

Dissertation

Strategic Flexibility for Multinational Enterprises in a Volatile Global Economy

Hyewon Ma^{1a}

¹ Indiana University, USA

Keywords: geopolitical shock, strategic flexibility, multinational enterprises (MNEs), real options, global networks, trade policy uncertainty

<https://doi.org/10.46697/001c.146524>

AIB Insights

Vol. 25, Issue 6, 2025

This dissertation investigates how multinational enterprises (MNEs) can build and use strategic flexibility to manage uncertainty in today's volatile global business environment. Using data from U.S. and foreign MNEs during the U.S.–China trade war, the first study shows that broader and denser international operations helped firms reduce tariff exposure. The second study finds that some MNEs turned disruption into opportunity by expanding into markets vacated by competitors. The third study highlights how decision-makers' behavioral biases shape the creation and use of flexibility. These insights offer practical guidance for firms and policymakers navigating geopolitical risk and trade policy uncertainty.

BIG QUESTION

How do multinational enterprises strategically respond to unexpected threats and/or opportunities from global business uncertainties? How does strategic flexibility help them navigate negative effects and capitalize on emerging opportunities?

INTRODUCTION

In a world marked by volatile trade relations, shifting alliances, and rising protectionism, MNEs face an existential challenge: how to remain agile when the rules of global engagement change overnight (Luo & Tung, 2025). The 2018–2019 U.S.–China trade war exposed these vulnerabilities, disrupting global value chains and forcing MNEs to reconsider where and how they operate. Yet some firms weathered the storm—and even capitalized on it—better than others. Why?

Drawing on the real options theory, my dissertation examines how MNEs design, recognize, and exercise options embedded in their international operations. Real options logic reframes foreign investments as portfolios of choices—each subsidiary, joint venture, or acquisition a potential option to expand, contract, delay, or abandon activities as uncertainty unfolds (Chi, Li, Trigeorgis, & Tsekrekos, 2019). The dissertation investigates how MNEs used such flexibility to both mitigate risk (“shield”) and

seize opportunity (“sword”) during the U.S.–China trade war, and how managerial biases influence the creation of flexibility.

The studies in my dissertation together illuminate a practical message: strategic flexibility is not luck; it is designed, maintained, and exercised through deliberate structures, capabilities, and managerial discipline.

STUDY 1: STRATEGIC FLEXIBILITY AS A SHIELD – MITIGATING TRADE WAR IMPACTS FOR INVOLVED-COUNTRY MNEs

When the U.S. and China engaged in tit-for-tat tariff escalations, U.S. MNEs with Chinese operations faced sharp increases in costs and operational risks. Both efficiency-seeking subsidiaries (producing in China for export) and market-seeking subsidiaries (serving Chinese consumers) were affected. With little warning, firms found themselves caught between two protectionist regimes. Traditional strategic planning offers limited guidance in such situations: five-year expansion roadmaps could not anticipate daily-changing tariff lists. What matters instead is how quickly firms can reconfigure—relocating production, real-locating assets, and shifting supply chains.

^a PhD awarded by University of Illinois at Urbana-Champaign (December 2024)

Dissertation title: Real Options Theory and the Value of Strategic Flexibility for MNEs: When and How Do Multinational Enterprises Seek and Exploit Strategic Flexibility?

THE REAL OPTIONS PERSPECTIVE

Real options theory explains such responsiveness as the exercise of *switching options*—the ability to redeploy resources among international units when conditions change (Chi et al., 2019; Kogut & Kulatilaka, 1994). I propose two structural enablers of this flexibility:

The first, *multinationality*, represents the breadth of an MNE's global network. A wide geographic footprint offers multiple alternative locations to which production, capital, or managerial expertise can be shifted when a particular market becomes risky or costly (Kogut & Kulatilaka, 1994). This breadth expands the firm's portfolio of potential responses.

The second, *regionality*, captures the depth and proximity of operations within a particular geographic area. Dense regional networks enable faster, lower-cost adjustments because neighboring countries share institutions, supply chains, and infrastructure (Rugman & Verbeke, 2004).

