Investigating the Governance of Open Innovation

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The notion of open innovation has raised attention both in academic research and in business practice.

Def.:

“Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively”

(Chesbrough, Vanhaverbeke, and West 2006)
Major points:

• A profit-maximizing strategy for innovating
  \textit{(Chesbrough 2003)}

• Role of business models that target both value creation and value capture
  \textit{(Chesbrough and Rosenbloom 2002)}

(Research has focused on value creation, even though value capture is crucial in an open innovation mode)
Also:

- "incentivizing and contracting" to enable innovation creation outside the boundaries of the firm  
  \textit{(West and Bogers 2011)}

- integrative competencies can be more important than technological competencies  
  \textit{(Christensen 2006)}
The GOVERNANCE of open innovation matters

Why? As a benchmark, compare with MFT

In MFT the innovation exists, and thus providing incentives to innovate is not an issue

In open innovation you manage future innovations as well, and thus providing incentives to innovate is important

In short, you need a governance that affects these incentives
But what is the governance of open innovation?

It’s the set of rules that establishes

… who takes decisions during the innovation process

… who owns the IPR over the final innovation

Why it matters? Because it affects:

1) how much value is created (value creation)
2) how it gets allocated (value capture)
The governance of open innovation

Instruments & Mechanisms:

1) Control Rights
2) IPR
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Instruments & Mechanisms: 1) Control Rights

- Governance sets boundaries on the set of decisions

Benefits of control:

- gear research towards own private objectives
- better bargaining position for value capture (greater bargaining power)
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Lerner and Merges 1998: The allocation of 25 rights is “painstakingly negotiated and carefully delineated.”

Right to shelve projects
Right to know-how transfer
Right to delay publications
Control of top project mng body
“Specified control rights place boundaries on the set of decisions that contracting parties can make and thus serve a role similar to ownership in the property-rights approach in creating incentives.” (Elfenbein and Lerner 2003)

Control rights are pie-splitting rights for value capture (Adegbesan and Higgins 2010)

Power shifts through the allocation of control (Panico 2011)
Instruments & Mechanisms: 2) IPR

- Governance sets who owns IPR on the innovation

Benefits:

- better bargaining position for value capture

*(ability to exploit the innovation for alternative uses)*
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NB/

- IPR is a dychotmous instrument (0 or 1)
- Control rights is continuous/fractional … i.e., you can calibrate it better (between 0 and 1)
- Implication: CR is more nuanced, it can be maneuvered better and can be used more precisely for the provision of incentives
We compare three modes:

- **Closed** (internal innovation)
- **Semi-open** (markets for tech.)
- **Open** (open innovation)

Main differences:

- **Closed mode:** no decision about IPR, CR (innovation prize to inventor)
- **Semi-open mode:** no decision about IPR, CR (exogenous, naturally with inventor)
- **Open mode:** decision about IPR, CR (endogenous allocation – governance)
We take the perspective of a firm that has market power \((\beta)\).

Then, we study the benefits of open innovation when:

- IPR and Control are non-fractional, either 0 or 1
- Control is fractional, in between 0 and 1

- This enables us to study the advantages of fine-tuning the allocation of control (well designed governance)
Findings

• When control is **nonfractional** *(poorly designed governance)* → open mode not always dominant *(in terms of value captured by the firm that designs the governance)*, and the firm can retain/transfer the IPR

• When control is **fractional** *(well designed governance)* → open mode always dominant *(in terms of value captured by the firm that designs the governance)*, and the firm always transfers the IPR
Our story then highlights the importance of Control compared to, e.g., allocation of IPR … and it lives or dies with the ability of firms to specify control rights (which are then crucial for OI)
Performances with non-fractional control
Performances with non-fractional control
Performances with fractional control
Role of the governance for affecting value creation and capture and for setting the correct incentives

The governance design competence makes open innovation the dominate mode

Control, as opposed to IPR, can be the crucial instrument for governing open innovation