Studying Innovation in Firms: Research Tradeoffs and Insights

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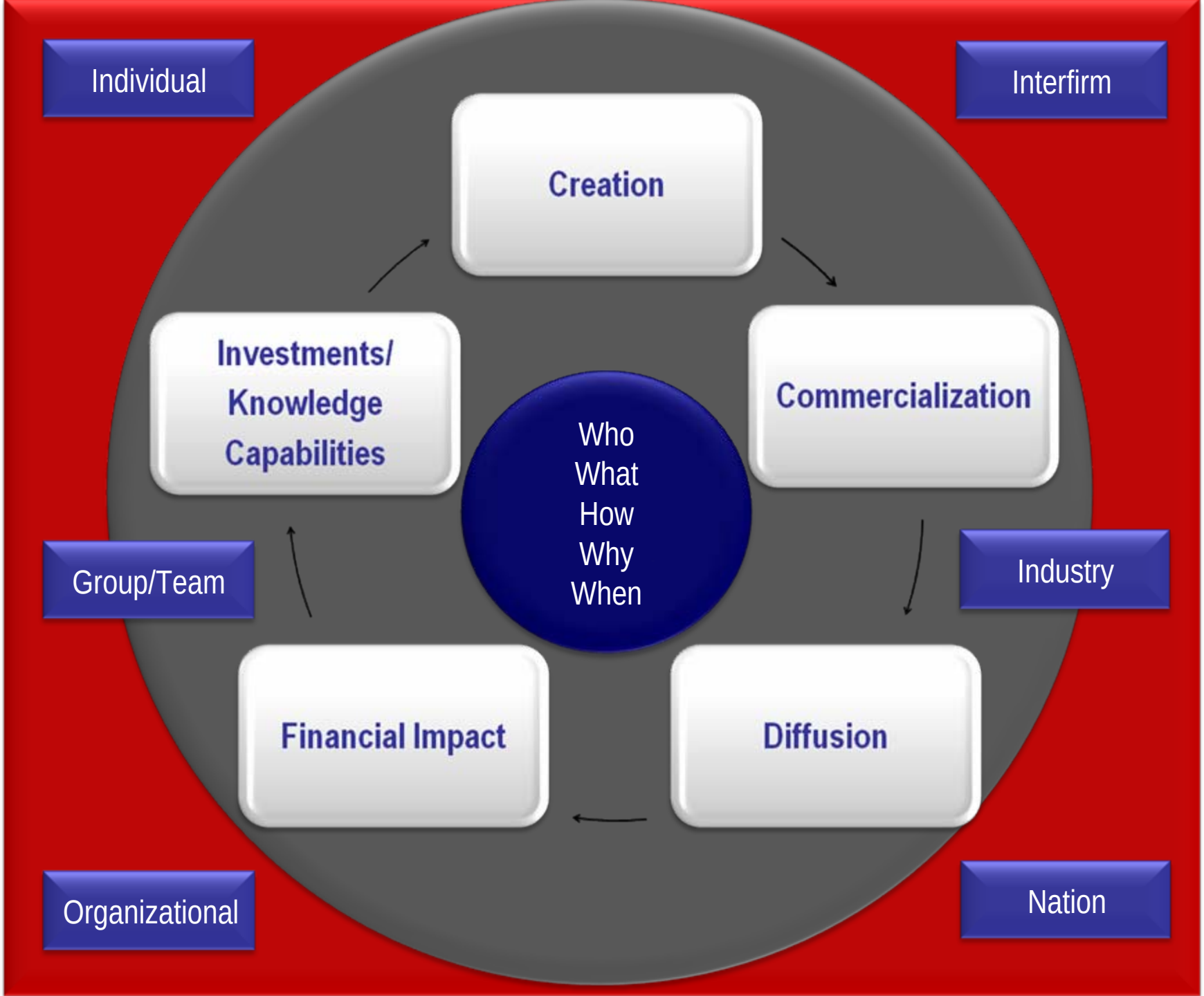