When facing unexpected geopolitical shocks, these existing cross-border networks create valuable flexibility. Reconfiguring activities within already established subsidiaries allows firms to respond far more quickly than starting new investments or reshoring production (Kogut & Kulatilaka, 1994). Established subsidiaries already possess the regulatory clearances, local relationships, and operational capacity needed for immediate redeployment, turning what could be disruption into a timely strategic adjustment.

KEY FINDINGS

The analysis draws on subsidiary-level data for 1,412 U.S. multinational subsidiaries operating in China between 2016 and 2019. Using a difference-in-differences approach, the study compares firms in tariff-affected industries with those in unaffected ones before and after the onset of the trade war. Key findings include:

- U.S. subsidiaries in tariff-affected industries reduced employment by about 8% and asset values by roughly 12% compared to unaffected sectors, reflecting the negative impact of higher trade costs.
- Firms with broader global footprints adjusted to a greater degree—about 15% in employment and 23% in assets—indicating that having operations in many countries helps U.S. firms cut back more flexibly in China when trade tensions rise.
- Regional networks matter even more: companies with extensive subsidiaries across Asia reduced their presence in China even more sharply—about 18% fewer employees and 24% lower assets—because nearby countries offered easier and faster alternatives for re-deploying operations during the crisis.

These findings lead to the managerial insights shown in [Table 1](#).

STUDY 2: STRATEGIC FLEXIBILITY AS A SWORD – SEIZING OPPORTUNITIES FOR THIRD-COUNTRY MNEs

While involved-country firms (U.S. and Chinese MNEs) fought to contain losses, third-country MNEs—those from nations not directly engaged in the trade conflict—faced a different environment. Trade wars, by creating barriers only for involved-countries, inadvertently generate competitive openings for firms from non-involved nations. My research identified two primary mechanisms through which this occurs. First, improved factor-market conditions emerge as involved-country firms reduce their operations due to tariffs, potentially leading to a decline in factor prices (such as labor costs, input materials, and logistics) in the affected host country. Third-country MNEs, not facing the same tariff burdens, can then acquire these resources at lower costs, enhancing their efficiency-seeking investments. Second, enhanced strategic competition arises because involved-country MNEs face higher costs for importing intermediate goods and serving the local market. This puts them at a competitive disadvantage against third-country MNEs, who can then gain market share and strengthen their competitive position.

THE REAL OPTIONS PERSPECTIVE

From a real options perspective, the trade war turned the host-country environment into a source of unexpected opportunities for third-country MNEs. For those already established in the host country, existing subsidiaries serve as a strong base to expand investments, capture greater market share, and create more local jobs. This adaptive expansion illustrates how firms exercise *growth options*—scaling up operations when uncertainty resolves in their favor and new strategic opportunities emerge (Kogut, 1991).

Three factors strengthen firms' strategic position to capitalize on such opportunities. First, *multinationality*—the breadth of a firm's international network—enables the redeployment of resources and knowledge across markets, turning flexibility into timely investment actions (Kogut & Kulatilaka, 1994).

Second, *bilateral agreements* between home and host countries, such as free trade agreements, mitigate policy uncertainty by clarifying trade rules and commitments, thereby lowering the perceived risks of expanding in China during the conflict (Bagwell & Staiger, 2002).

Third, *partnerships with local firms* enhance both legitimacy and early access to regulatory information, allowing firms to make informed and confident decisions amid volatility (Inkpen & Beamish, 1997).

Together, these mechanisms illustrate that in times of geopolitical disruption, firms equipped with extensive global networks and uncertainty-reducing capabilities are better positioned to transform volatility into growth.

Table 1. Managerial implications of strategic flexibility as a *shield*

Insight	Implementation
Cultivate adaptable networks	Build and maintain well-structured global and regional subsidiary networks that can be reconfigured quickly when trade conditions shift.
Use regional networks as flexibility anchors	Develop regional hubs that offer cost-effective alternatives for production and sourcing within proximate markets.
Treat your subsidiary networks as risk-management tools, not just expansion	Treat regional and global footprints not just as growth platforms but as strategic insurance against policy and supply disruptions.
Enhance supply chain resilience	Invest in coordination systems and logistics links that preserve continuity even when established trade routes are disrupted.

