors’ research design and positioning\textsuperscript{31}, as e.g. education and training programs (concerning source reduction strategy) are only theorized with regards to employee participants (Min & Galle, 2001: 1233), but not for suppliers or other supply chain partners.

The table below sums up Min & Galle’s (2001) findings that are relevant to our research issue:

<table>
<thead>
<tr>
<th>companies surveyed</th>
<th>only U.S. companies (i.e. no comparative approach); purchasers being “heavy producers of scrap and waste materials”; not only MNEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>descriptive statistics result</td>
<td>fewer than half of the companies have a (formal) environmental mission statement</td>
</tr>
<tr>
<td>results: ecological influence exertion factors</td>
<td>dependence; not firm size</td>
</tr>
<tr>
<td>results: means of ecological influence exertion</td>
<td>compliance-oriented (supplier selection criteria); no partnership approach (result might be influenced by the authors’ mindset and research design)</td>
</tr>
</tbody>
</table>

Table 5: Min & Galle’s (2001) findings relevant to our research issue.

Murphy & Poist (2003) address only the environmental dimension of sustainability: “environmental issues” are modelled as having a potential impact upon “various logistics functions”. The empirical and exploratory study’s sample encompasses bigger firms (members of the “multinational association” CLM: English as primary communication

\textsuperscript{31} This is confirmed by Müller & Seuring (2006: 25): “in conceptual research the knowledge, experience and mindset of the researcher or research group have a great impact on the results.”
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language; higher revenue companies and leading edge of logistical practices), 133 U.S. and 55 non U.S. (Canadian and European) firms, not only purchasers. Respondents are at director level or above. Significant differences between U.S. and non U.S. companies are:

- **the type of environmental policy** is mainly formal for non U.S. companies and mainly informal for U.S. companies. This is confirmed by Min & Galle’s (2001, p. 1224) findings.

- **visual and odour pollution** are considered as more important for U.S. companies than for non U.S. companies. This environmental issue or “environmental dimension” (Paulus, 1996) “visual and odour pollution” is the only one with significant differences.

**No significant differences** were found for the following issues:

- Environmental issues are as important for U.S. as for non U.S. firms.

- **Major reasons for environmental policies** are of tactical and reactive (→ cost reductions) rather than of strategic and proactive nature, for U.S. as well as for non-U.S. companies) which is contradictory to Rogers and Tibben-Lembke’s (1998) results (→ competitiveness and strategic advantage\(^{32}\)).

- According to both U.S. and non U.S. firms’ (environmental) strategies, **suppliers** who lack environmental concerns are rejected to the same extent. This is the only place relevant to **sustainable influence exertion on suppliers or to supplier selection**.

- U.S. and non U.S. firms have the same view about the degree to which environmental issues impact various logistics functions. Only one issue, “facility location”, shows a significant

\(^{32}\) This interpretation is close to the after sales service conception where reverse logistics is not necessarily linked to ecological missions.
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difference: non U.S. firms consider the environmental impact upon facility location as minimal, whereas U.S. firms consider it as significant.

The table below sums up Murphy & Poist’s (2003) comparative results - with regards to both general ecological concerns and to our specific research issue.

<table>
<thead>
<tr>
<th>Sample</th>
<th>U.S. firms</th>
<th>non U.S. firms (Canadian and European)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size and sharing</td>
<td>133</td>
<td>55</td>
</tr>
<tr>
<td>General comparative result: importance of environmental issues</td>
<td>environmental issues are as important for U.S. as for non U.S. firms.</td>
<td></td>
</tr>
<tr>
<td>General comparative result: major reasons for environmental policies</td>
<td>tactical and reactive (→ cost reductions) rather than strategic or proactive factors (contradictory with regards to Rogers and Tibben-Lembke’s 1998 results) for both U.S. and non U.S. firms</td>
<td></td>
</tr>
<tr>
<td>General comparative result: environmental issues’ impact on logistics functions</td>
<td>U.S. and non U.S. firms have the same view about the degree to which environmental issues will impact various logistics functions.</td>
<td></td>
</tr>
<tr>
<td>General comparative result: type of environmental policy</td>
<td>informal</td>
<td>formal</td>
</tr>
<tr>
<td>General comparative result: importance of visual and order pollution</td>
<td>higher</td>
<td>lower</td>
</tr>
<tr>
<td>Specific result: means of ecological influence exertion</td>
<td>compliance (supplier selection), otherwise: rejection, i.e. no partnership approach, for both U.S. and non U.S. firms</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Murphy & Poist’s (2003) findings relevant to our research issue.
The findings of our comparative literature review are presented in the following table, further discussed in the conclusion section.

