IMPORTANCE AND SUCCESS FACTORS OF
STRATEGIC SUPPLIER PARTNERSHIPS IN
THE CONTEXT OF INDUSTRY 4.0
– 24th EurOMA conference –
05.07.17
Grit Teichgräber | Prof. Dr. Holger Müller
Agenda

Definitions
Industry 4.0 | Procurement 4.0 | SSP

Research Methods

Results

Conclusion
Definitions

Industry 4.0 | Procurement 4.0

„Industry 4.0 describes the organisation of production processes based on technology and devices autonomously communicating with each other along the value chain.“ (Smit et al., 2016, p. 20)

Procurement 4.0 describes the future-oriented adjustment of procurement to the impulses triggered by and to the technologies associated with Industry 4.0.
Definitions

Strategic supplier partnerships (SSP)

"An ongoing relationship between buying and supplying firms involving a commitment over an extended time period, and a mutual sharing of information; it may include the sharing of risks and the rewards of the relationship." (Hendrick and Ellram, 1993, p. 14)
Research methods
Research question and motivation

• „..... we found that two of the major dimensions of environmental uncertainty — technology change and market uncertainty — influence the adoption of supplier alliances and several related constructs very differently. Technology change has positive effects on strategic purchasing, specific investments and supplier alliances.“ (Lee et al., 2009, S. 190)

• „The term “Industrie 4.0” was initially coined by the German government. It describes and encapsulates a set of technological changes in manufacturing and sets out priorities of a coherent policy framework with the aim of maintaining the global competitiveness of German industry.“ (Smit et al., 2016, S. 20)
Research methods

Research question and motivation

- Does Industry 4.0/Procurement 4.0 impact the importance of strategic supplier partnerships?
- Which aspects are responsible for the changing importance?
- Are there additional success factors that become relevant in the context of Industry 4.0?
Research methods

Research design

- mixed-method approach

  1. qualitative research: semi-structured interviews
     → 6 interviewees from Leipzig (German city)
     → from October till November 2016
     → analysis: Thematic Analysis (MAXQDA)

  2. quantitative research: self-completion questionnaire
     → 38 persons surveyed from the German region Saxony
     → from December 2016 till January 2017
     → analysis: univariate, descriptive statistics (IBM SPSS)
Results

Evaluations of the current and future importance of SSPs

5 = very important
4 = important
3 = undecided
2 = rather unimportant
1 = unimportant

today (n = 38) in the future (n = 38)

3.7
4.2
Results
Industry 4.0’s impact on the growing importance of SSPs

- **very high impact**: 15.8%
- **high impact**: 39.5%
- **medium impact**: 23.7%
- **low impact**: 15.8%
- **no impact**: 5.3%

(n = 38)
## Results

Factors that influence the increasing importance of SSPs

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Results</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-parts</td>
<td>![3,7]</td>
<td>Strategic supplier partnerships are mainly built and maintained with suppliers of A-parts. These relationships are characterised by complex work packages and particular specifications.</td>
</tr>
<tr>
<td>pioneer role</td>
<td>![3,4]</td>
<td>Throughout the entire transformation process towards Procurement 4.0, strategic partners are expected to play a pioneer role. This means that new applications will be tested first with strategic partners.</td>
</tr>
<tr>
<td>Cloud</td>
<td>![3,3]</td>
<td>Only strategic partners will be involved in the supplier integration and the data exchange (via Cloud), as a certain amount of trust is required.</td>
</tr>
</tbody>
</table>
## Results

Factors that influence the increasing importance of SSPs

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Results</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flexibilisation</td>
<td>![3,2]</td>
<td>Presumably, the further flexibilisation of the supply chains could lead to a lower depth of added value and could facilitate the exchangeability of both suppliers and buyers. Nevertheless, strategic supplier partnerships are expected to become more important in order to create stable supplier relationships that foster the realisation of joint development projects and the long-term exploitation.</td>
</tr>
<tr>
<td>Big Data and Analytics</td>
<td>![3,2]</td>
<td>Big Data and Analytics are expected to lead to an increasing price transparency concerning C-parts. It is likely that suppliers will be exchanged more often. Nevertheless, strategic supplier partnerships will be important also in the C-parts section in order to serve as back-up suppliers.</td>
</tr>
</tbody>
</table>
## Results

Newly identified success factors of SSPs

<table>
<thead>
<tr>
<th>Factor</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>data protection and security</td>
<td>4.2</td>
</tr>
<tr>
<td>suppliers’ open-mindedness regarding Industry 4.0-specific development programmes</td>
<td>3.8</td>
</tr>
<tr>
<td>the partners’ ability to develop Industry 4.0-suitable products</td>
<td>3.6</td>
</tr>
</tbody>
</table>

05.07.17  Grit Teichgräber | Prof. Dr. Holger Müller
Conclusion

- SSPs become more important in the context of Industry 4.0
- various aspects are responsible for the growing importance (e.g. data exchange via Cloud or Big Data and Analytics)
- additional success factors have been identified: data protection and data security, the suppliers’ open-mindedness regarding Industry 4.0-specific development programmes, and the partners’ ability to develop innovative and Industry 4.0-suitable products
DO YOU HAVE QUESTIONS?

THANK YOU FOR YOUR ATTENTION

Grit Teichgräber, MSc MA
grit.teichgraeber@stud.htwk-leipzig.de

Prof. Dr. Holger Müller
Holger.Mueller.SCM@htwk-leipzig.de

05.07.17