Individual
Interfirm
Creation
Commercialization
Industry
Diffusion
Financial Impact
Investments/
Knowledge
Capabilities
Group/Team
Organizational
Nation
Who
What
How
Why
When

Innovation Research Goals

- To predict – outside the black box
- To explain – inside the black box

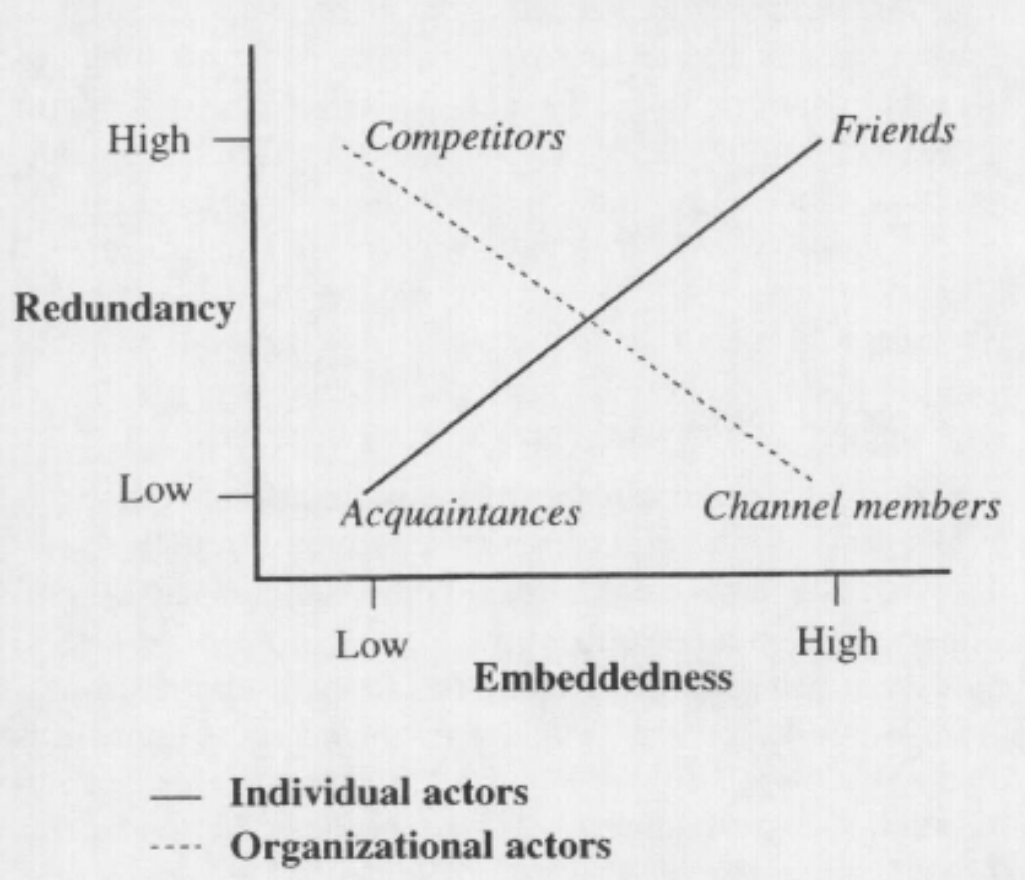
Insights and Lessons

- Pulling innovation theory across *levels of analysis*
- *Unintended consequences* of innovative activities
- Effects of *innovation incentives* in stock market and regulation
- The *mixed role of marketing variables* in innovation activities
- *Unplanned* innovation

Survey
Interfirm

Strength-of-Ties in Innovation

- Interpersonal ties are strong when they display high embeddedness and high knowledge redundancy
- Result: Firms in new product alliances display more complex structural and motivational features
- Lesson: Theory may not traverse all levels of analysis

