

TiasNimbias Business School

Technology Strategy: basic concepts

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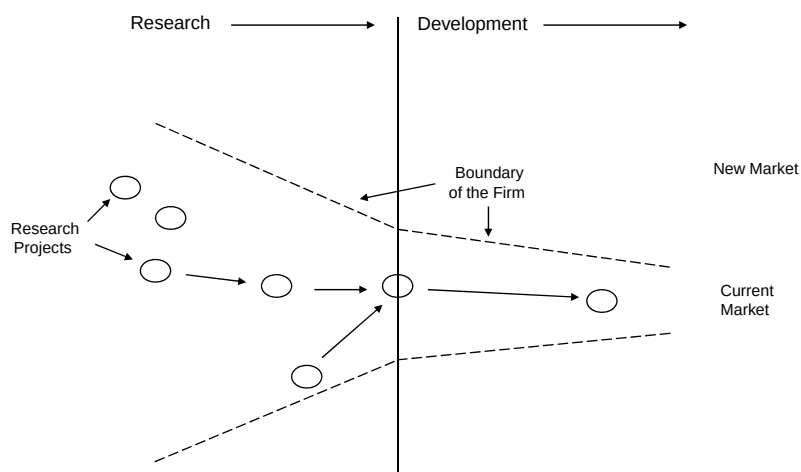
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“Closed innovation” paradigm (Chesbrough)

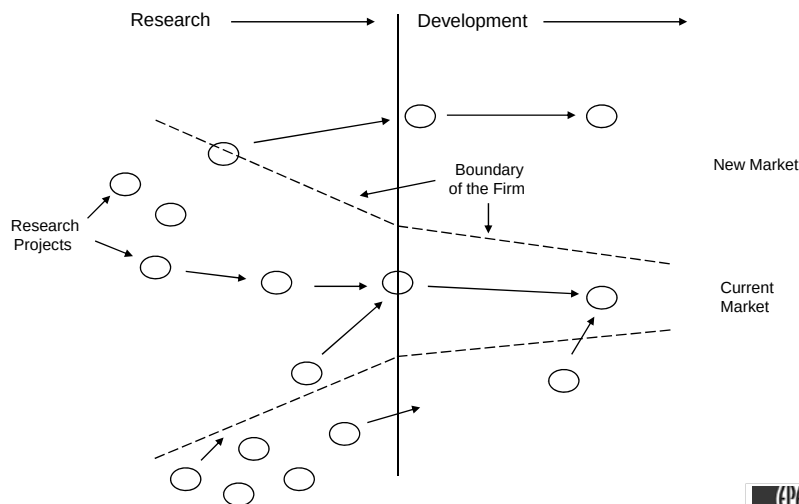


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“Open innovation” paradigm (Chesbrough)



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Open Innovation

- Implication: bring “inside out” and “outside in” in addition to traditional R&D
- Importance of alliances of all types, but especially
 - joint R&D
 - Contractual
 - Joint venture (JV)
 - Licensing
 - Technology licensing
 - cross-licensing
 - in-licensing, etc.

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Appropriability

- Appropriability refers to the ability to protect intellectual property (or indeed appropriate benefits from an innovation)
- The strength of the appropriability regime varies from
 - country to country ("national innovation systems" differ),
 - industry to industry (some industries such as pharma have strong patent protection, while others, such as software have relatively weak patent and copyright protection), and
 - firm to firm (firms differ in how much they enforce their intellectual property protection)
- Thus appropriability ranges from "weak" or "low" to "tight" or "strong" or "high"

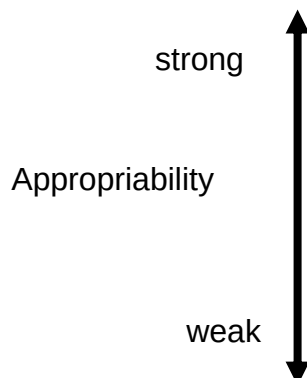
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Appropriability: who cares?

- Under a "tight" or "strong" appropriability regime, the innovator is more likely to be able to "milk" an invention
- Also it is harder for an alliance partner to steal the technology!



