

Business model innovation for biomass development: A Literature Review

**INTERNATIONAL SCIENTIFIC CONFERENCE
SUSTAINABLE BIOECONOMY DEVELOPMENT 2020
From Thinking Globally to Acting Locally**

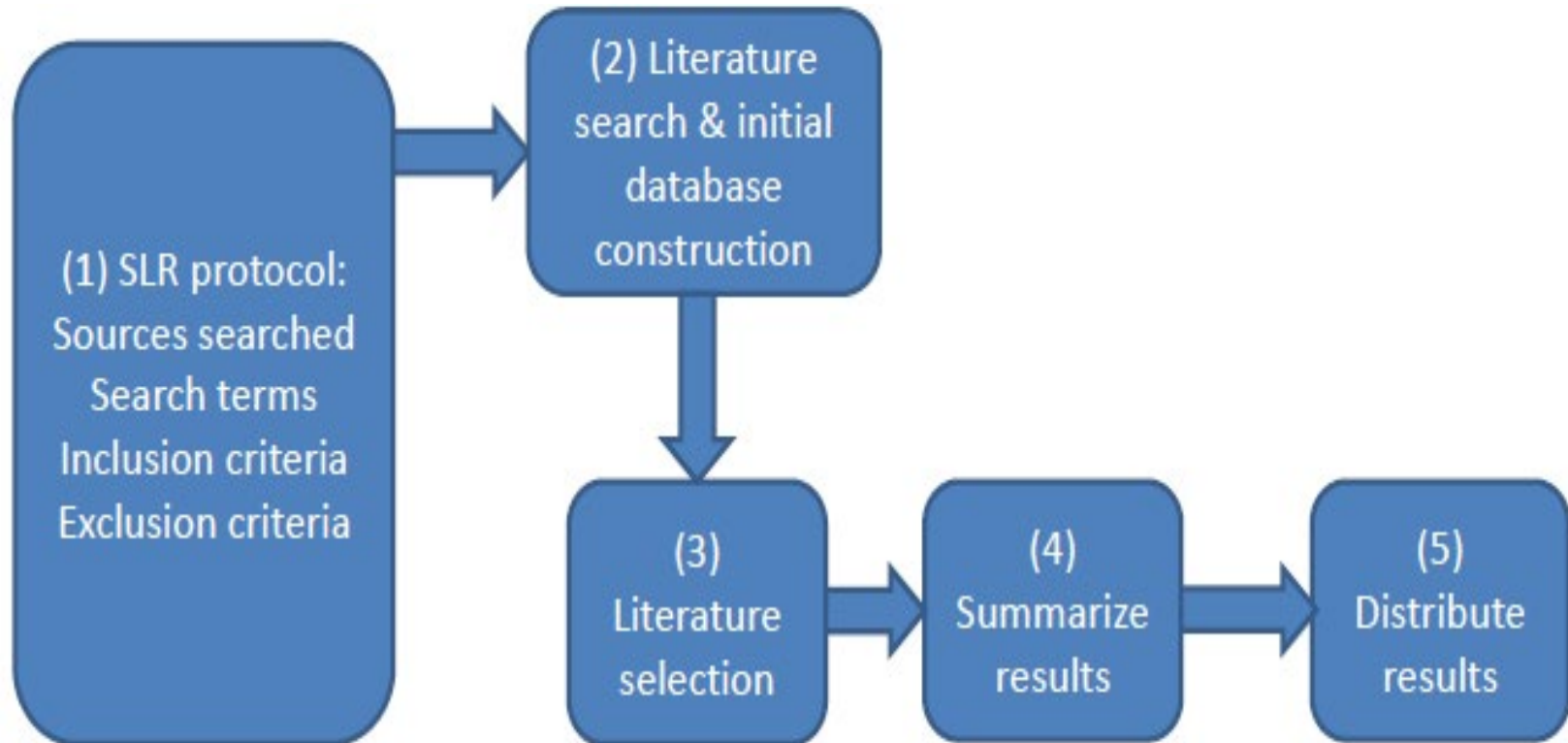
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Background