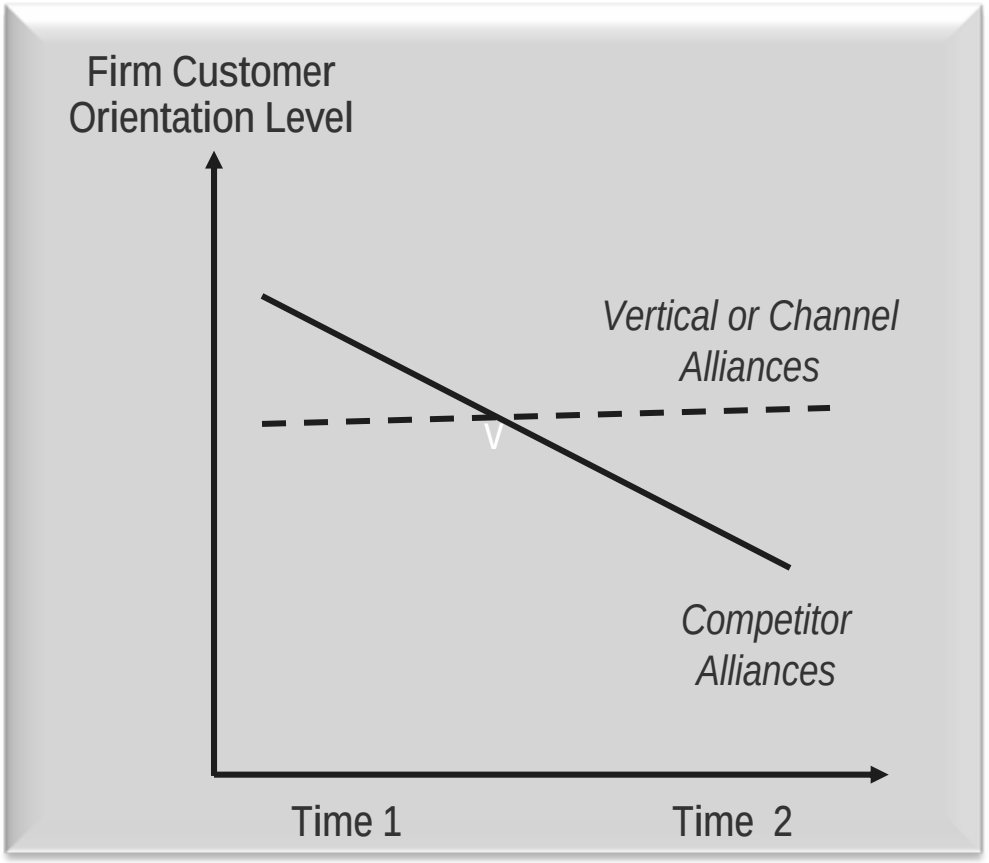


Rindfleisch and Moorman (2001), "The Acquisition and Utilization of Information in New Product Alliances," *Journal of Marketing*, 65 (April), 1-18.

Longitudinal Survey
Interfirm

Interfirm Innovation Alliances

- Result: Competitor alliances result in lower firm customer orientation over time
- Within-firm, overtime view reveals important consequence
- Insight: Unintended consequences of innovation



Rindfleisch and Moorman (2003), "Interfirm Cooperation and Customer Orientation," *Journal of Marketing Research*, 40 (November), 421-436.

