

Units (and Levels) of Analysis in Strategy Research: From Proliferation to Cumulative Knowledge Building

Mary Benner, Rahul Kapoor, and Myles Shaver



Strategy Summit 2024

Deer Valley, Utah

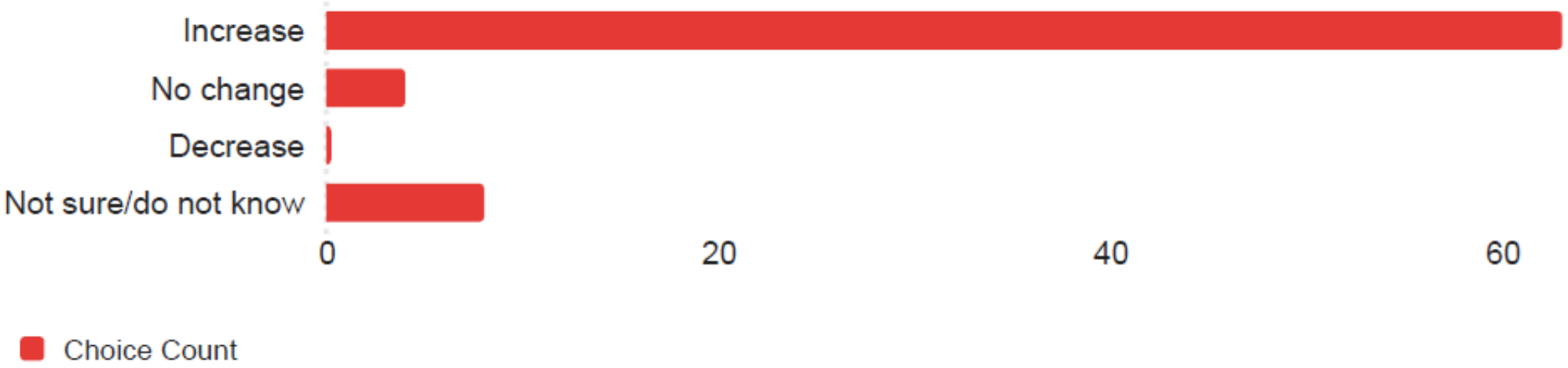
The firm, the transaction, the business model, resources, the network, the ecosystem, the platform—is the proliferation of units of analysis healthy or unhealthy for the field?



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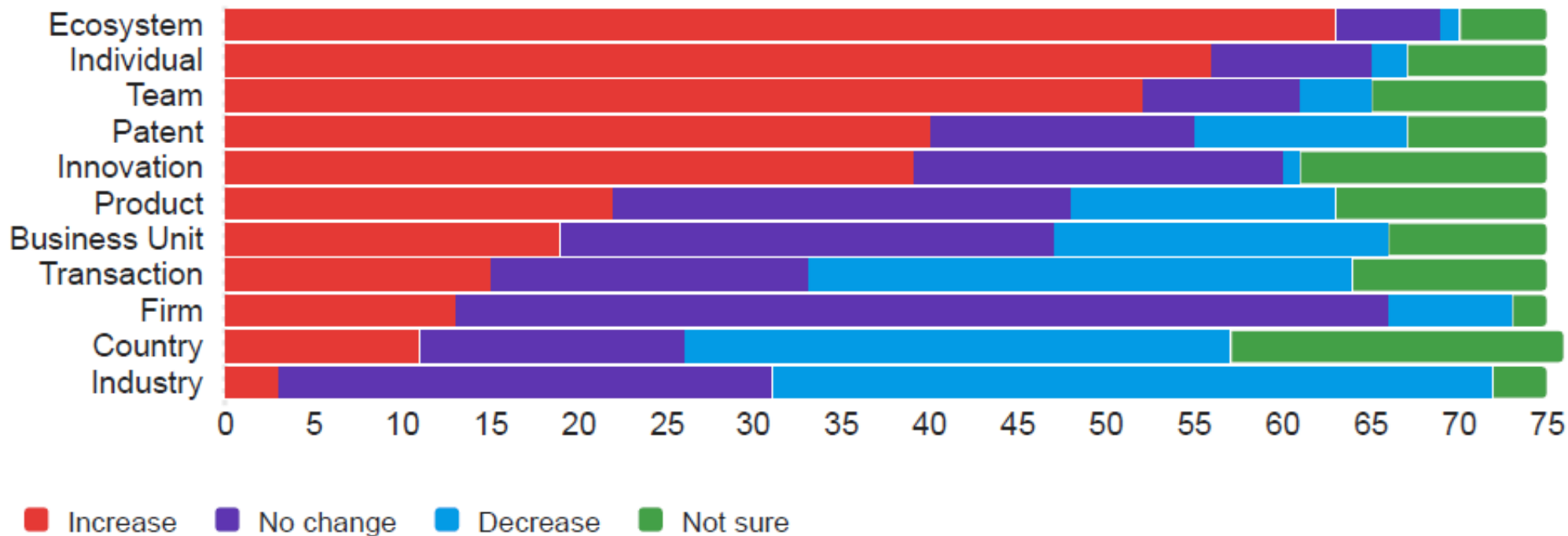
Verifying the premise