- Business models and business model innovation are seen as a key to companies' competitiveness, renewal and growth (Teece, 2010; Foss & Saebi, 2017).
- However, empirical research on the business models is predominantly European-based in the sectors of media, information technology and biotechnology.
 - research on business in the biomass area have gained limited attention

Methods

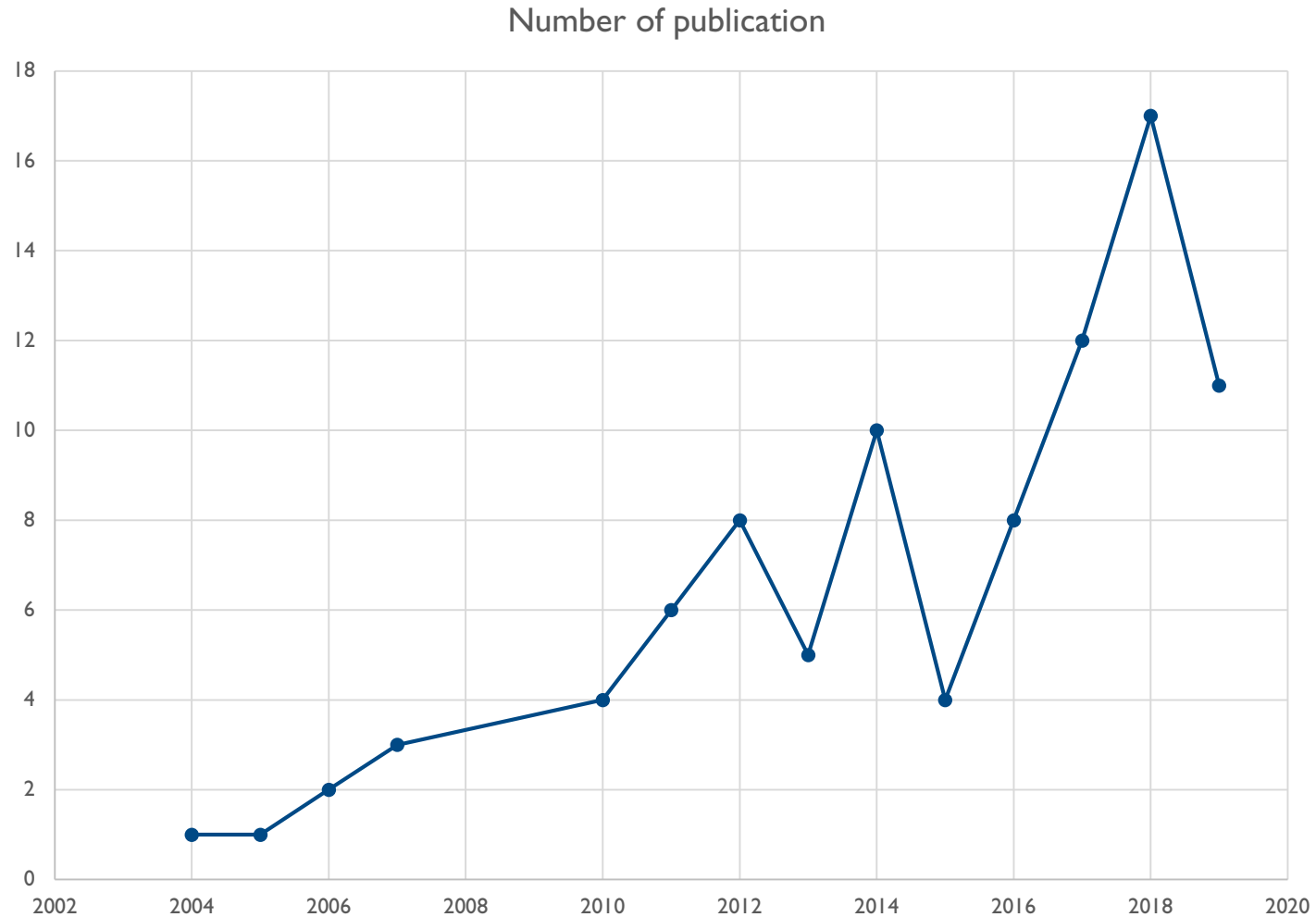


SLR based on the work of Hart (2001), Hörte et al. (2008), and Jesson et al. (2011)

