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LINGNAN UNIVERSITY DEPARTMENT OF ECONOMICS 30TH ANNIVERSARY

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Green Persuasion Meets Certification: Greenwahsing and Brownwashing

23 March 2026 (Mon)
16:00-17:30

WYL314, 3/F, Dorothy Y. L. Wong Building, Lingnan University

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BIOGRAPHY

Jiajia CONG is an Assistant Professor in the College of Business at City University of Hong Kong. His research focuses on industrial organization theory and quantitative marketing, with particular emphasis on platforms, data, incentives, and the digital economy. His work has been published in the *RAND Journal of Economics*, *Management Science*, *Journal of Economic Behavior and Organization*, and *Journal of Economics and Management Strategy*.

ABSTRACT

We investigate how a firm with uncertain environmental credentials strategically designs information, through greenwashing (overstating greenness) and brownwashing (understating greenness), to secure certification from a certifier who can directly approve, directly decline, or conduct a costly test with endogenously chosen accuracy. Using a Bayesian persuasion framework, we characterize the equilibrium interaction between the firm's information design and the certifier's certification strategy and uncover a central “testing paradox”: the availability of certification testing amplifies rather than deters deceptive communication. Specifically, we derive four results. First, greenwashing always arises, but its intensity is non-monotonic in the firm's prior probability of being green; brownwashing emerges only when the certifier tests in equilibrium, driven by the firm’s incentive to trigger a test that yields profitable false positives benefiting non-green firms. Second, the presence of testing expands the feasible range for profitable greenwashing beyond the no-test benchmark and simultaneously introduces brownwashing as a novel strategic channel. Third, committing to alternative certification frameworks, prohibiting direct approval, direct decline, or both, leaves equilibrium outcomes unchanged, as the certifier optimally substitutes with costless, uninformative tests. Finally, improved certification technology can inadvertently harm consumer surplus, as the firm’s aggressive strategic washing responses may outweigh the direct benefits of more accurate testing.

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