"Governance and IPP - the example of the textile industry"

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Summer Academy
From Government to Governance:
The Case of Integrated Product Policy (IPP)
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Content

- Three Perspectives of Substance Chain Management
- Symbols as Ways to Deal with Governance in Complex Substance Chain Environments
- Three Illustrative Examples of Interpretive Substance Chain Management in the Textile Chain
- Conclusion and Outlook on Future Research
Some preliminary remarks

- Presentation will enhance awareness for an alternative perspective on substance chains
- It is inspired by social science theory
- The empirical base is the EcoMTex (Ecological Mass Textiles)-Project
Project Partner - EcoMTex

University of Oldenburg
Coordination

University of St. Gallen
Marketing-Strategies

Öko-Institut, Freiburg
Ecological Assessment

FH Hannover
Textile Design

Steilmann
Synthetic Fibers
(Polyester)

Otto
Fallstudie Natural Fibers
(Baumwolle)
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Technical and Social Science Perspective in SubCM

Substance Chain Management (SubCM)

Technical Perspective
- Substance Chain is flow of material + information
- Goal: Technical optimization of Supply Chains

Social Science Perspective
- Substance Chain is coordinated social process
- Goal: Understanding of the social dynamics between the actors
Or more specific: Three perspectives of Substance Chains

<table>
<thead>
<tr>
<th>Understanding of the Substance Chain</th>
<th>Disciplinary Approach</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical-/Engineering-Flow-Perspective</td>
<td>A Substance Chain is a flow of material and information</td>
<td>Engineering Science, Computer Science, Mathematics</td>
</tr>
<tr>
<td>Actor/Economic-Perspective</td>
<td>A Substance Chain is a set of economically rational acting partners</td>
<td>Economics</td>
</tr>
<tr>
<td>Symbol-/Culturalistic-Perspective</td>
<td>A Substance Chain is a social system embedded in shared normative and interpretive schemes</td>
<td>Social/Organizational Science</td>
</tr>
</tbody>
</table>
Three Perspectives of Substance Chain Management

Symbols as Ways to Deal with Governance in Complex Substance Chain Environments

Three Illustrative Examples of Interpretive Substance Chain Management in the Textile Chain

Conclusion and Outlook on Future Research
SubCM is Management of Complexity – Dimensions of Complexity

- Program Complexity
- Product Complexity
- Process Complexity

- Technological Change
- Changing Consumer Behaviour
- Changing Competitor Reaction
- Stakeholder Demands
- ....

Bliss 2000
Important Complexity Factors in Substance Chains

- High technological dynamics
- High dynamic in consumer preferences and behaviour
- Cultural conflicts in international Supply Chains
- Big number of involved actors (Suppliers, Stakeholder, Government)

Complexity factors limit the possibility of a pure technical/mathematical optimization. They create the need for complexity management appropriate for complex social systems.
Symbol Systems help to reduce Complexity in SubCM

- Reduce the number of possible alternatives
- Create stability and certainty in social settings
- Arise over long times in organizations
- Can not be changed by a single actors
- Need interpretation and context management to be understood and changed
- Can have the format of „trends“, „standards“, „interpretation systems“
Symbol Systems are normative and interpretive schemes, which help to coordinate actions among individuals and among organizations.
Symbol Systems in Substance Chain Governance

Rules for Product Development

Quality Management System/Standard

Consumer Fashion Trends

Supplier
Producer
Retailer
Consumer
Recycler

Cost Management Systems

Recycling Standards
Role of Symbol Systems

- Reduction of complexity
- Efficient coordination between actors
- Definition of innovation trajectories
Basic ideas of an interpretive Substance Chain Management

- Need of „interpretive managers“*
- Understanding SubCM as an open-ended process, which needs a continued interpretation of the complexity variables and its transformation by symbol systems
- Managers as leaders of a „Jazz Combo“

*Lester, Priore, Malek (1998)
Content

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◆ Conclusion and Outlook on Future Research
Reasons for the Selection of the Textile Chain as Illustrative Case

- „Symbolic“ market environment
- Instability of the whole chain (nearly season-oriented change of supply chain-partners)
- Highly international supply chain which is embedded in various cultural contexts
## Selection of the three illustrative examples

<table>
<thead>
<tr>
<th>Symbol system</th>
<th>Concerned Complexity Dimensions</th>
<th>Involved Actors in the Definition of the Symbols System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fashion</td>
<td>Program, Product</td>
<td>Various Societal Forces, Designer, Companies by their Marketing/Promotion, Fibre-Textile-Producer</td>
</tr>
<tr>
<td>Ecological Classification Schemes</td>
<td>Processes, Product</td>
<td>Industry Representatives, Science, Environmental Agencies and Politics, Stakeholder like Environmental Organizations</td>
</tr>
</tbody>
</table>
Example 1: Fashion and Substance Chain Management

- Fashion trends have an impact on fibres, fabrics, colours and finishing substances in the textile industry.
- Are changing nearly every season.
- Are not alone, but also influenced by companies (e.g. by communication/promotion, development of new technology and products (e.g. „lycra“)).

