

Centre for Asian Business and Economics

CABE RESEARCH SEMINAR SERIES

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TOPIC Industrial Robotic Adoption and Myopic Innovation

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TIME 10:30 AM – 12.00 PM

VENUE The Spot (198 Berkeley Street), Level 10, Room 10.039

ABSTRACT

Robotics are increasingly prevalent in industrial firms, offering immediate benefits such as reduced process variation and automated operational data collection. However, the long-term impacts of robotics on innovation behavior remain underexplored. Drawing from organizational learning literature, we propose that the reduced operational variation and historically focused data processing from robotics adoption may lead to innovation myopia. This condition causes firms to concentrate on incremental and narrow-scope innovations, crowding out breakthroughs and broader-scope innovations. We employed a difference-in-difference analysis using data on industrial robotics adoption from publicly listed Chinese firms, alongside their patent application records. Our findings indicate that while robotics adoption boosts incremental patent application, it does not enhance breakthrough patent application and can even narrow the scope of innovation. Additionally, our analysis reveals that inter-organizational collaborative innovation can moderate the learning myopia associated with the use of robotics. These findings highlight that robotics not only alter daily operations but also influence the diversity and depth of a firm's knowledge base, fueling myopic innovation. We discuss the theoretical contributions to organizational learning, technology management, and process standardization literature, and offer implications for managers and policymakers.

BIO

Dr. Shouyu Yao is an Assistant Professor and doctoral supervisor in the Department of Accounting and Financial Management at the College of Management and Economics, Tianjin University, China. He holds dual Ph.D. degrees in Finance from Macquarie University and in Management from Tianjin University. His primary research interests include corporate governance, the relationship between government and firms, and non-market strategies. Dr. Yao has led and participated in several projects funded by the National Natural Science Foundation of China. Over the past three years, he has published more than 30 papers in prestigious international journals, including *Journal of Economic Behavior & Organization* (Tilburg Econ-35 Journals), *Journal of Business Ethics* (FT50), *Journal of Product Innovation Management* (ABS 4), *British Journal of Management* (ABS 4), *Journal of Accounting and Public Policy*, *Corporate Governance: An International Review*, *British Accounting Review*, *European Journal of Finance*, and *Energy Economics*. His work has been presented at notable conferences such as the European Financial Management Annual Meeting (EFMA) and the Asian Finance Annual Meeting (Asian FA), earning accolades like the Best Paper Award at the Annual Conference of Chinese Finance and Accounting Academics. Dr. Yao also serves as an Ad Hoc Associate Editor and Editorial Board Member of the *Journal of Chinese Economic and Business Studies*, is on the Youth Editorial Board of *China Finance Review International*, and is an Associate Editor for the *International Journal of Financial Studies*. Additionally, he reviews for over 30 international journals, including those rated FT50 and ABS 4.