Q2 - Trend



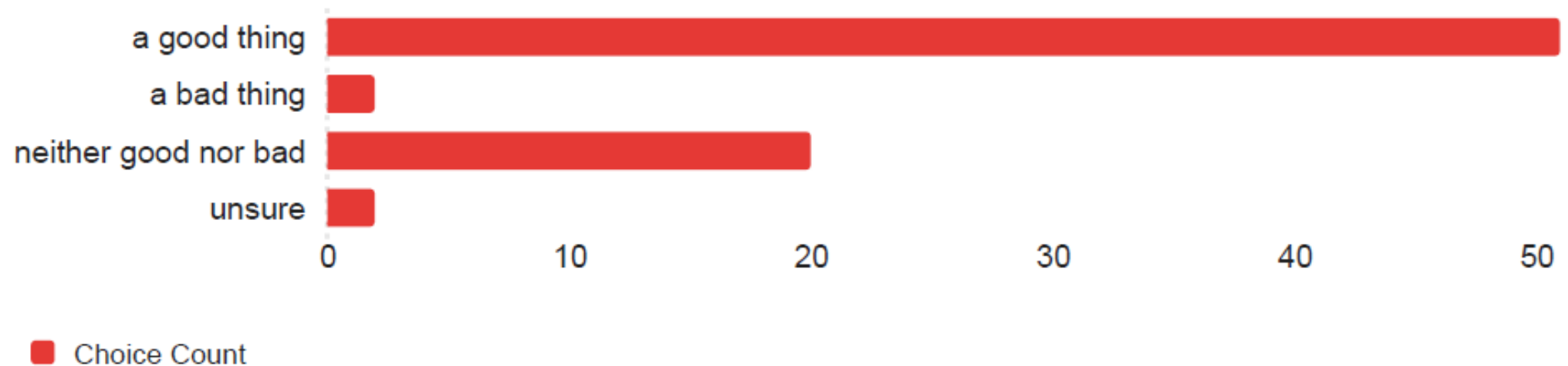
Trend by unit of analysis

Q3 - Trend by type



Is the trend a good thing?

Q4 - Desirability





Our assessment

The proliferation of units of analysis has not been unhealthy for the field – at the same time, it has the potential to be unhealthy.

We may be missing the opportunity to make it healthy for the field



Conceptual Structure

- Distinguish between
 - Unit of Analysis
 - Level of Analysis
 - Phenomenon of Analysis
- Grounded within the ‘strategy context’
 - Not a general philosophical or measurement debate
 - Must be assessed within the context of the questions we ask, theories are testing, and the empirical reality of the phenomena we study.