Methods

| Database(s) | Yielded |
|--|----------------|
| Web of Science | 38 |
| Scopus | 75 |
| ABI Inform | 7 |
| Emerald | 4 |
| Science Direct | 50 |
| Academic Search | 65 |
| Springer-Link | 8 |
| DOAJ | 5 |
| Total articles yielded | 252 |
| Duplicated | -107 |
| Total articles categorized in excel | 145 |
| Eliminated | -13 |
| Total articles analyzed | 132 |

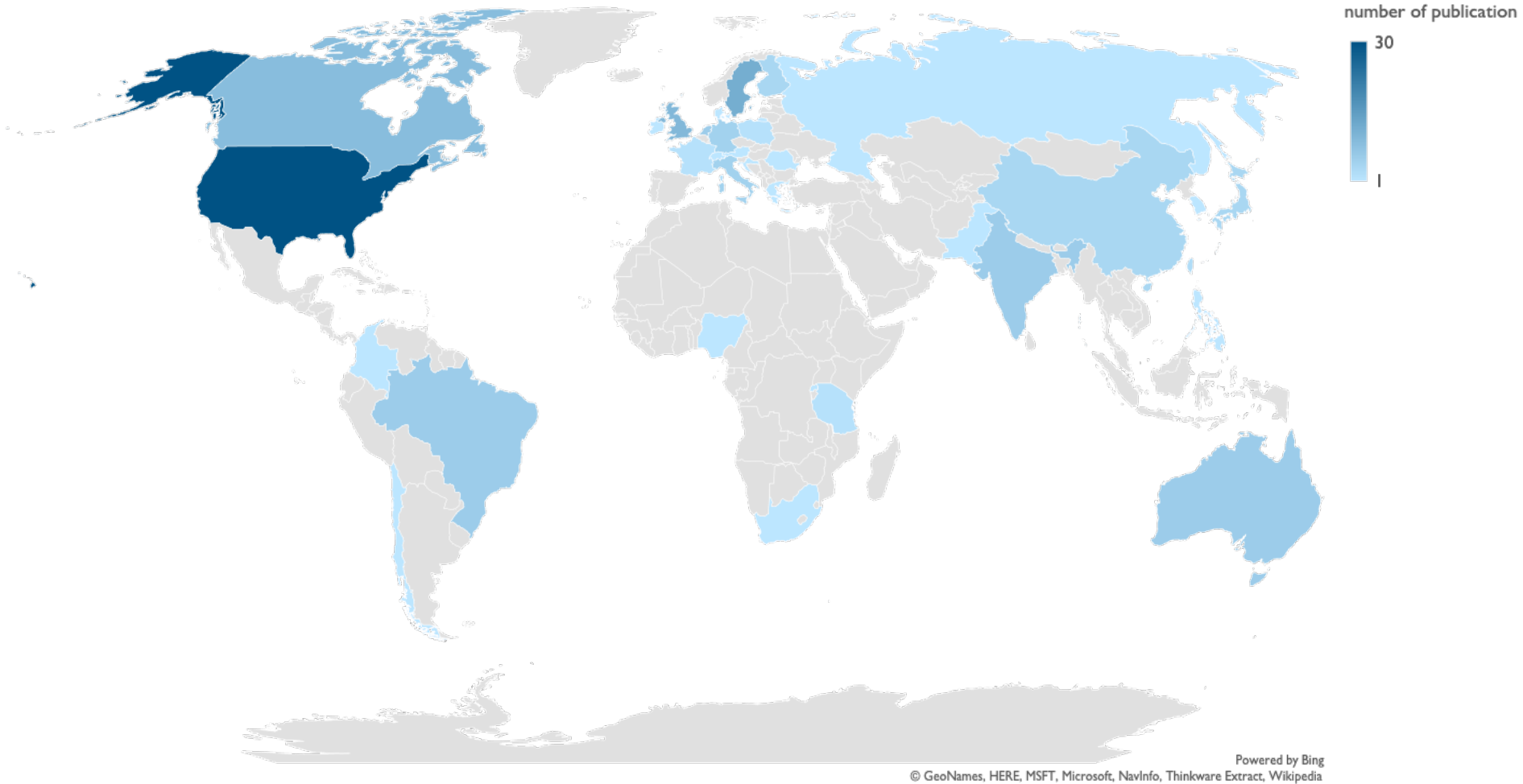
Number of articles published last 20 years on business models and Biomass



