

Innovation gets a boost with the right competition

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Competition has long been seen as a fuel that powers innovation in many industries.

But the type of competition makes a huge difference on how much firms spend on research and development, said Yue Maggie Zhou, a professor of strategy at the University of Michigan Ross School of Business.

Zhou and co-author Xiaoyang Li of the Cheung Kong Graduate School of Business analyzed the relationship between import competition and innovation among a large sample of public U.S. manufacturing firms. They found that firms in industries that have experienced a greater level of import competition from high-wage countries significantly increased their R&D expenditures and generated a greater number of [patents](#), more valuable patents and more breakthrough patents. These effects are stronger for leading firms in their industries and weaker for lagging firms.

Firms in industries that experienced a greater level of import competition from low-wage countries significantly reduced their R&D expenditures and generated fewer breakthrough patents.

"While trading with low-wage countries has brought tremendous benefits to American consumers, it places significant downward pressure on U.S. firms' profitability," Zhou said. "Policymakers should be mindful that the openness of trade with different countries will have different impacts on the long-term performance of domestic firms and on the economy,

due to their different impacts on innovation."

The researchers found that a 10-percentage-point increase in import competition from high-wage countries would increase a firm's R&D expenditures by 7 percent and number of patents by more than 5 percent. And more of those patents are breakthroughs.

The results also highlight the circumstances under which existing firms become a source of radical inventions and enhance their competitive advantages.

"A lot of people think competition is good for innovation," Zhou said. "Our findings say it depends on what kind of competition firms are facing because it may not necessarily be good for the long-term competitiveness of the economy."

Managers need to be aware of the effect of import competition on their firms.

"Taken together, these findings support our arguments that import competition from high-wage countries is more like 'neck-and-neck' competition, which incentivizes firms to increase [innovation](#) effort to stay ahead," Zhou said.

Competition from low-wage countries is less based on technology but more based on natural resources and labor, which does not prompt industry leading [firms](#) to innovate as much as competition from high-wage [countries](#), she said.

More information: Does Import Competition Spur Innovations?
[deepblue.lib.umich.edu/bitstre ... quence=1&isAllowed=y](https://deepblue.lib.umich.edu/bitstream/handle/2026.1/1234567890/1/1234567890.pdf?sequence=1&isAllowed=y)

Provided by University of Michigan

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