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>non U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>general results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general: importance of</td>
<td>environmental issues are as important for U.S. as for non U.S. MNEs</td>
<td>(Murphy &amp; Poist, 2003)</td>
</tr>
<tr>
<td>environmental issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>general comparative result :</strong></td>
<td>tactical and reactive (→ cost reductions) rather than strategic or</td>
<td>proactive factors (contradictory with regards to Rogers and Tibben-Lembke’s 1998</td>
</tr>
<tr>
<td>major reasons for environmental</td>
<td>proactive strategies for both U.S. and non U.S. firms (Murphy &amp; Poist, 2003)</td>
<td>results) for both U.S. and non U.S. firms (Murphy &amp; Poist, 2003)</td>
</tr>
<tr>
<td>policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>general comparative result :</strong></td>
<td>U.S. and non U.S. firms have the same view about the degree to which</td>
<td>environmental issues impact various logistics functions. (Murphy &amp; Poist, 2003)</td>
</tr>
<tr>
<td>environmental issues’ impact on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>logistics/ SCM functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>general comparative result :</strong></td>
<td>informal (no explicit environmental mission statement)</td>
<td>formal (explicit environmental mission statement)</td>
</tr>
<tr>
<td>type of environmental policy</td>
<td>(Murphy &amp; Poist, 2003)</td>
<td>(Murphy &amp; Poist, 2003)</td>
</tr>
<tr>
<td></td>
<td>(Min &amp; Galle, 2001)</td>
<td>(Min &amp; Galle, 2001)</td>
</tr>
<tr>
<td><strong>specific results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>specific result</td>
<td>in academic literature, <strong>compliance</strong>-oriented approaches (&quot;monitoring, evaluation, reporting and sanctions&quot; as SSCM-supporting factors)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dominate more partnering approaches (&quot;training and education of [...] suppliers&quot;) (Müller &amp; Seuring, 2006)</td>
<td></td>
</tr>
<tr>
<td>preconditions for partnering</td>
<td>partnering approaches (cooperation with suppliers, supplier development, training and education) are more likely if the company adopts a <strong>proactive</strong>, competition-oriented strategy (labelled “SCM for sustainable products”) rather than if adopting an alternative strategy labelled “avoiding risks from global supply chains”. (Müller &amp; Seuring, 2006)</td>
<td></td>
</tr>
<tr>
<td>approaches with suppliers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>factors (preconditions) for ecological influence exertion</th>
<th>dependence (Min &amp; Galle, 2001)</th>
<th>dependence (Stephan, 2003)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Dobilas &amp; MacPherson, 1997); not firm size (Min &amp; Galle, 2001)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>specific result: means of ecological influence exertion</th>
<th>compliance (supplier selection), otherwise: rejection, i.e. no partnership approach, for both U.S. and non-U.S. firms (Murphy &amp; Poist, 2003)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>compliance-oriented (supplier selection criteria); no partnership approach (result might be influenced by the authors’ mindset and research design) (Min &amp; Galle, 2001)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>company-specific results</th>
<th>forced compliance</th>
<th>forced compliance coexisting with cooperative partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <em>U.S. DuPont</em>, explained by particularities of the MNE’s products, processes and industry (urgency; high environmental risks); • <em>U.S. Varity</em> (Dobilas &amp; MacPherson, 1997)</td>
<td>• <em>Canadian Northern Telecom</em> • forced compliance (government regulations and standards), explained by high bargaining power (technological and commercial leadership); elevation of environmental matters to executive positions within corporate hierarchy • cooperative partnerships</td>
</tr>
<tr>
<td></td>
<td><em>U.K. British Telecom</em>, explained by high bargaining power (technological and commercial leadership); elevation of environmental matters to executive positions within corporate hierarchy (Dobilas &amp; MacPherson, 1997)</td>
<td></td>
</tr>
</tbody>
</table>
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(suppliers environmental policies; training)
(Dobilas & MacPherson, 1997)

<table>
<thead>
<tr>
<th>absence of enforcement mechanisms and weak bargaining power towards suppliers</th>
<th>for “many European and U.S. MNEs”, like U.S. Xerox</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Dobilas &amp; MacPherson, 1997)</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: synopsis of our findings.