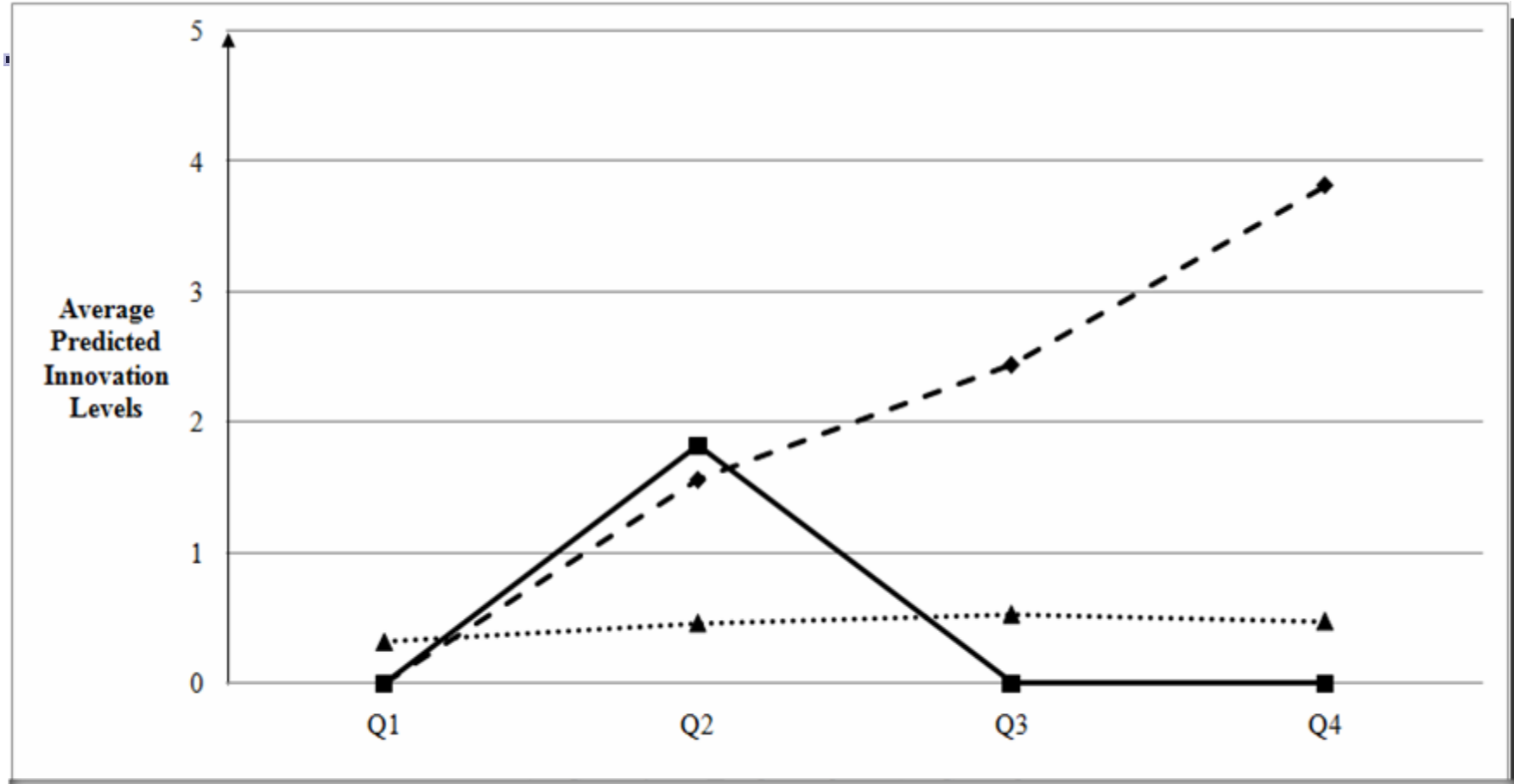
Secondary Data/ Organizational

The Innovation Ratchet & Stock Market Outcomes

- Observation: Stock market rewards firms for increasing innovation over time: Innovation Ratchet
- Key insight: Firms time introduction of innovations across the year to demonstrate improvement: This means delaying introduction.

Moorman and Spencer (2008), "The Innovation Ratchet: How Firms Tradeoff Value in Financial Markets and Product Markets," *Working paper*, Marketing Science Institute.

How Firms Time Innovation in Response to Stock Market Incentives



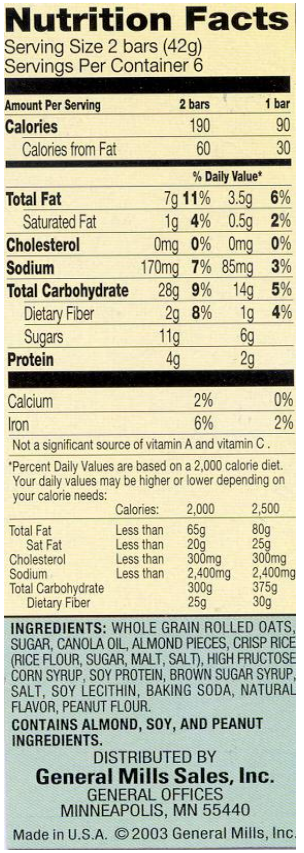
Insight: Over time within-firm view helps uncover firm response to stock market incentives for public firms to tradeoff value in financial markets and revenues in product markets

