
Institute of Innovation Marketing, Technical University Hamburg-Harburg (TUHH)

16-02-2017 BiNa-Workshop | Friederike Esther Rhein

Bei den folgenden Inhalten handelt es sich um bislang unveröffentlichte (Zwischen-)Ergebnisse. Wir bitten darum diese mit der entsprechenden Vertraulichkeit zu behandeln.

Weiterverwendung der Inhalte darf nur nach Absprache mit der Verfasserin erfolgen.
„Green Chemistry“: Market Dynamics

- Volatility in raw material prices of petrochemicals coupled with depleting fossil fuel reserves
- New and different functionalities of biological feedstocks
- Growing LOHAS share: consumer demand for more environmentally friendly products
- Sustainability issues more prominent on companies’ agenda: brand owners’ sustainability visions & green marketing efforts
- Alternative routes based on renewable resources / R&D shift towards bio-based technologies
- Increasing role of materials derived from biomass: new, value-added products & potential low cost substitutes
- Stringent government regulations / bans on account of environmental concerns, federal green purchasing programs promoting eco-friendly products
- National Research strategy / Innovation funding programs & activities (e.g. BioEconomy 2030, Horizon 2020, PPPs)
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The “greening” of brand owners drives innovation in bio-based materials: Brandowners’ sustainability messages

“We are working to completely eliminate the use of nonrenewable fossil fuels in our plastic bottles while maintaining quality and recyclability”

“Reducing the environmental impact of packaging: we will be developing partnerships with 2nd and 3rd generation bioplastics manufacturers”

“Using 100% renewable or recycled materials for all products and packaging”

“Halve the greenhouse gas impact of our products across the lifecycle by 2020”

“By 2020 100% of our plastics will be from renewable or recycled sources (...) With size comes responsibility.”

“(...) We have already taken important steps to reduce our carbon footprint (...) Now we are accelerating our focus on materials.”

“Green. That’s how we’d like the world to be. As an environmental leader, we do more than meet industry standards – we seek to raise them”
Diffusion of „green“ Product Innovation: Increasing role of bioplastics

Bridgestone, Cooper Tire and Goodyear developing sustainable tires made from plants

LEGO Group to invest 1 Billion DKK for sustainable materials

Mitsubishi Chemical develops new bio-based plastic, Durabio, for automotive touch panels

Tetra Pak signs Bio-LDPE supply deal in Brazil

Industry News
Bio-based Microcellular PU Foam for Shoe Soles: Reverdia/Xinhuarun Partnership
Published on 2016-10-07. Author: SpecialChem

Vertraulich
Research Aim
(1) Examine why companies “go green” & investigate switching behaviour
(2) Exploring Market Entry Dynamics & Diffusion Patterns
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BIO-PLASTICS
THE NEXT BIG THING?
Why companies “go green” - parts of a big jigsaw puzzle

“In all, PlantBottle™ packaging is delivering against three key business values: It is a brand differentiator. It is a major advance in our goal to use more sustainable packaging. And by reducing our dependence on petroleum and natural gas, it enables us to control costs and keep our products affordable. [...] In April 2011, PlantBottle™ packaging received an Edison Award recognizing the most innovative products from a variety of categories. Wal-Mart Stores, Inc., recognized PlantBottle™ packaging in June 2011 with their Sustainable Packaging Award. In 2012, McDonald’s Corporation selected PlantBottle™ packaging for its 2012 Global Best of Sustainable Supply Report.“ (Coca Cola Company Website; 2016)

“One important lesson we have learned on our journey toward zero waste is that more sustainable packaging is a complex issue and a hard one to communicate.“ (Coca Cola Company Website; 2016)
Why companies “go green” - parts of a big jigsaw puzzle

"Four years ago, the only driver was consumers interested in buying a “green” product, he said. Today, PLA also is starting to offer a more competitive financial prospect. On a price per pound basis, PS is still cheaper, but because PLA packaging can be produced with a thinner wall and takes less space in shipping, it can be the same in a price per piece, Forowycz said. Darone also sees the potential for PLA to offer greater price stability in the long run than a material based on petroleum." (Plasticnews, 19.02.2014)


Different motivations of brand owners driving the switch towards bioplastics: The Value Equation

- **Social Legitimacy: Corporate Identity & Green Marketing**
  - Reduce Carbon Footprint ("Low-Carbon Economy")
  - Embark leakage into the environment ("Circular Economy")
  - Maximize conversion of renewable resources / Reduction of fossil fuel usage & decoupling ("Bioeconomy")

- **Technical Efficiency: Product Performance & Cost Control**
  - Functional benefits / "unique selling proposition" (new / enhanced technical performance, e.g. superior gas barrier, tensile strength, impact resistance, lightweight, optical properties)
  - Direct Cost Advantages (easier to process, subsidies & tax credits, improving supply security and price predictability or hedging of price volatilities)

- **Or any combination thereof.**
Different Logics in Procurement Decision determine Diffusion Patterns: Goal Frames & Switching Behaviour

- **Companies’ “green Mission Statement“**: Long-term goals, interim targets & measures
- **Companies’ ressources and betting on the future**: Gains vs. losses, Capital expenditures & Payback periods
- **Green marketing**: Product portfolio, Premium pricing & Promotion, Communications & Public relations, Partnerships
- **Target market**: Niche / Mainstream
- **Scaling & Timing strategy**

"Crossing the chasm?!"

A Typology of Early Adopters and Switching Behaviour

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>&quot;Increasing Efficiency Investment&quot;</td>
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