Intellectual Property: Tension on Open Innovation?

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Agenda

1) Introduction and Definitions

2) Literature: Intellectual Property and Open Innovation

3) Open Innovation Life-Cycle

4) Discussion and Implications
Introduction and Definitions

- **Introduction:**

  “The Congress shall have Power … to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” (U.S. Constitution Art. I, Section 8)

  - Firms turn innovation activities towards open collaboration with external partners
    (e.g. Chesbrough, 2003a; Gianiodis et al., 2010; West/Bogers, 2014; West et al. 2014)

  - Linking open innovation and intellectual property (IP) rights: Tension?

- **Definitions:**

  - **IP:**
    - Modes of IP regimes beyond patents
      (e.g. Conley et al., 2013; Granstrand, 1999)
    - Clear management perspective
      (e.g. Al-Aali/Teece, 2013; Di Minin/Faems, 2013)
  
  - **Open Innovation:**
    - Firms utilize in- and external sources and establish up- and downstream paths to markets
      (e.g. Chesbrough, 2003a; 2003b; Hagedoorn, 1993; 2002; Jespersen, 2010)
    - Extract value from work through IP on broader scope, e.g. by selling, licensing, or donating IP and by collaboration with partners
      (e.g. Conley et al., 2013; Fisher/Oberholzer-Gee, 2013; Peters et al., 2013)
Literature: Intellectual Property and Open Innovation

**IP: Enabler of Open Innovation**
- Baum et al. (2000)
- Dubiansky (2006)
- Maurer/Scotchmer (2006)
- Pisano and Teece (2007)
- Lichtenthaler (2010)
- Hagedoorn/Ridder (2012)
- Chesbrough/Chen (2013)

**IP: Disabler of Open Innovation**
- de Laat (2005)
- Simcoe (2006)
- Shinneman (2010)
- Georgiades (2011)
- Boyle (2012)
- Salter et al. (2014)

**IP: Ambivalent to Open Innovation**
- Graham/Mowery (2006)
- West (2006)
- West/Gallagher (2006)
- Alexy et al. (2009)
- Lee (2009)
- Lee et al. (2010)
- Rao et al. (2011)
- Bogers et al. (2012)
- Henkel et al. (2013)
- Belderbos et al. (2014)
- Laursen/Salter (2014)

- Few contributions focus on IP management in open innovation context
  (exceptions, e.g. Chesbrough/Chen, 2003; Lichtenthaler, 2010)
- **Selected enablers**: IP management (value capture strategies) and protection (firm openness)
  (e.g. Chesbrough/Chen, 2013; Dubiansky, 2006; Lichtenthaler, 2010; Pisano/Teece, 2007)
- **Selected disablers**: open source software environments (alternatives) and legal enforcement options
  (e.g. Boyle, 2012; de Laat, 2005; Simcoe, 2006; von Hippel/von Krogh, 2003)
- **Ambivalence**: IP with positive open innovation effects but conflicts between value creation and capture
  (e.g. Graham/Mowery, 2006; West, 2006; West/Gallagher, 2006)
- **Recommendation**: case-by-case decisions
  (e.g. Alexy et al., 2009; Bogers et al., 2012; Lee, 2009; Lee et al., 2010)

(Hagedoorn/Ridder, 2012; Laursen/Salter, 2014)
Open Innovation Life-Cycle: Categories and Stages

- **Prior research**: link between IP and open innovation, but few to no management recommendations

- **Stages**:
  1. Preparation: *upfront activities*
  2. Operation: *active collaboration*
  3. Termination: *deferred obligations*

- **Success Factor Categories**:
  - Planning: *e.g. general set-up, objectives, management involvement, openness, collaboration extent*
  - Partnering: *e.g. up- and downstream partner selection, similarity, required (networking) skills, trust*
  - Governance: *e.g. assignment of responsibilities and (business) ownership (via IP), formal regulation, incentives*
  - Competence, Culture, and Mindset: *e.g. skills development (training), failure treatment, information disclosure*
  - Competitive Landscape: *e.g. ending collaboration, general transformation, partners turning competitors*
## Open Innovation Life-Cycle: Selected Success Factors

**Overall Findings: 5 Categories with 24 Success Factors**

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<th>Category</th>
<th>Success Factors</th>
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| Planning                   | • Case-by-case IP approach profitable through value extraction options like licensing and layered cooperation schemes  
                              • Establishment of modular IP systems and alignment of technology and IP modules integral parts of planning | Alexy et al., 2009; Bogers et al., 2012; Henkel et al., 2013; Salter et al., 2014 |
| Partnering                 | • Clarification of control appropriation, IP ownership, and allocation of rights, e.g. in transaction-light partnerships, securable via standard IP protection contracts  
                              • High absorptive capacity obtain- and maintainable through internal innovation activities | de Jong et al., 2008; Grimaldi et al., 2013; Lee et al., 2010; Salter et al., 2014 |
| Governance                 | • Proactive IP management, based on strong but adaptable IP regimes and protection, is used to assign business ownership and responsibility for success  
                              • Appropriate governance mechanisms like contracts encompassing IP and compliance regulations standardize and publicize out-licensing processes | Alexy et al., 2009; Chesbrough/Chen, 2013 Chesbrough/Crowther, 2006; Dubiansky, 2006; Munsch, 2009 |
| Competence, Culture, and Mindset | • Training employees IP-, interpersonal-, project-management, and technological and networking competence incentivizes open innovation engagement  
                                      • Shifting mindset and people's understanding of open innovation culture enhances identification of potential external IP by R&D personnel | Chesbrough, 2003a; du Chatenier et al., 2010; Ritter/Gemünden, 2004; Nakagaki et al., 2012; Ollila/Elmquist, 2010; Salter et al., 2014 |
| Competitive Landscape       | • Integrating IP into knowledge exchange mechanism structures raises the competitive fit  
                              • Open innovation project termination is only feasible upon approval of all involved partners and needs to consider deferred obligations | Hoffmann/Schlosser, 2001; Laursen/Salter, 2014 |
Discussion and Implications

- **Discussion:**
  - Few contributions on IP and open innovation, even fewer on IP management
  - Relations between open innovation and IP:
    - IP to enable,
    - IP to disable, or
    - IP to ambivalently affect open innovation
  - Open Innovation Life Cycle: recommendations to proactively manage IP in open innovation settings
  - Lacking understanding of termination stage and deferred obligations
  - Hinge factor: disjunct lifetimes of open innovation activities and different IP regimes

- **Implications:**
  - IP management in open innovation requires
    - Long-term strategic orientation
    - Case-by-case management approaches
    - Appropriation of competence and experience across functional and managerial departments
  - Future research:
    - Time disparity
    - Success factors and Open Innovation Life Cycle
    - Termination stage

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Feedback, Q&A, …

Thank you.

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