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Complementary Assets

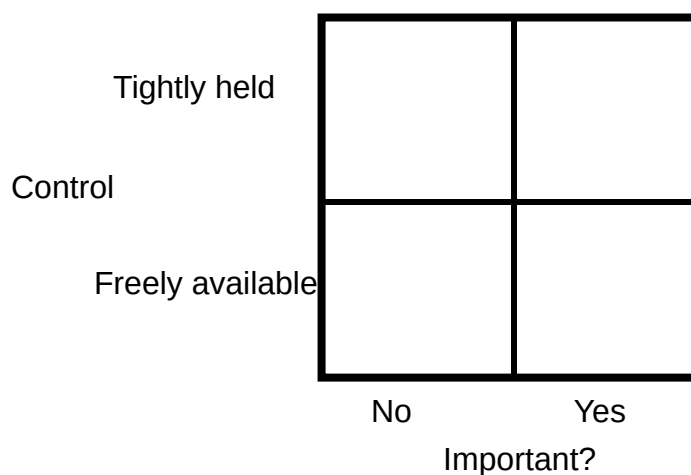
- Everything required to commercialize a technological innovation besides the technology itself
- What are some examples of complementary assets?
 - Sales force, manufacturing, marketing/merchandizing,...
- Are complementary assets the same as complementary goods?
 - No, sales of complementary goods stimulate sales of the original product (or service) and vice versa
- When do we care about complementary assets?
- How do we decide whether we should care about a particular complementary asset?

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Importance vs. control

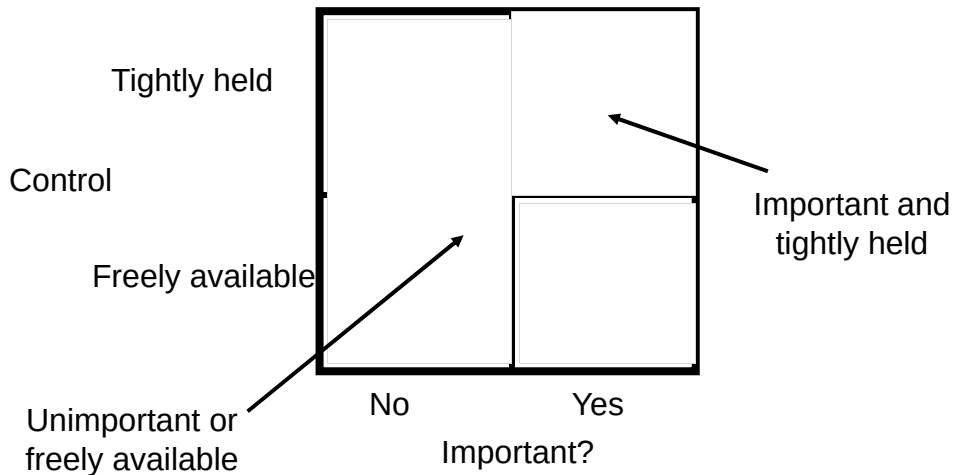


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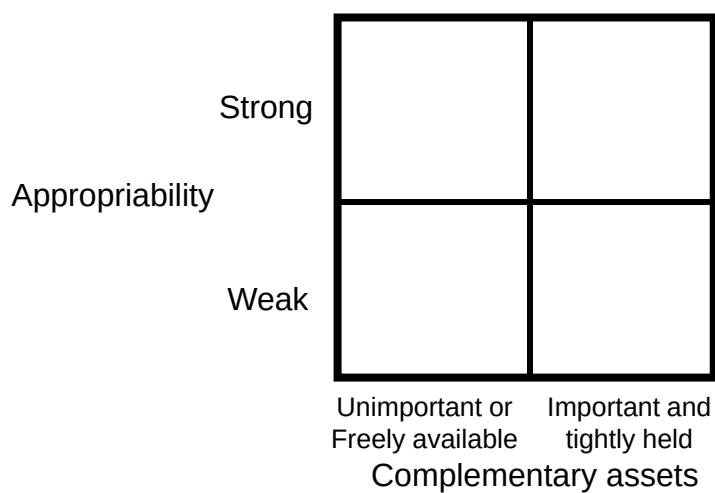
Importance vs. control



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Complementary asset framework



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Complementary asset framework

Appropriability	Strong	Inventor “wins”	Bargaining Game (usually CA- Holder)
	Weak	Customers “win”	CA-holder “wins”
		Unimportant or Freely available	Important and tightly held
		Complementary assets	

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Conclusion from all this

- When complementary assets are freely available or unimportant, the innovator is more likely to profit from an invention
- Alliance strategies:
 - Depending on quadrant and position of company, the alliance may have an obvious “winner,” usually not the small technology “inventor” company
 - CA holders have a VERY credible entry proposition when the asset is tightly held, even when appropriability is strong
 - Small technology companies are forced to enter into a losing alliance to gain access to the CA

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THANK YOU!

- Let me know if you have any questions
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