

Bryan Chai

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EDUCATION

National University of Singapore, NUS Business School

Ph.D. in Management, Concentration in Strategy & Policy

Aug 2020 – Present

Dissertation: Essays on Strategic Resource Decay, Firm Strategy, and Innovation

Thesis Supervisor: Prof. Ishtiaq Pasha Mahmood

Committee Members: Prof. Kulwant Singh, Prof. Andrew Delios

Bachelor in Business Administration, Honors with Highest Distinction

Aug 2016 – Jan 2020

RESEARCH INTERESTS

Corporate Strategy, Sustainability, Innovation, Entrepreneurship, Emerging Markets

WORKING PAPERS & RESEARCH PIPELINE

1. “Mors Certa, Hora Incerta: The Impact of Strategic Resource Decay on Firm Strategy & Innovation”

- Single Authored, **Job Market Paper**, Preparing for Journal Submission
- *Abstract*: Strategic resources are crucial for firms to sustain their competitive advantage. However, strategic resources may lose their value-creating potential over time and deployment, a phenomena termed as “strategic resource decay”. This paper empirically examines how strategic resource decay impacts firm strategy and innovation. We theorize that strategic resource decay may hamper firms from replenishing strategic resources and investing in technology. Ecological uncertainty may also have a counterintuitive effect of mitigating the cumulative disadvantages of strategic resource decay and innovation by insulating firm capabilities through adaptation. We test this theory using the context of U.S. independent exploration and production firms in the upstream oil and gas sector. We find that firms which experience more strategic resource decay invest less in resource replenishment but not in technology after accounting for firm-specific characteristics. These relationships are weaker when ecological uncertainty is high. Ecological uncertainty can also create strong resource constraints that lowers resource replenishment whilst suppressing the impact of strategic resource decay. Firm-specific characteristics may insulate the firm’s innovation capabilities from both strategic resource decay and ecological uncertainty.
- Submitted for SMS Paper Development Workshop In Seoul, July 2024

2. **“Tabula Rasa aut Vetus Modus: The Impact of Capability Erosion and Sustainability on Firm Strategy”**

- Single Authored, Data Collected and Cleaned, Drafting
- *Abstract:* Firms’ competitive advantage are typically threatened by external forces, such as competitor firms, its market, and natural environment. Capability erosion is a phenomenon where a firm’s ability to perform specific tasks effectively and efficiently using its competencies and resources are disrupted by the external environment. Using an event study approach, this paper empirically examines how capability erosion and a firm’s focus on sustainability impact firm strategy. We theorize that firms may change the trajectory of their new capabilities if existing capabilities are eroded whilst having a strong sustainability-focus. We test this theory using the context of U.S. independent exploration and production firms in the upstream oil and gas sector before and after Hurricane Katrina. After accounting for within-firm variation by clustering standard errors at the firm level, we find that capability erosion increases investments in sustainable alternatives but has a non-significant relationship with resource replenishment. The sustainability-focus of firms is also positively associated with both resource replenishment and investing in sustainable alternatives. However, a strong sustainability-focus has a counterintuitive effect of weakening the relationship between capability erosion and alternative sustainable investments, which may suggest resource allocation trade-offs or strategic re-evaluations. These findings suggest that firms may invest in new, sustainable capabilities when existing capabilities are eroded.

3. **“When Sustainability and Technology Clash: Analyzing Firm Strategy using Natural Language Processing”**

- Single Authored, Data Collected and Cleaned
- *Description of Study:* In extractive industries, technological development goals and sustainability targets often come into conflict. We use natural language processing (NLP) to identify these conflicts in U.S. independent exploration and production firms in the upstream oil and gas sector and find out what firm characteristics contribute to favoring sustainability or technology, and the ability to successfully integrate both.

4. **“How Strategic Resource Heterogeneity Affects Resource Decay and Capability Erosion Dynamics”**

- Single Authored, Data Collected
- *Description of Study:* We use the context of the mining industry to find out how strategic resource heterogeneity, measured by the breadth and composition of mineral types in the extraction portfolio, affects how a firm responds to strategic resource decay and capability erosion.

5. **“How Strategic Resource Perishability Affects Firm Strategy and Innovation”**

- Single Authored, Data Collected
- *Description of Study:* We use the context of the agriculture and fishing industry to find out how resource perishability affects firm strategy and innovation. We look at what firm characteristics are associated with innovations that extend the useful life of the firm’s strategic resources.

HONORS, FELLOWSHIPS & AWARDS

| | |
|---|----------------|
| President's Graduate Fellowship, National University of Singapore | 2020 - Present |
| Dean's List, National University of Singapore | 2018 - 2020 |

SERVICE

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|---|---------------------|
| Graduate Fellow , Tembusu College, National University of Singapore | Aug 2020 - Dec 2021 |
| <ul style="list-style-type: none">• Mentor, emergency first-responder, and student support coordinator for undergraduates on campus• Designed and delivered comprehensive training for emergency first responders and residential assistants• Organized and taught Strategy & Business Case-Study masterclasses to undergraduates on campus | |

CONFERENCE & WORKSHOP ATTENDANCE

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| AMR Idea Development Workshop, Singapore | Dec, 2022 |
| ABFER 11th Annual Conference, Singapore (upcoming, registered) | May, 2024 |
| SMS Research Atelier (Private Paper Development Workshop, upcoming, registered) | May, 2024 |
| AOM Research Methods Group Doctoral Consortium (upcoming, pending results) | Jun, 2024 |
| SMS Paper Development Workshop, Korea (upcoming, pending results) | Jul, 2024 |
| AIB Annual Conference, Korea (upcoming, registered) | Jul, 2024 |
| AOM Annual Conference, Chicago (upcoming, registered) | Aug, 2024 |

TEACHING EXPERIENCE

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| BME5054, Strategy , Executive MBA. (Teaching Assistant, with Prof. Chang Sea-Jin) | Spring, 2023 |
| BME5052, Governance and Sustainable Business , Executive MBA. (Graduate Student Tutor, with Prof. Lawrence Loh) | Summer, 2022 |
| BSP3701, Strategic Management , BBA. (Teaching Assistant, with Prof. Lawrence Loh) | Fall, 2022 |
| BSN3701/TR3008, Technological Innovation , BBA. (Teaching Assistant, with Ms. Su-Ann Nair) | Fall, 2022 |
| BMS 5120, Innovation & Strategies for Emerging Markets , MSc. (Teaching Assistant, with Prof. Ishtiaq Pasha Mahmood) | Spring, 2022 |
| BMS5113, Venture Capital , MSc. (Teaching Assistant, with Asst. Prof. Weiyi Ng) | Spring, 2022 |
| BMS5124, Entrepreneurial Management , MSc. (Teaching Assistant, with Asst. Prof. Weiyi Ng) | Spring, 2022 |

REFERENCES

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Prof. Andrew Delios

Vice Dean, MSc Programmes Office

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