



# NAVIGATING THE FOG

**TRADE POLICY UNCERTAINTY** can have far-reaching effects on businesses, influencing everything from supply chains to investment decisions. In a world where trade policies are constantly shifting, understanding how this uncertainty impacts firms' innovation investment is critical, said Daniel Chen, PhD, the Randall W. and Sandra Ferguson Endowed Professor of Information Systems.

"Most of the academic literature talks about uncertainty, but they don't look specifically at the firm-specific level of uncertainty," Chen said. "Part of the reason why prior research did not look at this is because of the difficulty to measure or quantify it."

Chen's research changed that. Alongside Nan Hu of Singapore Management University, Peng Liang of the University of Science and Technology of China, and Morgan Swink of Texas Christian University, Chen authored the research article "Understanding the Impact of Trade Policy Effect Uncertainty on Firm-Level Innovation Investment," published in *Journal of Operations Management*. The study sheds light on the challenges businesses face in an ever-changing global trade landscape by examining how trade policy uncertainty affects companies' investment decisions in new ideas and technologies.

What is trade policy uncertainty? The team defined it as an uncertainty regarding what the rules for trading goods and services internationally will be, Chen said. This can make companies hesitant to spend money on developing products or improving existing ones—significantly impacting a company's ability to stay competitive and grow. The ongoing trade war between the United States and China is a perfect example of trade policy uncertainty, Chen said.

"It is difficult to predict how long this trade war is going to last," Chen said. "How many companies, industries and countries are going to be involved? But what is less understood is what will happen to my business."

Using artificial intelligence and large language models to analyze data from various companies, the team studied how trade policy uncertainty impacted how much money firms put into innovation. They found companies tend to spend less

on innovation when trade policy uncertainty is high. This means they might create fewer new products or fail to improve their current ones as much as they would if they felt more confident about trade policies.

Markets play a significant role in this as well, Chen said.

"If you are a company where most of your sales are coming from domestic markets, there will be some impact in terms of supplier costs," he said. "But if your major market is international, then there is going to be a huge impact on you."

The team also looked at other factors that might influence how trade policy uncertainty affects innovation investment, such as the company's size, how competitive their industry is and if they have different investment options.

"If you are a state-owned company, the impact of trade policy uncertainty might be less," Chen said. "At that point, most of your resources are from the state, so you feel it less."

Competitiveness also played a role, he said. Companies likely can't afford to wait on innovation if the market's competition is highly intense. Regardless of trade policy uncertainty, companies will likely make some amount of investment in innovation.

This study has important implications for policymakers and business leaders who want to encourage innovation and growth, Chen said. It suggests stable and predictable trade policies could help companies feel more confident about investing in new ideas and technologies, ultimately benefiting everyone. ■





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