Most cited articles

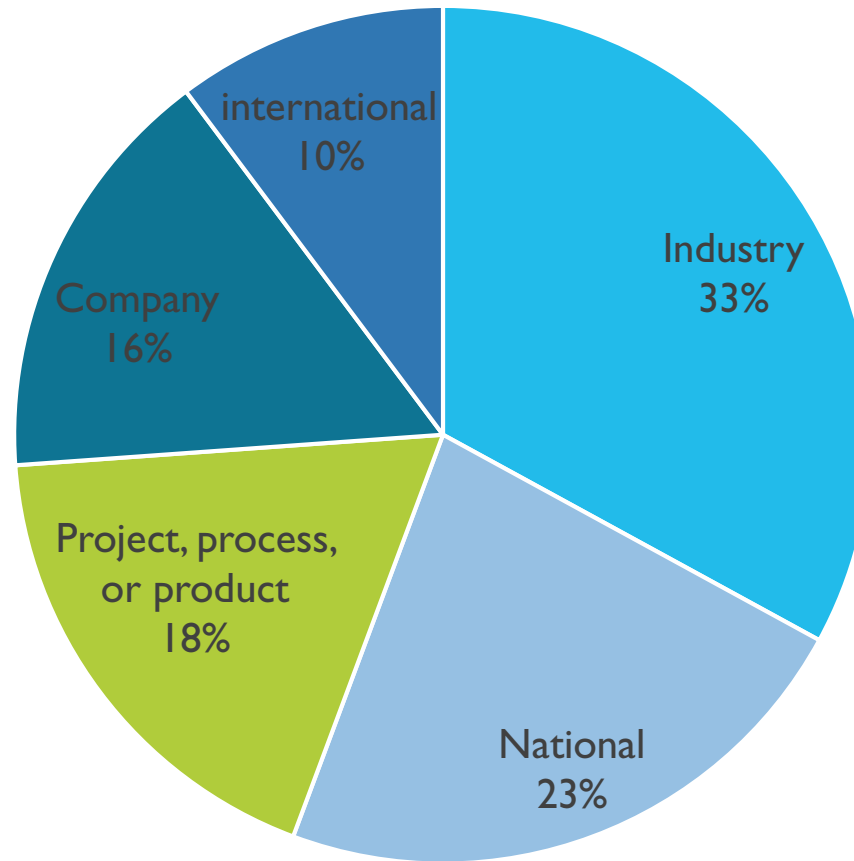
| Authors | Year | Title | Journal Title | Impact factor of the journal | No of citations (Scopus citations) |
|---|------|--|--|------------------------------|------------------------------------|
| C. K. Prahalad Di Benedetto, C. Anthony Nakata, Cheryl C. | 2012 | Bottom of the pyramid as a source of breakthrough innovations | Journal of Product Innovation Management | 4,305 | 224 |
| Tom L. Richard | 2010 | Challenges in Scaling Up Biofuels Infrastructure | Science | 41,063 | 203 |
| Peter Asmus | 2010 | Microgrids, Virtual Power Plants and Our Distributed Energy Future | The Electricity Journal | 0,89 | 184 |
| Mansoornejad, B. Chambost, V. Stuart, P. | 2010 | Integrating product portfolio design and supply chain design for the forest biorefinery | Computers and Chemical Engineering | 3,334 | 73 |
| Wesley Foell Shonali Pachauri Daniel Spreng Hisham Zerriffi | 2011 | Household cooking fuels and technologies in developing economies | Energy Policy | 4,88 | 64 |
| Gireesh Shrimali Xander Slaski Mark C. Thurber Hisham Zerriffi | 2011 | Improved stoves in India: A study of sustainable business models | Energy Policy | 4,88 | 57 |
| Xu, Dongmei Hao Liu | 2018 | Carbon Sequestration Capacity of The Forest | Chemical Engineering Transactions | 0,76 | 53 |
| Pantaleo, A. Candelise, C. Bauen, A. Shah, N. | 2014 | ESCO business models for biomass heating and CHP: Profitability of ESCO operations in Italy and key factors assessment | Renewable and Sustainable Energy Reviews | 10,556 | 52 |
| Antonios D. Livieratos Panagiotis Lepeniotis | 2017 | Corporate venture capital programs of European electric utilities: Motives, trends, strategies and challenges | The Electricity Journal | 0,819 | 49 |
| Sari Hämäläinen Annukka Näyhä Hanna-Leena Pesonen | 2011 | Forest biorefineries – A business opportunity for the Finnish forest cluster | Journal of Cleaner Production | 6,395 | 49 |