Table 2. Managerial implications of strategic flexibility as a *sword*

Insight	Implementation
Geopolitical conflict can be the next growth arena	Trade wars and bilateral tensions between major economies do not only generate risks—they also create windows of opportunity for third-country MNEs. Monitor major-geopolitical conflicts and move quickly to fill gaps left by constrained rivals.
Operational flexibility amplifies opportunity	A well-structured subsidiary network provides not only protection against negative shocks but also a platform for leveraging unexpected advantages . Firms capable of reallocating resources swiftly across affiliates can turn geopolitical turbulence into strategic gain.
Equip for uncertainty	Mechanisms that reduce ambiguity during conflict—such as bilateral FTAs and credible local partnerships—are critical enablers of opportunity capture . These tools help firms read policy signals early and move decisively amid disruptions.

KEY FINDINGS

The analysis uses data from 3,675 Chinese subsidiaries of 2,223 multinational firms from 51 non-U.S. countries between 2016 and 2019. The findings show how firms from third countries—those not directly involved in the U.S.–China trade war—expanded their activities as trade tensions reshaped the competitive landscape.

- In tariff-affected industries, third-country MNEs increased employment by about 11% and assets by 15%.
- Highly multinational firms achieved the stronger growth—employment up 14% and assets up 19%—showing that global networks enable rapid, flexible responses to new opportunities.
- Firms from countries with a Free Trade Agreement (FTA) with China increased investments to a greater degree—around 19% in employment and 26% in assets—reflecting the stabilizing effect of predictable trade rules.
- Those with Chinese joint-venture partners showed about 14% higher employment and 16% greater asset growth, highlighting the value of trusted local relationships.

These findings lead to the managerial insights shown in [Table 2](#).

STUDY 3: THE HUMAN ELEMENT – BEHAVIORAL BIASES IN REAL OPTIONS CREATION

The first two studies show how MNEs exercise flexibility. The third study explores how they create it. Before a firm can exercise real options, it must first build them—by structuring investments to preserve optionality. Cross-border acquisitions offer a classic example: acquiring a minority stake in a foreign firm creates a *toehold option*—the right, but not obligation, to expand ownership later (Bowman & Hurry, 1993). Yet not all managers use this logic consistently. Many firms bypass staged entries, rushing into full acquisitions even when uncertainty is high. Why? The answer may lie in the intersection of real options theory and behavioral strategy.

THE BEHAVIORAL PERSPECTIVE

Managers do not always act as purely rational optimizers (Cyert & March, 1963). Their choices can be influenced by how well the firm has been doing and how much excess resources it has, both of which shape how they interpret and respond to uncertainty.

When performance exceeds their goals, managers often become more cautious because they want to protect what the firm has already achieved (Kahneman & Tversky, 1979). They tend to favor smaller, reversible investments—such as minority acquisitions—that limit downside risk while keeping strategic options open.

Table 3. Managerial implications of behavioral biases in real options creation

Insight	Implementation
Recognize that strategic flexibility depends on managerial behavior	Build awareness that investments choice reflects human judgment under uncertainty. Train managers to identify how overconfidence or urgency can limit option thinking.
Institutionalize disciplined decision processes to counter bias	Establish formal staging criteria, review gates, and post-acquisition assessments that enforce deliberate, data-driven decision making.
Monitor aspiration levels to prevent overreaction or premature commitment	Track performance feedback systems and communicate aspiration gaps transparently to avoid impulsive, high-commitment moves when facing success or shortfalls.

When performance falls short of expectations, managers often engage in *problemistic search*—actively looking for bold, riskier moves to reverse the decline (Cyert & March, 1963). In such situations, they may pursue high-commitment actions, such as full acquisitions, to restore growth or signal decisive leadership.

Slack resources, such as excess cash or unused capacity, further shape these tendencies. When resources are plentiful, even well-performing firms may take bolder actions because the buffer reduces perceived risk (Thompson, 1967). Conversely, when resources are tight, struggling firms may become even more cautious, fearing that failure could threaten their survival.

KEY FINDINGS

The analysis covers 3,038 cross-border acquisitions in the manufacturing sector between 1995 and 2018. The results show consistent behavioral patterns that reveal how managers' perceptions and resources shape their approach to uncertainty. All findings are based on statistically significant estimates:

- Firms performing above their goals tend to adopt an options-oriented approach, taking smaller, incremental stakes in foreign firms. This cautious approach allows them to test the waters while preserving flexibility for future expansion.
- Firms performing below expectations are more likely to pursue full acquisitions, seeking quick turnarounds—even if that meant giving up flexibility.
- Firms with greater financial slack—such as excess cash or unused capacity—often become overconfident, pursuing full acquisitions outright and overlooking the advantages of an options-based approach.
- The two factors also interact: for firms doing well, having excess slack further reduced caution; for struggling firms, slack fueled risk-taking, making them less likely to build flexibility into their deals.