Secondary Data/
Quasi-experiment
Organizational

Regulation and Innovation

Nutrition Labeling and Education Act of 1994 (NLEA)

- Strategic use of regulation by firms when innovating
  - Increased positive nutrients in existing products (e.g., vitamins) and introduced new products with lower negative nutrients (e.g., fats)
- Firms differentially likely and fast to innovate
  - Firms with marketing and R&D capabilities more likely and faster to respond with nutrition improvements
- Insight: Heterogeneity of outcomes and actors
  - Innovation outcomes: Positive vs. negative; new products vs. current products
  - Firm differences



Nutrition Facts
Serving Size 2 bars (42g)
Servings Per Container 6

Amount Per Serving	2 bars		1 bar	
Calories	190		90	
Calories from Fat	60		30	
		% Daily Value*		
Total Fat	7g	**11%**	3.5g	**6%**
Saturated Fat	1g	**4%**	0.5g	**2%**
Cholesterol	0mg	**0%**	0mg	**0%**
Sodium	170mg	**7%**	85mg	**3%**
Total Carbohydrate	28g	**9%**	14g	**5%**
Dietary Fiber	2g	**8%**	1g	**4%**
Sugars	11g		6g	
Protein	4g		2g	
Calcium		2%		0%
Iron		6%		2%

Not a significant source of vitamin A and vitamin C.

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

INGREDIENTS: WHOLE GRAIN ROLLED OATS, SUGAR, CANOLA OIL, ALMOND PIECES, CRISP RICE (RICE FLOUR, SUGAR, MALT, SALT), HIGH FRUCTOSE CORN SYRUP, SOY PROTEIN, BROWN SUGAR SYRUP, SALT, SOY LECITHIN, BAKING SODA, NATURAL FLAVOR, PEANUT FLOUR.
CONTAINS ALMOND, SOY, AND PEANUT INGREDIENTS.

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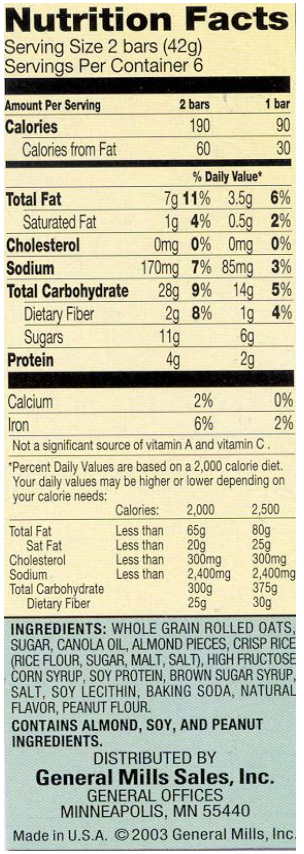
Moorman (1998), "Market-Level Effects of Information: Competitive Responses and Consumer Dynamics," *Journal of Marketing Research,* 35 (February), 82-98.
Moorman and Slotegraaf (1999), "The Contingency Value of Complementary Capabilities in New Product Development," *Journal of Marketing Research,* 36 (May), 239-257.

Secondary Data/
Quasi-experiment
Industry

Regulation and Innovation

Nutrition Labeling and Education Act of 1994 (NLEA)

- Are these differences in firm innovation rates fatal?
  - Firm differences led to small market share firms more likely to exit food categories following NLEA
- What are the conditions under which a market for quality is fostered following regulation?
  - Firms in higher concentration industries were more likely to invest in nutrition improvements following the NLEA



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Moorman, Du, and Mela (2005), ""The Effect of Standardized Information on Firm Survival and Marketing Strategies," *Marketing Science*, 24 (Spring), 263-274.
Moorman, Ferraro, and Huber, "Industry Concentration and the Market for Quality," in process