Elements of our conceptual structure

- Unit of analysis
 - The unit at which data are collected
 - Often involves data at the firm level, such as profits and other financial measures
 - Could be data at more micro levels, (e.g., patents, individuals, products) or more macro levels (e.g., ecosystems, platforms).
- Level of analysis
 - The level at which the data are analyzed to answer the question
 - Matches the research question
 - Where variance is invoked
 - Unit and level of analysis can be the same, but not necessarily
- Phenomenon of analysis
 - Topic of study
 - Not a source of variance



Examples (from our work)

- How do challenges in the ecosystem impact the benefits for firms that are technological pioneers? (Adner & Kapoor, 2010)
 - Phenomenon: Firm commercialization of new technologies
 - Level of analysis: firm level
 - Unit of analysis: both ecosystem- and firm-level data



Examples from our work (2)

- How does digitization in movies (i.e., the technological changes that allow streaming digital content) influence the types of movies that firms produce? (Benner & Waldfogel, 2023)
 - Phenomenon: Digitization and digital distribution
 - Level of analysis: firm level
 - Unit of analysis: individual movie products



Examples from our work (3)

- How does industry experience influence venture survivability?
(Guenther & Shaver, 2024)
 - Phenomenon: Venture survival
 - Initial level of analysis: venture (firm)
 - Unit of analysis: individual level
 - Subsequent level of analysis: individual



Context of strategy

- Our assessment needs to be grounded in the context of what we study in strategy
- Central issues in strategy concern firm-level value creation and capture
- Suggests that the firm is the key unit/level of analysis for strategy research
- This is consistent with our survey: 97% of respondents report doing research at the firm level



Benefits from Proliferating Units of Analysis

- Better capturing the locus of value creation and value capture
 - Reality of what we study
 - Multibusiness firms, collaborative ecosystems, multiple geographies
 - Multiple sources of firm-level value creation (e.g., innovation, business unit, partnership, network, platform)
 - Firm-level value capture in phenomenon involving multiple firms (competitors, complementors, suppliers, partners)
- Identifying and isolating theoretical mechanisms
 - Many theories operate at levels other than the firm
 - Variation at those levels shape firm-level outcomes



Implications for (Healthy) Research

- Build cumulative body of knowledge
 - Important for research that deviates from firm-level to make explicit connections with sources of firm-level value creation or isolating theoretical mechanisms that shape firm-level outcome
- Recognize assumptions when changing levels of analysis
 - Sources of value creation can be at many different levels
 - Value capture is at the firm-level



AI and Strategy Research: Opportunities Across Multiple Level of Analysis

*Move beyond “AI effects” to uncover sources of
firm-level heterogeneity and performance*



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Activity -level

- AI has the potential to enhance a firm's competitive advantage through its integration within firm's activity system
- Firm-level variation in terms of how AI is integrated
- Relative effectiveness of AI integration within a given organizational and industry context



Capability-level

- Differences among how firms leverage AI to adapt existing capabilities and/or build new capabilities
- Different types of capabilities
- Different types of firms



Ecosystem-level

- New ways of creating value through AI in existing and new ecosystems
- New sources of complementarities and interdependencies within an ecosystem
- Differences among firms in terms of value creation and capture



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Observation before concluding

- Very beginnings of the field – limited data sources
 - Industry
 - Firm – Compustat (and some firm surveys)
 - Close ties between units and levels of analysis
- Since then
 - Sources of data has exploded
 - Ease of access
 - Ingenious research designs
 - Theories have focused on non-firm-level mechanisms
 - Uncoupled the ties between units and levels in our work



Conclusions

- Proliferation of units and levels of analysis in the strategy field holds significant potential
 - Richer more granular insights into firm value creation and capture
- But proliferation – on its own – will not lead to this
- Requires alignment of research questions, units of analysis, levels of analysis, and a commitment to build a cumulative body of research
 - Ultimately helps assess firm value creation and capture



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- Without such efforts (current state of affairs) can lead to fragmentation or drift
- Indications of that occurring
 - Data availability or novelty drive unit of analysis
 - Not connecting research designs and studies to firm value creation or capture



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Strategy as a 'big tent'

- Beneficial when it introduces units and levels of analysis that
 - Better capture the locus of value creation
 - Better isolate and test theoretical mechanisms
- Can be intellectually disconnected and potentially harmful when such connections are not made
 - Creates fragmentation and drift