Countries of Authors



Unit of Analysis

Percent of publications



Main Areas of Discussion



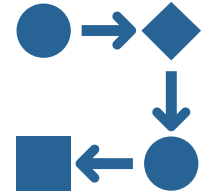
Policy



Long-term
Viability



Environmental
sustainability

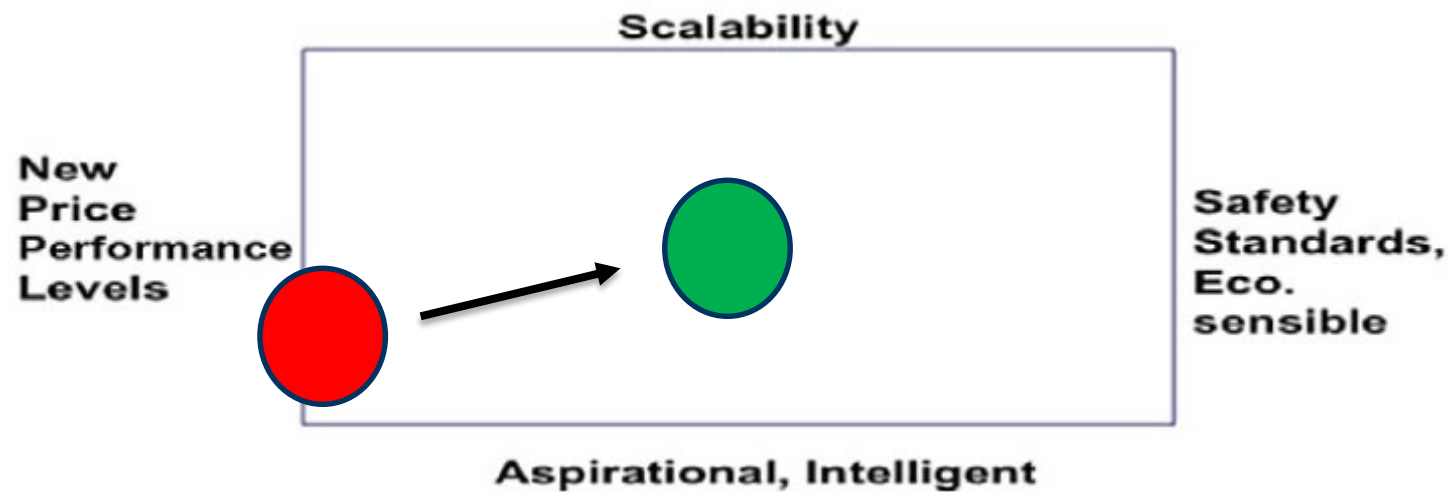


Process Feasibility

Findings on Business Model (BM)

- Major focus on *value capture* of BM, such as cost structure, feasibility and revenue streams, which is a necessity in the short run...
 - ...but from a strategic perspective attention also need to adress *value intention, value proposition, and value creation and delivery* (Barth et al, 2017; 2018).
- Sustainability is discussed in several articles, but few address (or connect to) framework on Sustainable BM (for example, Bocken et al, 2014) or use checklists/tools/methods for sustainable innovation (for example, Prahalad, 2012)

The Challenge - Making the movement towards *sustainable* solutions



Innovation Sandbox (Prahalad, 2012)

Interested in the findings?

Send me an e-mail and you get a copy when it is published: Henrik.Barth@hh.se

Thank you for your attention!