Survey
Organizational

Marketing Variables that Influence Innovation

- Literature: Exploration drives out exploitation and exploitation drives out exploration (Levinthal and March 1993)
- Finding: Firm market orientation resolves the exploitation and exploration tension (Kyriakopoulos and Moorman 2004)
- How does market orientation do this?
  - Unifying frame of reference focused on customers
  - Organization-wide information processes for acquiring, sharing, and using customer information
  - Dynamic market linking capability that creates a complementarity of exploitation and exploration

Firm Market Orientation Resolves the Exploitation and Exploration Tension

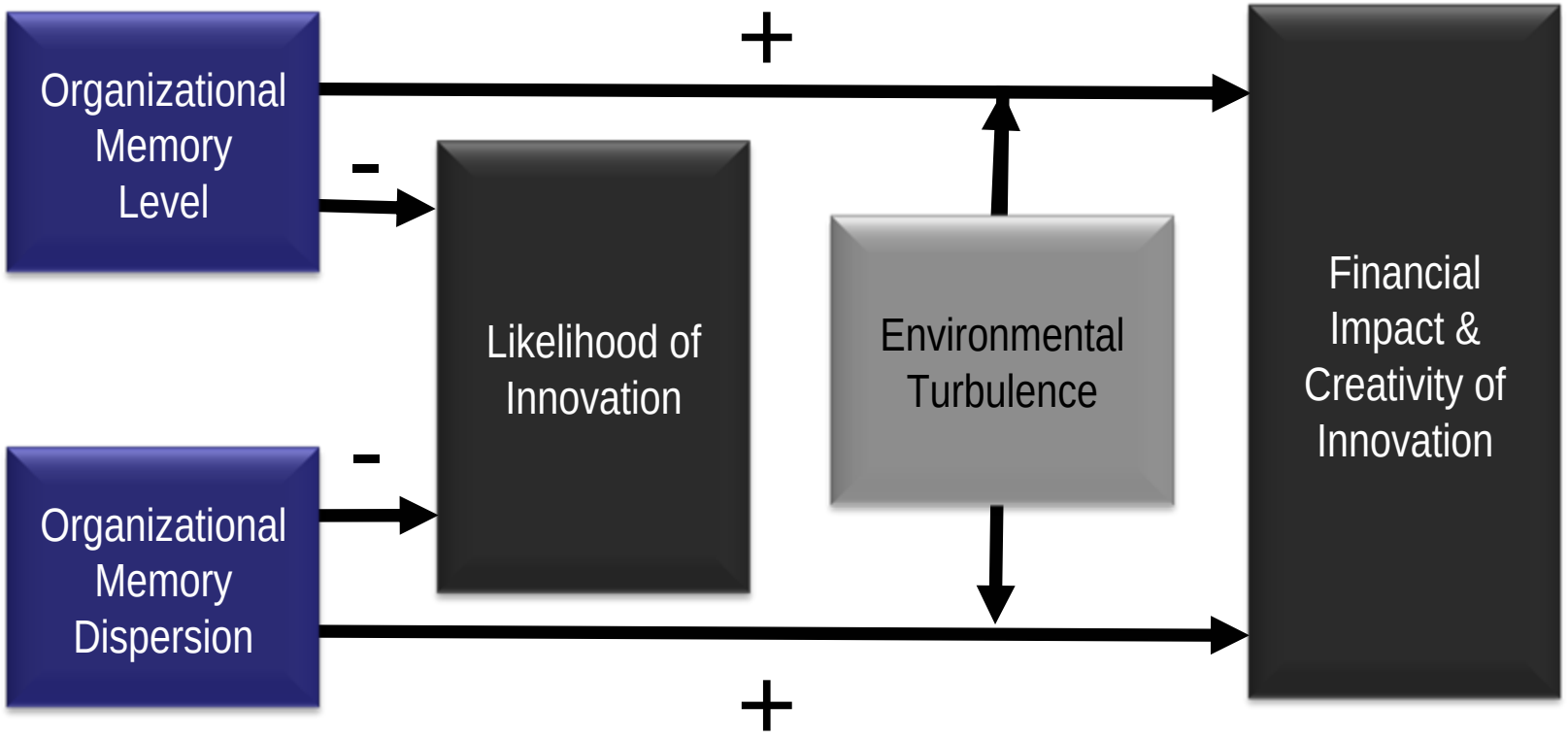
- Observe a three-way interaction of firm market orientation, firm exploitation, and firm exploration strategies in a sample of 95 Dutch firms over a two-year period.