Good supply chain management in the textile chain needs a comprehensive interpretive capacity – for interpreting fashion trends, market research results, simultaneously having in mind the delivering options of hundreds of possible suppliers in a global supply chain.
New Communication Schemes

- Escape from the „eco-perception“
- Association with „Pureness“ (Pure Wear), „Technology“, „Innovation“, \(\Rightarrow\) strictly avoid to activate eco-schemes!
- Re-Integration in the standard product range
Buyer Typology (Otto)

**Fashion and Trend**

**Fashion-Fans**
- Fashion First
- Bequemfraktion

**Ecology as Individual advantage**
- Gesundheits-Wellness-Freundinnen

**Niche Clients**
- Öko-Ästheten

**Ecology as Responsibility**
- Entspannte Öko-Verbraucher
- Öko-Dogmatiker

**Fashion of low Importance („Modemuffel“)**
- Modeängstliche

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Integrated Communication from buying decision to delivery

Before Buying

Serve Pages

Environmental report

www.otto.com/umwelt

After Sale

When more Information is needed
Example 2: Cost Management Systems

- Impact within companies and affection their supply chain decisions
- Influenced by „Objectivity“, „Exactness“ and „Production“-Myth
- Are an interpretive framework to look at the company or the supply chain to support and to legitimate decisions in organizations
- High impact of calculation/costing rules in textile chain

Uncovering the myths, applying new cost perspectives (e.g. Activity Based Accounting), discovering new coordination schemes in the supply chain
Locked in the niche...

Low production volume
High production costs per unit
High consumer prices

Low demand

High consumer prices
Concentration on niche segments

Low demand
## Kostentreiber-Analyse

<table>
<thead>
<tr>
<th>Baumwollanbau</th>
<th>Spinnerei</th>
<th>Weberei/Wirkerei/Strickerei</th>
<th>Färbeerei/Veredelung</th>
<th>Konfektion</th>
<th>Otto</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+ 30%</td>
<td>+ 20%</td>
<td>+ 1 - 50%</td>
<td>bis +10%</td>
<td>+ 5%</td>
</tr>
</tbody>
</table>

**Einsatz von Bio-Baumwolle:**
- Kleinaufträge Spinnerei
- Kleinaufträge Weberei
- Strickerei: separate Verarbeitung
- Transaktionskosten
- Separates Handling

Multiplikationseffekte in ökologisch-optimierten Ketten

Kumulierte Kosten

Kosten Öko-Produkte

Kosten konventionelle Produkte

Verkaufspreis Öko-Produkt

Verkaufspreis konventionelles Produkt

Kostendifferenz

0,50-0,60 €/kg

= 15-25%

0,60-0,90 €/kg

= 15-30%

1,00-10,00 €/Stück

= 15-50%

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Example 3: Ecological Standards

- Ecological classification schemes give simple orientation in a world of thousands of different substances
- Are embedded in scientific (e.g. established test systems, standardized measure methods for effects) and political (Eco- and risk principles) symbol Systems

Active Co-Development of these schemes by companies and industry associations
Die im Projekt entwickelten EcoMTex-Kriterien...

- umfassen drei Klassen: empfehlenswert, einsetzbar, Ausschluß
- greifen auf und ergänzen das TEGEWA-Konzept zur Textilhilfsmittelklassifikation
- sind auch auf auf Farbmittel anwendbar
- lassen optische Aufheller in der Ausrüstung zu
Die im Projekt entwickelten Kriterien haben sich im Projekt als praktisch einsetzbar erwiesen

- Sowohl aus Biobaumwolle als auch aus gefahrstofffrei katalysiertem Polyester können modische Kleider hergestellt werden; in Verarbeitungsprozessen, bei denen Umwelt- und Arbeitsschutz auf hohem Niveau gewährleistet sind.
- Die Prozessoptimierung lohnt sich für die Veredlungsunternehmen. Rohstoffe, Energie, Textilhilfsmittel und Kosten können eingespart werden.
- Die EcoMTex-Kriterien erleichtern die Auswahl von Textilhilfsmitteln und Farbstoffen, die unter Umwelt-, Arbeitsschutz- und Verbraucherschutz-Gesichtspunkten empfehlenswert sind.
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Consequences for Substance Chain Management and IPP

- Need for a good understanding of the power of existing symbol systems in substance chains
- Strengthen the competence for the interorganizational development of shared symbol systems within IPP
- Application of additional social science theory to better understand the general effects of symbol systems (e.g. Organizational Culture-Research, Theory of Structuration/Giddens, Symbol Structures/Bourdieu)
- Research on best practice cases of the successful change of symbol systems
Questions? Further information?

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Literature