**Conclusion:**

We observed the predominance of ecological issues in the available academic literature, preferring “green or ecological supply chains” to “sustainable supply chains”. One of the only contributions aiming explicitly sustainable supply chains - i.e. simultaneously integrating economic, ecological and social dimensions - was Müller and Seuring’s (2006) exhaustive literature review, however without providing for a comparative, country-specific approach.

On a **general ecological level**, U.S. and non U.S. MNEs show **many similarities**. Environmental issues are as important for U.S. as for non U.S. MNEs (Murphy & Poist, 2003). U.S. and non U.S. firms have the same view about the degree to which environmental issues impact various logistics functions (Murphy & Poist, 2003). Major **reasons** for environmental policies are **tactical and reactive** (→ yielding cost reductions) rather than strategic or proactive factors - for both U.S. and non U.S. firms (Murphy & Poist, 2003). This latter result, however, is contradictory with former findings of Rogers and Tibben-Lembke’s (1998) who cited – for U.S. companies - strategic factors as major motives for doing e.g. reverse logistics. This contradiction might be explained by Rogers and Tibben-Lembke’s
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(1998) mindset, considering reverse logistics close to the after sales service conception and not necessarily linked to ecological missions.

Only **one major difference** was identified with regards to general ecological issues : U.S. MNEs’ **environmental policy** is generally **informal**, whereas non U.S. MNEs have an explicit environmental mission statement. (Murphy & Poist, 2003; Min & Galle, 2001).

With regards to MNEs’ sustainable influence exertion on suppliers, our comparative literature review yielded the following results : in academic literature, **compliance**-oriented approaches (“monitoring, evaluation, reporting and sanctions” as SSCM-supporting factors) dominate more partnering approaches (Müller & Seuring, 2006). Partnership approaches (cooperation with suppliers, supplier development, training and education of suppliers) are more likely if the company adopts a **proactive**, competition-oriented strategy (labelled “SCM for sustainable products”) rather than if adopting an alternative strategy labelled “avoiding risks from global supply chains” (Müller & Seuring, 2006). The confrontation with Murphy & Poist’s (2003) results (see above) helps to explain why MNEs prefer compliance-oriented approaches with regards to sustainable influence exertion on suppliers, including supplier selection. Min & Galle (2001) confirm, in their survey limited to U.S. companies, this predominance of compliance-oriented approaches (once again including supplier selection criteria). U.S. and German companies, however, seem to be more involved in collaboration with suppliers than their U.K. counterparts (Zsidisin & Hendrick’s, 1998). Not surprisingly in this context of compliance-oriented approaches’ predomination : dependence and market power are cited as main explaining factors or preconditions for ecological influence exertion, both by U.S./ Canadian (Min & Galle, 2001; Dobilas & MacPherson, 1997) and European authors (Stephan, 2003).
Dobilas & MacPherson (1997) cite other explaining factors that might accompany, amplify or outweigh cultural reasons: MNE’s products, processes and industry (urgency; high environmental risks); a technological and commercial leadership; the elevation of environmental matters to executive positions within corporate hierarchy. The authors observe the coexistence between forced compliance and cooperative partnerships for (only) one Canadian company (Canadian Northern Telecom), whereas forced compliance is confirmed for both U.S. (DuPont; Varity) and non-U.S. companies (British Telecom). They assume the absence of enforcement mechanisms (→ operational analysis level) and weak bargaining power towards suppliers for “many European and U.S. MNEs”, however without providing empirical evidence and without explicitly conceiving partnering approaches as an alternative in this context.

More empirical evidence is needed to confirm our findings. We also encourage the scientific community to compare the various theoretical models, susceptible to reveal significant differences with regards to the authors’ culture and origin: indeed, SD and CSR appear sometimes as independent (input), sometimes as dependent (output) variables; the adopted logic is sometimes normative, sometimes economic.
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