	NP Financial Performance, Time 1 (b)	NP Financial Performance, Time 2 (b)
Effect of Exploration		
High exploitation + high market orientation	(1.21**)	(0.48**)
High exploitation + low market orientation	(-2.66*)	(-1.59**)
Effect of Exploitation		
High exploration + high market orientation	(1.81**)	(2.85**)
High exploration + low market orientation	(-1.81***)	(-3.24*)

Kyriakopoulos and Moorman, "Tradeoffs in Marketing Exploitation and Exploration: The Overlooked Role of Market Orientation," *International Journal of Research in Marketing*, 21 (September), 219-240.

Survey Organizational

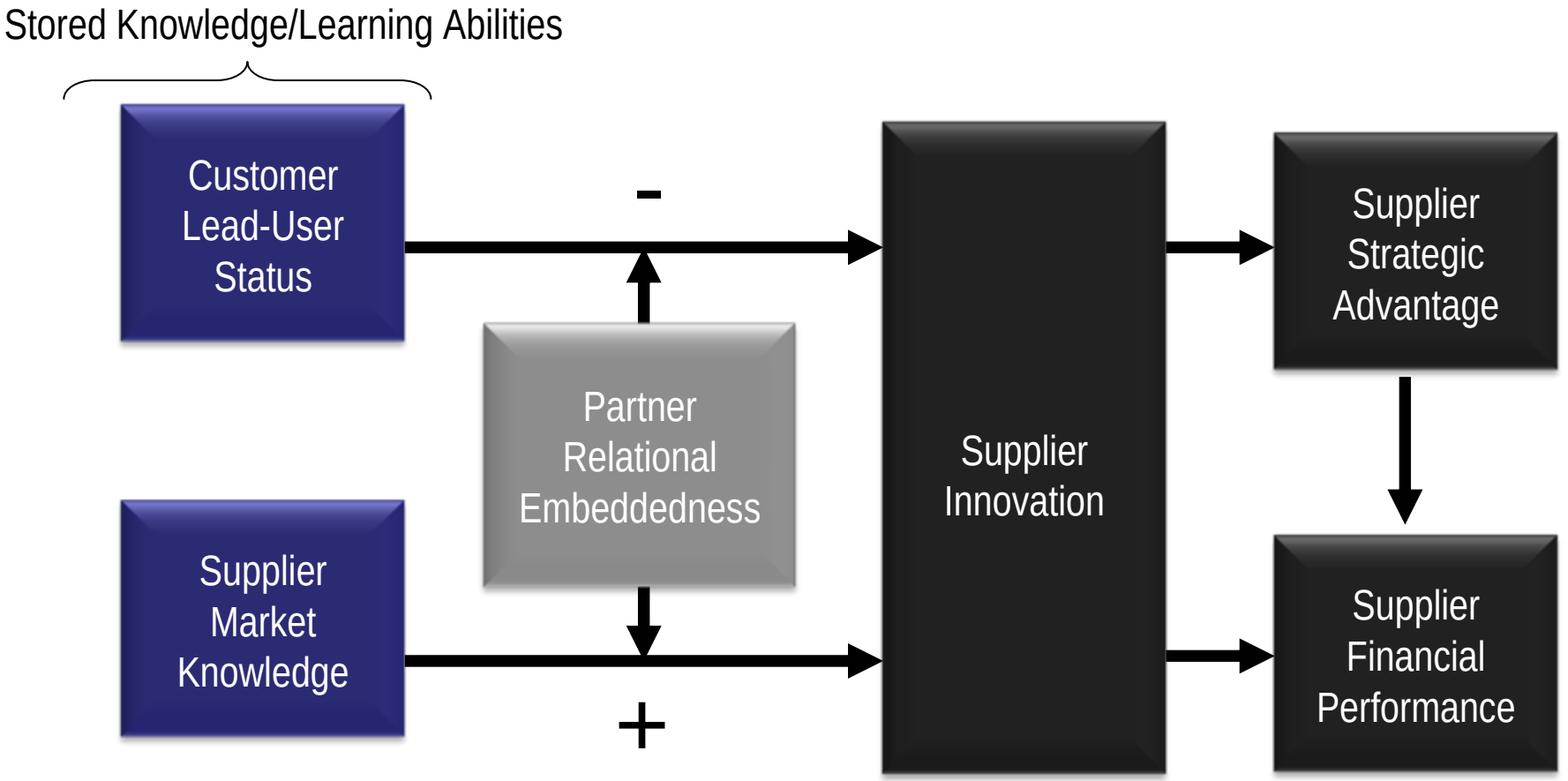
Market Knowledge Helps & Hurts Innovation