These findings lead to the managerial insights shown in [Table 3](#).

INTEGRATING THE INSIGHTS: STRATEGIC FLEXIBILITY AS SHIELD, SWORD, AND DISCIPLINE

Taken together, these findings reveal strategic flexibility as a multi-dimensional capability—a system of structures, processes, and mindsets that enable MNEs to adapt under volatility.

- As a *shield*, flexibility mitigates losses from negative shocks through redeployment and contraction.
- As a *sword*, it captures upside from rivals' constraints by exploiting policy asymmetries.
- As a *discipline*, it relies on managerial awareness and governance to prevent behavioral overreach.

Together, my dissertation advances real options theory by incorporating trade policy shocks—an important yet underexplored source of uncertainty—into the analysis of option exercise. It also reframes multinationality and regionality by moving beyond simple country counts to conceptualize network redeployability as a structural capability of multinational firms. Finally, it bridges behavioral and real options perspectives by demonstrating how managerial cognition and organizational slack shape option creation, linking financial logic with the realities of human decision-making.

In a world of constant uncertainty, resilience comes not only from prediction but may come from built-in flexibility.

ACKNOWLEDGEMENTS

I am deeply grateful to my dissertation advisor, Joseph Clougherty, for his exceptional mentorship, guidance, and unwavering support throughout this research journey. I also thank Joseph Mahoney, Tony Tong, and Fiona Yao for their invaluable feedback and encouragement, which greatly shaped this dissertation and its subsequent publications.

ABOUT THE AUTHOR

Hyewon Ma is an Assistant Professor of International Business at the Kelley School of Business, Indiana University. Her research examines how multinational enterprises re-

spond strategically to geopolitical and trade policy uncertainty. She earned her Ph.D. from the University of Illinois Urbana–Champaign. Her work has received multiple international honors, including the 2025 AOM IM Division Best Dissertation Award, the 2025 AIB Buckley and Casson

Dissertation Award, and the 2022 Alan M. Rugman Young Scholar Award from the Academy of International Business.

Submitted: August 12, 2025 EST. Accepted: October 24, 2025 EST. Published: November 12, 2025 EST.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

REFERENCES

- Bagwell, K., & Staiger, R. W. 2002. *The economics of the world trading system*. MIT Press. <https://doi.org/10.7551/mitpress/2628.001.0001>.
- Bowman, E. H., & Hurry, D. 1993. Strategy through the option lens: An integrated view of resource investments and the incremental-choice process. *Academy of Management Review*, 18(4): 760–782.
- Chi, T., Li, J., Trigeorgis, L. G., & Tsekrekos, A. E. 2019. Real options theory in international business. *Journal of International Business Studies*, 50(4): 525–553.
- Cyert, R. M., & March, J. G. 1963. *A Behavioral theory of the firm*. Prentice-Hall.
- Inkpen, A. C., & Beamish, P. W. 1997. Knowledge, bargaining power, and the instability of international joint ventures. *Academy of Management Review*, 22(1): 177–202.
- Kahneman, D., & Tversky, A. 1979. On the interpretation of intuitive probability: A reply to Jonathan Cohen. *Cognition*, 7(4): 409–411.
- Kogut, B. 1991. Joint ventures and the option to expand and acquire. *Management Science*, 37(1): 19–33.
- Kogut, B., & Kulatilaka, N. 1994. Operating flexibility, global manufacturing, and the option value of a multinational network. *Management Science*, 40(1): 123–139.
- Luo, Y., & Tung, R. L. 2025. A multipolar geo-strategy for international business. *Journal of International Business Studies*, 56: 821–829.
- Rugman, A. M., & Verbeke, A. 2004. A perspective on regional and global strategies of multinational enterprises. *Journal of International Business Studies*, 35(1): 3–18.
- Thompson, J. D. 1967. *Organizations in action*. McGraw-Hill.