Moorman and Miner (1997), "The Impact of Organizational Memory in New Product Performance and Creativity," *Journal of Marketing Research*, 34, (February), 91-106.

Survey
Organizational/
Interfirm

Asymmetric Effect of Relational Ties on B2B Innovation



Noordhofff, Kyriakopoulos, Pauwels, Dellaert, and Moorman, The Asymmetric Effect of Relational Ties in Business-to-Business Innovation."

Lab Experiments
Individual Managers

Premature Dismissal of Innovation Opportunities

- Problem: The way managers integrate market information (customer information and competitor information)

	Heterogeneous Customers	Homogeneous Customers
Heterogeneous Competitors		
Homogeneous Competitors	X	

- Experimental evidence indicates that managers systematically devalue X as a market opportunity when they are first told that competitors are homogeneous

Spencer, Moorman, and Urbany "Premature Dismissal of Innovation Opportunities," *Working Paper*

Survey/Depth Interviews
Team/Organizational

Unplanned Innovation

- Ten month study of new product development in two firms
  - Attend weekly meetings to break team activities up into actions that could be evaluated in terms of process activities and outcomes
  - Team leaders rated degree to which actions were “improvised” (novel and involve the fusing of design and execution “making it up as you go along”) as well as concurrent team activities and outcomes (4 weeks later, 3 months later)
- Does improvisation occur?
  - Yes, mean 4.2/7.00 (s.d. = 1.9), 42.7% of events were rated as a 5 or above!
- How does it happen?
  - Triggered by problems and opportunities
  - Took the form of new beliefs, new behaviors, and new artifacts

Moorman and Miner (1998), “The Convergence of Planning and Execution: Improvisation in New Product Development,” *Journal of Marketing*, 62 (July), 1-20.

Survey/Depth Interviews
Team/Organizational

Unplanned Innovation

- When does improvisation occur?
  - *Organizational memory (-)*
  - Environmental turbulence (+)
  - Real-time information sharing (+)

Likelihood of Improvisation

- When does improvisation help the firm?
  - *Organizational memory (+)*
  - Environmental turbulence (+)
  - Real-time information sharing (+)

Effectiveness of Improvisation

- We observed improvisational competencies in both firms
  - The firms "planned to improvise" in the innovation process

Planned to Improvise

Miner, Bassoff, and Moorman (2001), "Organizational Improvisation and Learning: A Field Study," *Administrative Science Quarterly*, 46 (June), 304-337.

Innovation Insights

- Escape the pro-innovation bias
- Question assumptions about nature of innovation (e.g., planned, hurt/helped by regulation)
- Look for tradeoffs in factors facilitating likelihood and effectiveness of innovation
- Look for unintended consequences of incentives to innovate
- Dig deeper for heterogeneity in firm and outcomes
- Locate interesting marketing variables to innovate
- Method choices will influence nature of innovation insights; hence, ensure theory is interesting and comprehensive